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External Evaluation and Review Report



Techtorium New Zealand Institute of
Information Technology

Date of report: 6 December 2019

About Techtorium New Zealand Institute of Information Technology

Techtorium provides a pathway for learners, including secondary school students, to gain skills and knowledge in computer engineering, software development and information and communications technology (ICT) support, and to commence a career in the information technology industry or progress to further study.

Type of organisation:	Private training establishment (PTE)
Location:	182 Broadway, Newmarket, Auckland
Code of Practice signatory:	Yes
Number of students:	Domestic: in 2018, 253 students (223 equivalent full-time students); 51 Māori (20 per cent); 63 Pasifika (22 per cent) International: in 2018, nine students
Number of staff:	39 full-time and one part-time
TEO profile:	See: Techtorium New Zealand Techtorium also offers short courses and vocational pathways programmes to senior secondary school students.
Last EER outcome:	In 2016, NZQA was Highly Confident in Techtorium's educational performance and capability in self-assessment.
Scope of evaluation:	NZQA-approved programmes: <ul style="list-style-type: none">• Diploma in Cloud Management (Level 7)• New Zealand Diploma in Information Systems (Level 5) and New Zealand Diploma in Software Development (Level 6)
MoE number:	7638
NZQA reference:	C36644
Dates of EER visit:	16 and 17 October 2019

Summary of Results

Techtorium is a student-centred institute with strong connections to the information technology industry and is comprehensively meeting learner and other stakeholder needs. Effective leadership and self-assessment underpin excellent educational performance.

Highly Confident in educational performance

- All student groups are achieving strong pass rates supported by effective teaching and student engagement strategies in an innovative learning environment. Work-readiness is deliberately developed through a focus on attendance, achievement and attitude.
- Ongoing and authentic industry engagement informs programme development and delivery and ensures students gain relevant skills, knowledge and attributes. Techtorium is very successful in transitioning students to employment.

Highly Confident in capability in self-assessment

- Highly effective, individualised pastoral care and guidance contributes to student success. Staff actively seek and consider student viewpoints. Student satisfaction is high.
- Academic processes and documentation are comprehensive and effective in maintaining academic standards and integrity. Trainers are well supported to build teaching capabilities and maintain industry currency.
- Techtorium has strong and effective leadership. Effective planning, resourcing and communication practices ensure high-quality educational provision during a period of significant change.
- Self-assessment is well embedded at all levels of the organisation. Systematic gathering and analysis of information informs decision-making.
- There are appropriate systems and monitoring processes to manage compliance accountabilities.

Key evaluation question findings¹

1.1 How well do students achieve?

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Very high course and qualification completion rates are being achieved by all groups of students across all programmes (refer Tables 1-3, Appendix 1). Variances in individual years or cohorts are investigated and improvements identified. Achievement rates compare very favourably with Tertiary Education Commission sector medians.</p> <p>As part of regular monitoring of achievement, Techtorium reviews key metrics for intakes, cohorts and individuals, including withdrawal and attendance rates.² Contributing factors are understood and remedial actions are identified. Techtorium monitors rates of success at first assessment attempt against its target of 90 per cent, to identify and address issues with assessments or tutor performance.</p> <p>Techtorium intentionally develops and formally assesses the development of key personal skills and attributes which help to prepare students for employment, such as communication, teamwork, problem solving and professionalism. The HAL³ rubric is used to assign a final score for completing students.</p> <p>Appropriate assessment and moderation practices support reliable and valid results.</p>
Conclusion:	Detailed real-time, achievement-related information is reported and reviewed throughout the year and used to inform strategies for improvement. Techtorium understands the importance of monitoring and supporting attendance for improving retention and performance.

¹ The findings in this report are derived using a standard process and are based on a targeted sample of the organisation's activities.

² Students whose attendance drops below 90 per cent are followed up.

