

DIGITAL TECHNOLOGIES

SUBJECT EXPERT GROUP RESPONSE TO FEEDBACK ON THE PHASE 1 MATERIALS

The Digital Technologies Subject Expert Group (SEG) would like to thank those who took the time to review the Digital Technologies subject content. We received 66 individual responses to the survey.

The Ministry also conducted Focus Group meetings with members of the sector who gave feedback on the draft materials. Additional feedback was provided by Digital Technologies Teachers Aotearoa.

It is important to note that the Level 1 subject materials currently published on the NCEA.education website are in a draft state. These will be revised and refined over time and the SEG would like to encourage schools, teachers, students, and whānau to continue to contribute to the feedback process.

Five main themes were identified in the feedback.

Theme One

Respondents expressed uncertainty about their ability to incorporate te ao Māori principles and/or perspectives in a meaningful way

Response

Change 2 of the NCEA Change Package calls for mana ōrite mō te mātauranga Māori. Realising this change means we ensure mātauranga Māori is equitably valued and resourced in NCEA, broadening access to mātauranga Māori pathways and increasing teacher capability. This means incorporating mātauranga Māori, te ao Māori and te reo Māori appropriately into the new Digital Technologies content.

The subject content provides additional capability support:

- Learning Matrices and Course Outlines illustrate how mātauranga Māori can be woven through teaching and learning.
- The Glossary will define any kupu Māori used in the subject content.
- Assessment resources, student exemplars, and examples of Teaching and Learning Programmes used in the pilot will further exemplify the integration of mātauranga Māori.

[A further response from the Ministry can be found here.](#)

Theme Two

Respondents questioned whether a course could still cover a range of digital technologies domains/contexts.

Response

The SEG recognises that the changes to NCEA are significant, but these changes are designed to allow students the opportunity to develop broad and foundational knowledge at Level 1 with increasing specialisation in Levels 2 and 3. We have chosen Significant Learning that we feel is fundamental to the study of Digital Technologies. This sits alongside the four Achievement Standards which credential knowledge from the progress outcomes for both Computational Thinking for Digital Technologies and Designing and Developing Digital Outcomes. Also noting that the NCEA change package allows for four Achievement Standards per subject, and schools may still choose to create their own programmes of study and the standards they wish to use to credential that learning.

Theme Three

Respondents expressed concerns about the assessment for Achievement Standard 1.4 (Apply Computational Thinking Skills in a Programming Context)

Response

The SEG recognises that changes will need to be made to the proposed Achievement Standard 1.4 (Apply Computational Thinking Skills in a Programming Context). We have not determined whether this Achievement Standard should be internally or externally assessed, and we do not want to restrict the choice of programming language. The feedback has been noted and we will work on this standard during the next phase of development.

However, the SEG feels strongly that all Digital Technologies students, regardless of background or gender, deserve the opportunity to be exposed to computer programming and computational thinking skills. This will help address some of the inequalities seen in the study of STEM subjects at senior secondary school and beyond. The SEG also notes that the shift towards a clear expectation that these skills are taught aligns with trends in international education practice.

Theme Four

Respondents emphasised a preference for practical modes of learning and assessment over written work

And

Theme Five

Respondents queried the credit weighting for Achievement Standard titles 1.1 (Design a digital Technologies Outcome) and 1.2 (Develop a Digital Technologies Outcome)

Response

The SEG does not intend Digital Technologies to be a purely academic subject at NCEA level 1 and are currently working through the balance between practical skills and theoretical

knowledge. The SEG also recognises that the workload for each standard should reflect their credit value, and are working to ensure this is reflected in the balance of credits.