PROGRAM OF RESEARCH: KEY FINDINGS FROM FOUR INTERNATIONAL COMPARATIVE STUDIES:

- **THE BRITISH COLUMBIA CURRICULUM**
- **THE FINNISH NATIONAL CORE CURRICULUM**
- **THE SINGAPORE CURRICULUM**
- **THE NEW ZEALAND CURRICULUM**

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1. INTRODUCTION

This paper presents findings from studies undertaken by the Australian Curriculum, Assessment and Reporting Authority (ACARA) curriculum team in 2016-18 which compare the Australian Curriculum (AC) with the British Columbia Curriculum (BCC), the Finnish National Core Curriculum (FNCC), The New Zealand Curriculum (NZC)[1] and the Singapore Curriculum (SC). It summarises key insights and considerations across the four comparative studies that can help inform future advice on refinements and improvements to the AC.

The comparative studies used a mixed-methods research design that incorporated an assessment of the breadth, depth and rigour of each curriculum, along with analysis of the philosophical and pedagogical assumptions behind a number of identified lines of enquiry.

Evidence from these comparative studies identifies how high performing education systems are incorporating 21st century capabilities/competencies into their curricula. Recent developments in these curricula also include increasing emphasis on essential/core concepts at the expense of detailed statements of mandatory content, catering for student diversity, and emphasising the importance of equal access for all students including First Peoples and those with additional needs. Across these curricula there is also evidence that the level of flexibility available during curriculum implementation varies depending on the status of guidance provided about matters such as local curriculum planning, accompanying the written curriculum. For example, in British Columbia, Finland, New Zealand and Singapore the written curriculum documents include extensive advice regarding matters such as pedagogy, the relationship between curriculum components and processes for local curriculum development.

2. BREADTH, DEPTH AND RIGOUR

Analysis of the AC with the curricula from the four jurisdictions focused on considerations of the breadth, depth and rigour of each. For the purposes of the analyses, the following definitions applied:

- **Breadth** refers to the number or range of content or topics covered in the curriculum, often referred to as 'coverage'. Breadth was described as *limited, fundamental* or *comprehensive.*
- **Depth** refers to the detail or amount of knowledge that leads to the development of deep understandings of key concepts, principles and knowledge, and the ability to apply these understandings to real-world contexts. Depth was described as *limited, fundamental* or *challenging.*
- **Rigour** refers to the cognitive demand in the curriculum required for students to engage in higher order thinking. Rigour was described as *limited, moderate* or *challenging*.

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[1] The New Zealand Ministry of Education (NZME) National Curriculum includes *The New Zealand Curriculum,* used by English-medium schools and *Te Marautanga o Aotearoa*, which is used by schools (kura) that deliver the curriculum in te reo Māori and also schools that deliver in dual medium instruction. For the purposes of this study *The New Zealand Curriculum for English-medium teaching and learning in years 1–13 has been used.*

A template was developed to map curricular breadth, depth and rigour using the three-point scale. Findings were analysed for each of the eight learning areas at the comparison points of Years 2, 6 and 10 by equivalent year, grade or level of the comparative curricula.

2.1. Key findings

Across the four curricula compared, there was general consistency in the levels of breadth, depth and rigour within and between learning areas[2]/subjects[3]. This was not unexpected given the levels of achievement attained by students from these jurisdictions in international assessments. It also reflects general agreements about the concepts and skills that constitute essential discipline-based learning and awareness of how this knowledge can be introduced and developed across the compulsory years of schooling.

In comparison to the other curricula, the AC was found to be a more prescriptive curriculum, characterised by disciplinary knowledge, skills and understandings described by content descriptions and achievement standards, supported by general capabilities and cross curriculum priorities that are developed across the learning areas.

Where variation was evident it tended to highlight different approaches to curriculum design and prescription, responsibility for guidance to schools for implementation and approaches to developing deep understanding in some learning areas.

Overall, the AC attempts to strike a balance of depth and breadth across all learning areas with some tendency to more breadth than the other curricula. Similarly, The NZC illustrates how depth and breadth are equally important, while the British Columbia's new curriculum design privileges depth over breadth. Singapore, which has trimmed its curriculum content by 30 per cent, exhibits high-order rigour especially in English, Mathematics and Science. The FNCC, while not prescriptive, also exhibits high-level rigour.

More specifically, in terms of breadth, both the AC and FNCC offer *comprehensive* breadth, more so than The NZC, SC and BCC, with a high degree of consistency across the learning areas/subjects and year levels. There is some variability in breadth across the subjects in the BCC, and the SC shows mostly *fundamental* breadth across the three comparison points.

The research found that depth was *challenging* in most learning areas/subjects across all curricula, particularly in the secondary years. Science was the most variable, with the AC showing *fundamental* depth at Year 2 and Year 10, and *limited* depth at Year 6, whereas in the BCC there was *challenging* depth in Science across all year levels, and in the SC *challenging* depth in Year 6 and Year 10 Science. There was also general consistency in depth across the curricula at Year 2 with most jurisdictions showing *fundamental* depth for the Humanities/Social Sciences, Technologies subjects and Health and Physical Education.

There was most variability across all curricula when comparing rigour. The most consistent judgement was for AC and FNCC, with both offering *challenging* rigour across most learning areas/subjects. Singapore was deemed to have a highly rigorous curriculum, while it was not

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[2] 'Learning areas' is the overarching collective term for disciplines of study (subjects) in the AC and The NZC
[3] 'Subjects' is the overarching collective term for disciplines of study in the BCC, FNCC and SC

possible to make a determination of rigour for some BCC subjects given the flexible choices of study in some subjects and the focus on big ideas and less prescription.