³ Habits and Attitudes to Learning (HAL) Rubric

1.2 What is the value of the outcomes for key stakeholders, including students?

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Techtorium specialises in providing secondary school students with pathways to diplomas in information communications technology and then to employment or higher-level study. Approximately 55 per cent of students enrolled in 2019 have previously done a short course with Techtorium. In 2018, nearly 50 per cent of individuals completing diplomas continued with further study (many continued with more advanced diplomas at Techtorium) and 26 per cent gained IT-related employment.</p> <p>Techtorium has had some success in targeting priority groups, which are underrepresented in IT, and supporting their progression from secondary school through to employment (at comparable rates to other students).</p> <p>Techtorium's success in transitioning students to the workplace is attributable to strong relationships with more than 50 employment partners and highly effective processes for developing skills and attitudes required by the ICT industry.</p> <p>Techtorium engages regularly with employers on workforce needs and the performance of their graduates. Techtorium also gathers useful industry feedback from an advisory board on the relevance and utility of their programmes, and industry trends.</p> <p>Recently Techtorium has invested in additional staff to further strengthen stakeholder engagement. Systems for gathering and capturing information and data are effective. Techtorium is increasingly documenting and understanding the links between programme outcomes and programme design and graduate skills.</p>
Conclusion:	<p>Techtorium has strong support from schools and industry. Graduates have the skills, knowledge and attributes for entry-level roles in the ICT industry. Ongoing engagement provides information on the value of the programmes for industry and graduates.</p>

1.3 How well do programme design and delivery, including learning and assessment activities, match the needs of students and other relevant stakeholders?

Performance:	Good
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Programmes are designed to meet industry needs which are identified through effective, ongoing consultation and needs analysis. Learning activities are a mix of theory and practice, and are aligned to content, technologies and industry practice. Attendance, achievement and attitude (known as the 'Triple As') are closely monitored to ensure students develop essential skills and attributes for employment in a supportive environment.</p> <p>Suitable processes maintain academic quality. Comprehensive documentation supports programme delivery and assessment. Internal moderation involves all trainers and leads to improvements in assessment materials and practice. Techtorium has achieved satisfactory outcomes from NZQA's national external moderation. For non-unit standard assessments, relationships have recently been established with external moderation partners.</p> <p>Self-assessment is effective. Changes are made to programmes in response to analysis of achievement, moderation reporting and feedback from students, staff and stakeholders. Records provide reasonable evidence of improvements year on year. Techtorium has responded effectively to the NZQA monitor's report on the level 7 programme (refer 2.1) and issues identified with initial delivery of the software strand (refer 2.2).</p> <p>Trainers have appropriate industry skills and knowledge and some have adult teaching qualifications. They are supported to engage with external groups such as Ako Aotearoa and to maintain industry currency and certification. Techtorium provides a flexible, modern teaching and learning environment. Students benefit from exposure to guest speakers and industry events, such as TechTalk.</p>
Conclusion:	Techtorium's vocational programmes support the development of practical skills and appropriate attitudes for work. Connections to industry ensure the programmes reflect industry trends.

1.4 How effectively are students supported and involved in their learning?

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Techtorium provides high-quality pastoral care and academic guidance to students. The emphasis is on building relationships and providing individualised support. Excellent achievement and graduate outcomes are evidence that this approach is effective.</p> <p>Students receive good information and advice prior to and at enrolment; their learning goals are discussed and support needs identified. Techtorium's expectations of students are also clearly explained. Regular monitoring of the Triple As ensures students who are at risk of withdrawing or falling behind are identified and supported to re-engage. Student progress and wellbeing are monitored through individual learning plans, remedial action plans, meetings and oversight by a 'home group' trainer. Records of all interventions and touchpoints are maintained.</p> <p>Techtorium creates an inclusive learning environment and has made particular commitments to support students with disabilities. Regular class activities and whole-of-organisation events provide opportunities to celebrate diversity and success.</p> <p>A small cohort of international students receives appropriate support and guidance, including additional information at orientation and regular meetings with key staff each term. International students are well integrated into the student body.</p> <p>Students are satisfied with their overall study experience. Techtorium regularly gathers and analyses feedback through surveys and class representative processes.</p>
Conclusion:	<p>All staff share the responsibility for supporting students to remain engaged and to succeed in their learning. Techtorium has highly effective process for monitoring student progress and wellbeing, which are key contributing factors to positive student outcomes. Techtorium regularly reviews support interventions and functions to ensure they are effective.</p>

