



Curriculum Advisory Group Report

**DIGITAL TECHNOLOGIES &
HANGARAU MATIHIKO**

OCTOBER 2017

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Curriculum Advisory Group

Digital Technologies & Hangarau Matihiko

TERMS OF REFERENCE

Purpose

To strengthen Digital Technologies & Hangarau Matihiko curriculum content in light of feedback from the Digital Technologies & Hangarau Matihiko curriculum consultation.

Background

The Ministry has procured the services of Education Technology, CORE Education and Victoria University to develop and design the new Digital Technologies & Hangarau Matihiko curriculum content in partnership with the Ministry and other key stakeholders from the education sector and business/industry. To inform and support this work during the design, gazetting and publishing process, the Ministry has established a Curriculum Advisory Group to provide recommendations on the content and design of the Digital Technologies & Hangarau Matihiko curriculum content as it is developed.

Draft Digital Technologies & Hangarau Matihiko curriculum content went out for public consultation from 28 June to 3 September 2017. We intend to use feedback from this consultation to strengthen the content prior to socialisation of the revised content, gazetting and publishing the strengthened national curriculum that will include new Digital Technologies & Hangarau Matihiko content.

Tasks for the Advisory Group

- 1 Review the independent curriculum consultation summary report.
- 2 Review the Ministry's response paper.
- 3 Consider any further changes to the curriculum content which arise from the Ministry's design processes, for example changes recommended due to psychometric assessment of the draft set of progress outcomes.
- 4 Provide independent advice to the Ministry regarding recommended changes to Digital Technologies & Hangarau Matihiko content in response to the issues raised in the consultation process.

Role and scope

In-Scope

- » Providing advice to the Ministry of Education regarding the Digital Technologies & Hangarau Matihiko content in light of the independent curriculum consultation summary report, including the Ministry's view of this report. This could include:
 - › The approach to describing and communicating the new curriculum content
 - › Gaps or duplication in the new curriculum content
- » The language of the new curriculum content
- » Advice regarding the appropriate supports that could be provided to support teachers, students, whānau, industry and the community to make use of the new curriculum content.
- » Advice on recommended changes must be within the Ministry's mandate of strengthening the positioning of learning in Digital Technologies & Hangarau Matihiko in the Technology | Hangarau Learning Areas.

Out of scope

- » Advice on recommended changes outside of the Ministry's mandate (eg: changes to the curriculum outside of Technology Learning Area of The New Zealand Curriculum, and outside of the Hangarau Wāhanga Ako of Te Marautanga o Aotearoa)
- » Advice drawing from feedback and reports submitted outside of the curriculum consultation process.

Meetings and process:

Meetings will be chaired by independent chair Graeme Aitken. The group is expected to meet as required between 27-28 September in Auckland and 3 October in Wellington. At its first meeting the Group will determine its requirements for quorum and meeting arrangements.

Responsibility of members.

Members will:

- a) act in the best interests of all stakeholders, including children and parents, families and whānau
- b) endeavour to provide objective, evidence-based advice
- c) dedicate sufficient time to make a meaningful contribution to the progress of the group. There will be some pre-meeting readings. There may also be video conferences to follow up meetings as needed.
- d) not disclose information provided to them in confidence by officials
- e) not make media statements about the work of the Group without the prior express permission of the Deputy Secretary Early Learning Student Achievement.

Conflict of interest

Group members should perform their tasks honestly, impartially and in good faith. Members should also avoid situations that might compromise their integrity or otherwise lead to conflicts of interest. If a member becomes aware of a conflict of interest, they will advise the Ministry of Education.

As the Advisory Group is engaged to provide independent advice regarding the feedback received during consultation members cannot provide feedback through the consultation process. Members who are part of organisations which are providing feedback will need to take appropriate action to distance themselves from that feedback.

Travel costs to attend Reference Group Meetings

With prior agreement, and in accordance with current Ministry of Education policies and processes, the Ministry of Education will reimburse actual and reasonable travel and accommodation costs incurred in attending Group meetings.

Teacher release funding

Teachers and kaiako who require teacher release to attend meetings at National Office may apply for a Teacher Release Day funding.

Remuneration

Per day rates will be negotiated with each Digital Technologies Curriculum Advisory Group member in accordance with current Ministry of Education policies and processes.

Term

It is intended that the Curriculum Advisory Group will meet from 27-28 September and 3 October. Up to three days of reading may be required in the week preceding the first Curriculum Advisory Group meeting.