1.5 How effective are governance and management in supporting educational achievement?

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Techtorium has a clear vision and shared values which guide organisational direction and day-to-day operations. The PTE's commitment to building relationships and working collaboratively with all stakeholders, including staff and students, is evident in all priority areas and is a key contributing factor to strong educational performance.</p> <p>Leadership is very effective. Key advisers and staff are involved in planning and resourcing decisions. Steady growth and increased funding have enabled Techtorium to invest in staff and facilities to improve the learning experience and support for students. Quality management and reporting systems have been revised to reflect the new organisational structure, underpinning academic integrity and effective self-assessment.</p> <p>Techtorium has an inclusive culture and staff feel valued, informed and well supported. There are regular minuted meetings for governance, management and staff, as well as frequent information sharing. All staff attend four learning and development events each year which provide opportunities for discussing organisational priorities, reflective activities and professional development. Effective performance management systems are in place.</p> <p>Monitoring, review and reporting activities are comprehensive and regular. Key processes and metrics measure student engagement and achievement. The recently introduced trainer 'run sheets' gather attendance and assessment-related metrics.</p>
Conclusion:	The PTE is responsive to its stakeholders. Academic developments reflect industry changes. Staff are positively engaged in a shared vision for high-quality vocational training within a strongly supportive learning environment. Techtorium continues to improve through self-assessment which is comprehensive and embedded at all levels of the organisation.

1.6 How effectively are important compliance accountabilities managed?

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>The managing director oversees compliance management – with support from a key staff member – which is scheduled as part of ongoing review and reporting.</p> <p>Information from funding and regulatory agencies is monitored and shared and follow-up actions are delegated.</p> <p>Techtorium has appropriate processes for managing academic standards and integrity, and for maintaining compliance with NZQA Rules. These include comprehensive documentation and monitoring of programme delivery and assessment; moderation processes; programme reviews and applications to NZQA for changes to programme approvals; and effective processes and record-keeping for responding to student complaints. Techtorium maintains a comprehensive risk register.</p> <p>Techtorium has developed comprehensive departmental manuals which reflect the organisation’s structure and staff responsibilities and are linked to the quality management system and NZQA’s key evaluation questions. Staff complete monthly reviews and changes are signed off by governance. This is an effective framework for ensuring staff know about key policies and procedures and use them on a day-to-day basis.</p> <p>Techtorium conducts the required annual review of compliance with the Education (Pastoral Care of International Students) Code of Practice 2016 and develops an action plan. No issues were identified in a sample of international student files reviewed during this evaluation.</p> <p>A routine Tertiary Education Commission audit in 2017 against funding rules identified minor errors which were all addressed.</p> <p>Techtorium has systems in place to maintain compliance with other key legislation, including the Vulnerable Children Act 2014 and Health and Safety at Work Act 2016.</p>
Conclusion:	Techtorium is effectively managing key areas of compliance.

Focus Areas

This section reports significant findings in each focus area, not already covered in Part 1.

2.1 Focus area: Diploma in Cloud Management (Level 7)

Performance:	Excellent
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Student achievement is very strong (refer Table 2, Appendix 1). Eighty per cent of 2016-2018 graduates have gained employment in the IT industry.</p> <p>Learning activities are based around 'statements of work', to match industry practice and build a range of technical, project management and critical thinking skills for employment.</p> <p>Techtorium has responded appropriately to all recommendations of the 2017 NZQA monitor's report and to feedback from external moderation partners.</p> <p>The trainer has extensive industry experience and knowledge and has received support to develop teaching skills.</p>
Conclusion:	The programme is meeting strong industry demand for Cloud professionals.