Official Information Act 1982

The Official Information Act 1982 will apply without exception to the activities of the Group. The Ministry will be responsible for ensuring that members are aware of the provisions of the Act, and the extent to which written material is discoverable under



Membership

The Group will be selected by the Ministry and will consist of:

ROLE	ROLE REQUIREMENTS
Chair	<ul style="list-style-type: none"> » Sector recognised leader in curriculum thinking, research and design » Significant expertise in effective pedagogy » Can facilitate discussions and decision-making across the New Zealand Curriculum and Te Marautanga o Aotearoa
Teachers (primary and 1 secondary from each medium)	<ul style="list-style-type: none"> » Experience teaching Technology / Hangarau and Digital Technologies / Hangarau Matihiko » Experience in the development of local curriculum in technology / hangarau and digital technologies / hangarau matihiko » Can quickly grasp the bigger picture without getting caught up in detail » Understanding of the current draft content and proposed changes to the Technology Learning Area / Hangarau Ako.
School Leader (1 from each medium)	<ul style="list-style-type: none"> » Expertise in curriculum thinking and design » Knowledge of the Technology / Hangarau and Digital Technology / Hangarau Matihiko curriculum » Track record for effecting change in line with effective pedagogical practice » Understanding of the current draft content and proposed changes to the Technology Learning Area / Hangarau Ako.
Industry Partner	<ul style="list-style-type: none"> » Industry recognised expertise in Digital Technologies. » Demonstrated interest in Digital Technologies education to date. » Experience working in or with NZ schools and career pathways. » Understanding of the political mandate and the current draft content to date

The Ministry's contracted curriculum designers will be available to support and advise the Expert Panel. These terms of reference were agreed to 21 September 2017.

Curriculum Advisory Group

FINAL REPORT

Introduction and Executive Summary

The Curriculum Advisory Group welcomes the opportunity that has been provided to comment on the development of the Digital Technologies and Hangarau Matihiko curriculum.

We see the curriculum offering important **opportunities** but also posing significant **risks** that will need to be mitigated to realise the opportunities.

Opportunities

The Digital Technologies & Hangarau Matihiko curriculum provides the opportunity:

- » For the Education sector to make a leading, and public contribution to New Zealand's world-leading innovation and enterprise success; and to New Zealand business and industry. This could be reinforced by publicly communicating in innovative ways the new curriculum developments to demonstrate the leadership the education sector is taking in this space (**See Recommendations 31 and 33d**). The change could also be signalled by considering a new name for the learning area in the New Zealand Curriculum (**See Recommendations 42 and 43**).
- » To prepare students for a digital world bringing to life the Ministry of Education's *Lifelong Learning Draft* (2015) and meeting the basic expectations of parents and employers for future-focussed, work-relevant learning.
- » To position Māori creativity, ingenuity and innovation at the heart of the development by ensuring equitable resourcing for Māori -medium implementation that enables active engagement with whānau (**See Recommendations 7, 10-12, 27, 33c**), and by ensuring greater visibility of Te Ao Māori and Te Tiriti in the Learning Area statement (**See Recommendation 8**).
- » To showcase from the outset, in a way that has never been fully achieved with literacy and numeracy, the integration of the digital across the curriculum. While it has been predetermined that Digital Technologies & Hangarau Matihiko forms part of the Technology Learning Area its digital nature is such that, like literacy and numeracy, it is embedded in all learning. Digital Technologies & Hangarau Matihiko offers the opportunity to illustrate this embeddedness through exemplars and professional development. (**See Recommendations 27-29**)
- » To model the contemporary, iterative, co-constructed nature of curriculum and curriculum development. We have a tradition of locking in curriculum over relatively long cycles. All curriculum, and especially Digital Technologies & Hangarau Matihiko, need to be responsive to changes in school/kura and the external environment. Such a development model would enable ongoing sector, student and community consultation (**See Recommendations 1-7**), and its ongoing development would be informed by this consultation, additional commissioned research (**See Recommendation 17**), and a commissioned longitudinal evaluation (**See Recommendation 39**). Its means of distribution would be digital.
- » To model future-focussed provision of Professional Learning Development, aligned to the content and intentions of the Digital Technologies & Hangarau Matihiko curriculum, by building digital platform for Māori -medium, for Years 1-10 and for Years 11-13 that not only develops teacher conceptual knowledge but that also enables teachers to envisage, through digital exemplars and vignettes of student work, the possibilities of the new curriculum (**See Recommendation 27**). Well-designed and thoughtfully structured and sequenced, this platform could also "badge" teacher completion of modules along the lines of commercial platforms Google, Apple, Microsoft, and be an asset for the Ministry with on-selling possibilities to other jurisdictions and, outside Education, to industry (**See Recommendations 32, 33, 34, 35, 38**).
- » To capitalise on Communities of Learning | Kahui Ako as one of the bases for sharing expertise and innovation (**See Recommendation 36**).

Risks

- » Successful implementation requires the management of many moving parts (the design, community information and engagement, equitable provision for Māori – medium, teacher professional learning, assessment development, infrastructure provision) – getting any one of these wrong risks losing teacher support and commitment.
- » Rushing implementation. The Curriculum Advisory Group supports the overall timeline but recognises that baseline capability in the sector is not strong. It is imperative, therefore, that implementation is well resourced, and that the balance between the pressure for change and the building of capacity is actively and responsively managed. This is especially so given the current workforce crisis in teaching and the increasing, and understandable, reluctance of teachers to simply add to workload to meet external expectations and requirements.
- » Not appreciating that knowledge and skill development in this area is exponential and that one-off forms of support will therefore be inadequate. The investment in teacher learning needs to be incremental and continuous.
- » Losing the compulsory nature of Digital Technologies & Hangarau Matihiko at Years 9 and 10 (**See Recommendation 16**).
- » The Digital Technologies & Hangarau Matihiko curriculum offers the opportunity to align curriculum and NCEA achievement standards development but the currently proposed timeline for the NCEA development precedes the finalisation of the curriculum. We have also learned from past experience of NCEA implementation that levels should be introduced sequentially, one-year at a time (**See Recommendation 40**).

Response to Feedback and Recommendations Consultation

The Curriculum Advisory Group

Acknowledges the MoE's investment in consultation via a comprehensive Consultation Document and more than 40 workshops.

Considers that the feedback was not sufficiently nuanced to be fully representative of the wide range of groups impacted by the curriculum.

Identified a number of limitations in the consultation feedback – viz:

- a) the survey was lengthy and may have been a barrier to its completion. It was noted that there were 1045 responses but only 505 completed and 151 partial surveys were included in the analysis which suggests that some respondents intended to contribute but did not in the end have the time to do so.
- b) limited and narrow parent voice
- c) only 7 kura (4 from Napier)
- d) no specific consultation in relation to Māori in the mainstream
- e) workshops did not provide much opportunity for feedback, they were hard to get to given the relieving situation in schools, and where kura were part of these workshops the Māori -medium specific voice was not always captured
- f) it was difficult to distinguish feedback that represented large groups and feedback that represented individuals
- g) while we acknowledge that small numbers may have made it difficult disaggregation by ethnicity would have alerted the Curriculum Advisory Group to ways in which responses may have been different for different groups, and may also have informed implementation.
- h) there was a lack of exemplars in the Developing Digital Outcomes area which may have restricted full understanding
- i) no student voice

Note that contemporary curriculum development is an iterative process that enables refinement in response to ongoing use, consultation and evaluation.



Curriculum Advisory Group Recommendations in relation to Consultation

- 1 Consultation needs to continue alongside piloting and implementation.
- 2 Consultation needs to be multi-faceted, accessible, two-way (listening as well as telling) and, where surveys are used, model the best of digital survey design.
- 3 Consultation needs to acknowledge the significant pressures on people's time and the enticement that may be necessary to achieve more fully representative voice.
- 4 Local Ministry of Education staff need to be leading and actively involved in ongoing consultation.
- 5 That Martin Jenkins be asked to review their data to determine whether it is possible to report in a more nuanced way on ethnicity.
- 6 Sort, focussed, online student surveys need to be conducted in English-medium and also in Māori-medium, specific to Māori to inform the development of the curriculum and of follow up resourcing.
- 7 More ongoing, relevant engagement needs to be undertaken with Māori medium kanohi ki te kanohi, and with hands-on experience that engages whānau as well.