2.2 Focus area: New Zealand Diploma in Information Systems (Level 5) and New Zealand Diploma in Software Development (Level 6)

Performance:	Good
Self-assessment:	Excellent
Findings and supporting evidence:	<p>Techtorium responded promptly to address low rates of progression into the second year of the level 6 diploma for the first intake (refer Table 3.1, Appendix 1), providing students with an exit qualification at level 5. Techtorium changed the programme length, improved the preparation of prospective students (including alignment of secondary school short courses and improved information and advice), and increased teaching resources.</p> <p>Achievement and retention rates have subsequently improved</p>

	<p>(refer Tables 3.2 and 3.3, Appendix 1). Three of the 2019 intake of 28 in the level 5 diploma have withdrawn (for personal reasons) but the remaining students are expected to complete successfully.</p> <p>The software strand provides opportunities for students to build essential skills in software development and identify areas of interest, such as mobile apps and web or games development. Throughout these software diplomas, students develop a portfolio of work which is useful for gaining employment. The second year incorporates a capstone project where students interact with industry project owners and design and deliver software solutions as part of a team.</p> <p>Techtorium has recently identified a suitable external moderation partner with appropriate expertise.</p>
Conclusion:	The software strand is designed to meet industry needs for specialist and technical software developers.

2.3 Focus area: International students: support and wellbeing

Performance:	Excellent
Self-assessment:	Excellent

Recommendations

Recommendations are not compulsory but their implementation may improve the quality and effectiveness of the training and education provided by the tertiary education organisation (TEO). They may be referred to in subsequent external evaluation and reviews (EERs) to gauge the effectiveness of the TEO's quality improvements over time.

There are no recommendations arising from the external evaluation and review.

Requirements

Requirements relate to the TEO's statutory obligations under legislation that governs their operation. This include NZQA Rules and relevant regulations promulgated by other agencies.

There are no requirements arising from the external evaluation and review.

Appendix 1

Table 1. Overall achievement data for Techtorium 2015-2018 (course and qualification completion rates, all programmes) (Tertiary Education Commission published data)

All programmes	2015	2016	2017	2018*
All students qual completion	98%	93%	93%	92%
Māori qual completion	97%	96%	100%	95%
Pasifika qual completion	100%	93%	89%	88%
All students course completion	100%	99%	98%	95%
*Māori course completion	100%	96%	85%	95%
*Pasifika course completion	100%	88%	96%	93%

*Data provided by Techtorium

Table 2. Achievement data for Diploma in Cloud Management (Level 7) 2016-2018*

	2016		2017		2018		2019 forecast	
	CC**	QC**	CC	CC	QC	QC	CC	QC
All students	(12/12) 100%	(12/12) 100%	(13/15) 87%	(25/25) 100%	(24/25) 96%	(13/13) 100%	(21/21) 100%	(21/21) 100%
Māori	(3/3) 100%	(3/3) 100%	(1/1) 100%	(6/6) 100%	(6/6) 100%	(1/1) 100%	(1/1) 100%	(1/1) 100%
Pasifika	(3/3) 100%	(3/3) 100%	(7/9) 78%	(4/4) 100%	(4/4) 100%	(7/7) 100%	(4/4) 100%	(4/4) 100%
Non-Māori, non-Pasifika	(6/6) 100%	(6/6) 100%	(5/5) 100%	(15/15) 100%	(14/15) 93%	(5/5) 100%	16/16 100%	16/16 100%

*Data provided by Techtorium

**CC=course completion; QC=qualification completion

Table 3. Achievement data for New Zealand Diploma in Software Development (Level 6)*

3.1. Intake one: Jan 2017- Dec 2018	Year 1: 2017		Year 2: 2018	
	CC**	QC**	CC	QC
All students	(24/25) 96%	NA	(16/19) 84%	(13/16) 81%
Māori	(1/1) 100%	NA	(1/1) 100%	(1/1) 100%
Pasifika	(4/4) 100%	NA	(1/2) 50%	(0/1) 0%
Non-Māori, non-Pasifika	(19/20) 95%	NA	(14/16) 88%	(12/14) 86%

3.2. Intake two: July 2017- June 2019	Year 1: 2017-2018		Year 2: 2018-2019	
	CC**	QC**	CC	QC
All students	(6/6) 100%	NA	(6/6) 100%	(6/6) 100%
Māori	(3/3) 100%	NA	(3/3) 100%	(3/3) 100%
Pasifika	0	NA	0	0
Non-Māori, non-Pasifika	(3/3) 100%	NA	(3/3) 100%	(3/3) 100%