Integration

The Curriculum Advisory Group

- » Noted the need to consider:
 - a) greater integration between Digital Technologies and Hangarau Matihiko
 - b) the relationship between Digital Technologies and the rest of the New Zealand Curriculum
- » Considers that greater clarification is needed about the compulsory nature of the curriculum at Years 9 and 10. The statement on page 13 of the Consultation Document (“Over the pathway from years 1-10, students will gain learning and experience in all five technological areas...”) is not clear about compulsion at each level.
- » Considers that the imbalance between knowledge and capabilities noted in the feedback needs to be addressed – specifically the concern that the capabilities (creativity, collaboration, resilience, problem solving, critical thinking and self-management) were underrepresented; that the curriculum gave too little prominence to issues of citizenship, ethics, privacy, security and safety; and that some of the Progress Outcomes had a stronger “understanding” (i.e. knowledge) focus than an active, process focus.
- » Acknowledges the benefit to the curriculum of it being informed by a strong research voice, especially as that related to the Computational Thinking area.

Curriculum Advisory Group recommendations in relation to Integration

- 8 The Curriculum Advisory Group reinforces the need to have greater visibility of Te Ao Māori and Te Tiriti in the Learning Area Statement and Progress Outcomes but warns against the shallow, decontextualised inclusion of Māori concepts. It is recommended that the EM designers make reference to the English text of the MM design as a source of material for integration.
- 9 Although out of the specific scope of the document the Curriculum Advisory Group recommends that
- 10 Me Māori te wairua o te Hangarau Matihiko.
- 11 Me kōtui ngā horopaki māori ki runga i ngā aho.
- 12 That any changes to the Hangarau Matihiko are reflected in the iho statement.
- 13 That the positioning of “understanding” and application/action/design/creating are reversed in the Progress Outcomes to make clear that understanding in action is what is important, rather than just understanding for its own sake (for example, change PO5 Designing and Developing Digital Outcomes from “Understanding the hardware components, protocols, and network architecture used in networks and apply this to assemble, configure and manage a network” to “Assemble, configure and manage a network drawing on understanding of the hardware components, protocols, and network architecture used in networks”).

- 14 That the statement of the curriculum needs to reflect the integrated form of its intended implementation. This could be achieved through:
 - a) adding a diagram in the Learning Area statement that illustrates integration
 - b) adding a statement such as the following to the start of the Progress Outcomes: "In authentic contexts, and through real world examples.."
 - c) adding statements such as the following to the Progress Outcomes, where relevant – PO3 Computational Thinking".. and that storing data comes with responsibilities related to storage and privacy"
- 15 That integration be illustrated through rich exemplars that show how te Ao Māori , Te Tiriti, key competencies, other learning areas, and other Technology areas can be incorporated into teaching and learning experiences.
- 16 That the compulsory nature of the Digital Technologies & Hangarau Matihiko curriculum be clearly stated by including the following statement: "In each of Years 1-10 students will gain learning and experience in Computational Thinking for Digital Technologies and Designing and Developing Digital Outcomes in order to attain the Year 10 Learning Outcome stated in the Learning Area Statement".
- 17 That the research voice be expanded to inform the ongoing development of the Designing and Developing Digital Outcomes technological area including the development of exemplars.

Achievement Outcomes/Progress Outcomes/Outcome Statements

The Curriculum Advisory Group

- » Supported the idea of learning progressions being included in the curriculum but endorsed the consultation feedback about the confusion between these progressions and achievement objectives.
- » Were unclear about role of AOs in the Digital Technologies curriculum. The AOs offer context and detail that is missing in the Progress Outcomes (for example, about interdisciplinarity and collaboration) but requiring teachers to navigate between AOs and the Progress Outcomes was seen as complex and potentially overwhelming. An unintended consequence may be that teachers see Progress Outcomes as an unnecessary inconvenience and reject them which may have an impact on the Ministry's future plans for curriculum.
- » Were unclear about the relationship between the Progress Outcomes and NCEA Achievement Standards at Level 1-3.
- » Saw value in the Outcome statements but thought that they added an unnecessary confusion to the curriculum.

Curriculum Advisory Group recommendations in relation to Achievement Outcomes/Progress Outcomes/Outcome Statements

- 18 That to avoid confused implementation and reporting, and unintended future consequences, we strongly recommend that the other three technological areas replace AOs with Progress Outcomes.
- 19 Should the prior recommendation not be accepted:
 - a) that the language of Progress Outcomes/Achievement Objectives be clarified to reduce confusion for teachers – one possibility might be to use the term Signposts, and/or
 - b) that the diagram on page 7 of the curriculum be redrawn to make it much clearer that Computational Thinking and Designing and Developing Digital Outcomes reference to the Progress Outcomes and not the AOs, and that this diagram is included in the Learning Area statement under the Learning area structure heading.
- 20 That the last sentence in the Learning area structure be changed to say: "The three strands of technological practice, technological knowledge and the nature of technology are influential on, and embedded within, each of these technological areas."
- 21 That an Outcome statement for the end of compulsory Digital Technologies education (i.e. the end of Year 10) be included in the Learning Area statement and not as a separate outcome statement.
- 22 That Outcome statement for Year 13 be removed from the document

- 23 That Outcome statements be developed for Year 6 and 8 to guide learning programmes at the key transition points in schooling, and that these, along with the Year 13 statement, be available separate from the curriculum.
- 24 That it be made clear that the NCEA Level 1-3 Achievement Standards are referenced to, and align with, Progress Outcomes 6, 7 and 8 (Computational Thinking) and 4 and 5 (Designing and Developing Digital Outcomes).