3.3. Intake three: Jan 2018-Dec 2019	Year 1: 2018		Year 2: 2019 (forecast)	
	CC**	QC**	CC	QC
All students	(33/34) 97%	NA	(31/31) 100%	(31/31) 100%
Māori	(2/2) 100%	NA	(2/2) 100%	(2/2) 100%
Pasifika	(3/3) 100%	NA	(3/3) 100 %	(3/3) 100 %
Non-Māori, non-Pasifika	(28/29) 96%	NA	(26/26) 100%	(26/26) 100%

*Data provided by Techtorium

**CC=course completion; QC=qualification completion

Appendix 2

Conduct of external evaluation and review

All external evaluation and reviews are conducted in accordance with NZQA's published rules. The methodology used is described in the web document <https://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/>. The TEO has an opportunity to comment on the accuracy of this report, and any submissions received are fully considered by NZQA before finalising the report.

Disclaimer

The findings in this report have been reached by means of a standard evaluative process. They are based on a representative selection of focus areas, and a sample of supporting information provided by the TEO under review or independently accessed by NZQA. As such, the report's findings offer a guide to the relative quality of the TEO at the time of the EER, in the light of the known evidence, and the likelihood that this level of quality will continue.

For the same reason, these findings are always limited in scope. They are derived from selections and samples evaluated at a point in time. The supporting methodology is not designed to:

- *Identify organisational fraud⁴*
- *Provide comprehensive coverage of all programmes within a TEO, or of all relevant evidence sources*
- *Predict the outcome of other reviews of the same TEO which, by posing different questions or examining different information, could reasonably arrive at different conclusions.*

⁴ NZQA and the Tertiary Education Commission comprehensively monitor risk in the tertiary education sector through a range of other mechanisms. When fraud, or any other serious risk factor, has been confirmed, corrective action is taken as a matter of urgency.

Regulatory basis for external evaluation and review

External evaluation and review is conducted under the Quality Assurance (including External Evaluation and Review (EER)) Rules 2016, which are made by NZQA under section 253(1)(pa) of the Education Act 1989 and approved by the NZQA Board and the Minister authorised as responsible for Part 20 of the Education Act.

Self-assessment and participation and cooperation in external evaluation and review are requirements for:

- *maintaining accreditation to provide an approved programme for all TEOs other than universities, and*
- *maintaining consent to assess against standards on the Directory of Assessment Standards for all TEOs including ITOs but excluding universities, and*
- *maintaining training scheme approval for all TEOs other than universities.*

The requirements for participation and cooperation are set through the Programme Approval and Accreditation Rules 2018, the Consent to Assess Against Standards Rules 2011 and the Training Scheme Rules 2012 respectively. These rules were also made by NZQA under section 253 of the Education Act 1989 and approved by the NZQA Board and the Minister.

In addition, the Private Training Establishment Rules 2018 require registered private training establishments to undertake self-assessment and participate in external evaluation and review as a condition of maintaining registration. The Private Training Establishment Registration Rules 2018 are also made by NZQA under section 253 of the Education Act 1989 and approved by the NZQA Board and the Minister for Tertiary Education, Skills and Employment.

NZQA is responsible for ensuring non-university TEOs continue to comply with the rules after the initial granting of approval and accreditation of programmes, training schemes and consents to assess and registration. The New Zealand Vice-Chancellors' Committee (NZVCC) has statutory responsibility for compliance by universities.

This report reflects the findings and conclusions of the external evaluation and review process, conducted according to the Quality Assurance (including External Evaluation and Review (EER)) Rules 2016. The report identifies strengths and areas for improvement in terms of the organisation's educational performance and capability in self-assessment.

External evaluation and review reports are one contributing piece of information in determining future funding decisions where the organisation is a funded TEO subject to an investment plan agreed with the Tertiary Education Commission.

External evaluation and review reports are public information and are available from the NZQA website (www.nzqa.govt.nz). All rules cited above are available at <https://www.nzqa.govt.nz/about-us/our-role/legislation/nzqa-rules/>, while information about the conduct and methodology for external evaluation and review can be found at <https://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/>.

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