Future Focus

The Curriculum Advisory Group

- » Understands the speed of change that affects the Digital Technologies & Hangarau Matihiko area and the need, already stated, for ongoing, iterative development of the curriculum, but most particularly of the exemplars as a means of illustrating evolving applications.
- » Noted the comments in the feedback about some of the language in the curriculum being likely to date quite quickly.
- » Endorsed the comments about the important role that exemplars need to play in illustrating the curriculum in action (for parents and whānau, and for teachers), and in ensuring that the curriculum remains current.
- » Was generally supportive of the way that the exemplars were framed.
- » Noted that while the consultation expressed support for the curriculum there were still areas of misunderstanding and concern that need to be addressed through ongoing communication.
- » Considers that the communication needs reflect the curriculum itself – modern, practical, relevant. The cover photo, and other photos in the Consultation Document, did not capture the contemporary nature of learning.

Curriculum Advisory Group recommendations in relation to Future Focus

- 25 That all language in the curriculum that is likely to date be removed (e.g. LAN, PC, Internet of Things).
- 26 That exemplars be updated at least on a two-year cycle in order to help keep the curriculum current.
- 27 That the Ministry of Education accesses real-life developing practice by regularly collecting, and/or purchasing, exemplars from schools and using these as the basis for the two-yearly updating process. And that the Ministry invests in enabling kura to participate in this process in equitable ways, and across a range of kura settings.
- 28 That exemplars are developed in digital form, not as pdfs but rather modelling the best in the use of digital technologies (e.g. pop-ups).
- 29 That at senior levels the exemplars are clearly distinguished from, but related to, the assessment exemplars.
- 30 That local Ministry officials and external agencies – for example, Professional Learning Development providers, Education Review Office – model the integration of digital technologies in their practice.
- 31 That communications about the curriculum need to make strong use of digital technologies: for example:
 - a) app promos about the curriculum addressing possible misunderstandings
 - b) engaging through social media
 - c) commissioned (short 30-second) vignettes showing the curriculum in action and aimed at addressing/heading off some of the known criticisms (e.g. too much screen time, only about devices), and reinforcing some of the connections to students' futures (e.g. relevance to future employment through vignettes that show students engaging with innovators).

Implementation and Evaluation

The Curriculum Advisory Group

- » Notes that the NZCER Digital Technologies for Learning report (p6), although not focussed on Digital Technologies & Hangarau Matihiko curriculum content, did report that only 56% of primary and intermediate teachers considered they had the knowledge and skills they need to provide learning with digital technology, and the same percentage considered that their schools had strong leadership for the use of digital technologies. This suggests that a priority for the early stages of Professional Learning Development is to ensure more widespread digital fluency among teachers and leaders.
- » Reinforced the critical importance of Professional Learning Development in ensuring that the curriculum is understood, accepted and well taught, and the importance of those contracted to deliver Professional Learning Development modelling appropriate digital behaviour.
- » Noted that to future proof the implementation of the Digital Technologies & Hangarau Matihiko curriculum it is essential to include teachers in training in any professional learning and development, and to also develop a workforce plan that includes consideration of how to reduce barriers to entry for those who are suitably qualified, but not traditionally qualified (for example, through degree-level study, or particular degree-level courses), to teach Digital Technologies & Hangarau Matihiko curriculum.
- » Affirmed the importance of holding to the proposed implementation timeline given the urgency of development and implementation but noted that:
 - a) the timeline could only be achieved if supported by the sort of resourcing outlined in the recommendations below
 - b) implementation needed be informed by early adopter experiences and ongoing, sector-informed evaluation – both of which may influence the content and process of implementation
 - c) the NCEA Level 1-3 timelines are too tight to enable significant learning from early adopter implementation

Curriculum Advisory Group recommendations in relation to Implementation and Evaluation

- 32** That a dedicated Professional Learning Development plan to bring current and new teachers (i.e. teachers in training) up to speed is developed in consultation with the Education Council of New Zealand.
- 33** That this plan:
 - a) Is funded to ensure all schools, kura and teacher training institutions have equitable access to resourcing to ensure readiness.
 - b) Includes both specialist training that develops understanding of the Digital Technologies & Hangarau Matihiko curriculum and its implementation requirements, AND Professional Learning Development that develops digital fluency and models the underpinning nature of Digital Technologies & Hangarau Matihiko in all learning areas.
 - c) Delivers Hangarau Matihiko Professional Learning Development kia Māori te aronga.
 - d) Includes funding, and resourcing for a dedicated school-community partnership day to socialise the intentions the new curriculum with teachers, students and whānau; to signal commitment to a new and important area of contemporary and future New Zealand Curriculum; and to enable schools/kura to map out an implementation strategy.
 - e) Identifies early adopters and supports them to share their expertise.
- 34** That the plan incorporates the development of high quality, online professional learning platforms and communities for teachers:
 - a) aimed at developing conceptual knowledge and raising awareness of implementation possibilities
 - b) at each of Years 1-10, Years 11-13 and for Māori-medium to acknowledge the specific and differing needs of each of those communities
 - c) with recognised progression and badging similar to commercial products offered Google, Apple and Microsoft
 - d) that involve subject associations and early adopters be involved in the development.

- 35 That a school/kura career pathway in Digital Technologies & Hangarau Matihiko leadership is defined and funded through additional MU allocations and time to schools.
- 36 That an additional dedicated across-school teacher be funded within each Community of Learning | Kahui Ako with the express purpose of sharing digital expertise and innovation.
- 37 That existing sources of funding be targeted to support upskilling and capability development (for example, Study Awards, TeachNZ scholarships).
- 38 That discussions be held with the sector about the way in which the Education Review Office might report in each of their school/kura reviews on the readiness for, and implementation of, Digital Technologies & Hangarau Matihiko.
- 39 That an independent, longitudinal evaluation be commissioned and a sector consultative group appointment to inform the evaluation and recommend responses to its emerging findings.
- 40 That the timeline for the full implementation of the NCEA Level 1-3 standards be revised as follows – Year 1-11 full implementation by 2020, Year 12/Level 2 by 2021, Year 13/Level 3 by 2022.
- 41 That the Ministry of Education work with Education Council of New Zealand to address barriers to entry for people suitably qualified to teach Digital Technologies & Hangarau Matihiko curriculum.

A comment on the name of the Learning Area

- 42 Given the substantial changes to the Learning Area, the Curriculum Advisory Group strongly recommends the name of the Technology Learning Area in the New Zealand Curriculum be updated to reflect the significant role the digital plays, as both 2 of 5 technological areas as well as underpinning the other 3, and the other elements of the curriculum. The Curriculum Advisory Group did not consider that such a change was necessary in Māori -medium where Hangarau was regarded as capturing the full essence of the learning area.

The name change in the New Zealand Curriculum is intended to:

- a) More accurately represent the updated Learning Area
 - b) Send a clear signal that this is a major transformational change to this area, not just minor reorganisation of a learning area
 - c) address concerns about the low status of “Technology” in secondary schools in particular – a status that puts pressure on time being made available for the delivery of the Digital Technologies technological areas.
 - d) reflect a similar form of naming in other curriculum areas – for example, Mathematics and Statistics, Health and Physical Education.
 - e) Ensure Digital Technologies is seen as part of a curriculum area in its own right with its own content, understandings and capabilities, and not just a pedagogical vehicle/tool for delivering the whole curriculum.
- 43 The Curriculum Advisory Group recommends that the new name incorporates the word “Digital” and suggests Digital and Materials Technology as one possibility.

Curriculum Advisory Group

ROLE	FIRST NAME	SURNAME
Chair	Graeme	Aitken
Primary Teacher (EM)	Dorothy	Burt
Secondary Teacher (EM)	John	Creighton
Secondary Teacher (MM)	Lani	Keelan-Goldsmith
Primary Teacher (MM)	Kirsty	Bennet-Ogden
Industry Rep (pathways focus)	Drummond	Morice
Industry Rep (CRIG)	Paul	Matthews
School Leader (EM)	Lesley	Murrihy
School Leader (MM)	Fleur	Wainohu
ERO Education Review Office	Barbie (Barbara)	Mavor
NZQA	Scott	Telfer