Focusing on depth, breadth and rigour ensured that the analyses drew mostly on the actual written curriculum – i.e. the content to be taught and the standards to be achieved. Additional comments noted by the curriculum specialists in the comparative study reports highlight other aspects of interest in the various curricula, such as embedding ICT capability within learning areas/subjects or the inclusion of 'new' topics in Science or specific concepts in the Humanities or Health and Physical Education curricula.

3. LINES OF INQUIRY

In addition to an assessment of the breadth, depth and rigour of each curricula, curriculum officers looked at the philosophical and pedagogical assumptions behind a number of identified lines of enquiry:

- purpose/goals of curriculum
- role and function of the competencies/capabilities/skills/values for learning
- flexibility of student progress through the curriculum/ sequencing of the curriculum
- nature of curriculum content (includes the additional focus on the place of Humanities and STEM, ICT General Capability/Technology, and Literacy and Numeracy)
- presentation of content and achievement standards
- student agency
- strategies to address student diversity with respect to demographic characteristics (plus focus on Indigenous perspectives).

3.1. Key findings

3.1.1. *Purpose/goals of curriculum*

Each of the four international curricula have similar goals to those of the AC as specified in Table 3.1. Themes that are common across the international curricula include aspirations for young people to be:

- confident, creative, active/energetic, involved/informed citizens
- life-long learners who can think and question, interact and express themselves
- culturally aware and respectful
- able to live full and satisfying lives and can take care of themselves and others
- able to secure a sustainable future for themselves and others.

Table 3. 1 *Goals of the curricula considered in the comparative studies*

Australian Curriculum	British Columbia Curriculum	Finnish National Core Curriculum	The New Zealand Curriculum	Singapore Curriculum
… to help all young Australians to become successful learners, confident and creative individuals, and active and informed citizens.	… supporting the development of citizens who are competent thinkers and communicators, and who are personally and socially competent in all areas of their lives.	… to ensure the equality and high quality of education and to create favourable conditions for the pupils' growth, development and learning	a vision of young people who will be confident, connected, actively involved, lifelong learners	… to help our students to discover their own talents, to make the best of these talents and realise their full potential, and to develop a passion for learning that lasts through life.

3.1.2. *Role and function of the competencies/capabilities/skills/values for learning*

The AC and the four international curricula all position 21st century competences/capabilities/skills and values as significant components of the curriculum. All identify both the traditional disciplines and these competencies as key elements of learning in their curriculum and represent that in different ways.

In each of the curricula, development of knowledge, skills and understandings of (traditional) learning area/subject content is explicitly connected to development of 21st century competencies/ capabilities and broader issues of national concern. The curriculum design models used in the BCC, FNCC and SC highlight a futures-orientation [See BCC 'Know-Do-Understand', FNCC Transversal Competencies model and Singapore 21CC].

The AC identifies seven general capabilities that play a significant role "in equipping young Australians to live and work successfully in the twenty-first century" (ACARA, 2017a). Each capability is organised into elements and sub-elements within a continuum focused on the development of skills and attitudes of learners as they progress through their schooling. Icons are used to signal opportunities for developing these capabilities within each learning area.

The BCC places literacy and numeracy and a set of core competencies at the centre of the curriculum model (Province of British Columbia, 2018a). The core competencies have the same status as the curriculum content and inform how the curriculum content is delivered in all areas of learning. In the BCC, literacy and numeracy are seen as fundamental to learning and are embedded in all subjects.

In the FNCC, the traditional academic disciplines sit alongside a set of seven Transversal Competences. An "integrative approach" to learning (Finnish National Board of Education (FNBE), 2016b) encourages development of the competences and multidisciplinary learning. For example, all schools are required to designate time for the teaching and development of multidisciplinary projects that aim to develop the Transversal Competences.

The NZC describes five Key Competencies that support the knowledge, skills, attitudes and values that all people need for today, for the future and to become successful lifelong learners. The competencies are not intended to stand alone and are intentionally included, in context, across the learning areas to achieve The NZC vision for young people to become confident, connected, actively involved, lifelong learners (NZME, 2007).

The SC identifies a framework of 21st Century Competencies (21CC). These competencies are reflected in each subject syllabus. The pedagogical guidance provided with the curriculum supports teachers to maintain a strong relationship between disciplinary knowledge and skills as students develop these competencies. The 21CC framework also reflects Singapore's commitment to nation-building and national policy statements and initiatives that "communicate a shared philosophy of education and desired student outcomes" towards 'nurturing' and sustaining a vibrant society and vigorous economy for Singapore (SME, 2017a).

The international curricula all give a more prominent role and function to the development and implementation of core competences/capabilities/skills than could be argued does the AC. Strengthening the position of the capabilities was a focus of the recent review of the BCC and also reflects the goals for education in the FNCC, The NZC and SC. All these jurisdictions provide detailed and authoritative advice about the intended relationship between competencies and discipline-based content. Table 3.2 outlines the competencies and capabilities included in each curriculum.

Table 3. 2 *Competencies and capabilities across the five curricula*

AC General Capabilities	BCC Core competencies	FNCC Transversal competencies	The NZC Key competencies	SC 21st Century competencies and student outcomes
Literacy Numeracy Critical and creative thinking ICT capability Personal and social capability Ethical understanding Intercultural understanding	Communication Creative thinking Critical thinking Positive personal and cultural identity Personal awareness and responsibility Social responsibility (along with literacy and numeracy)	Thinking and learning to learn Cultural competence, interaction and self-expression Taking care of oneself and managing daily life Multiliteracy ICT competence Working life competence and entrepreneurship Participation, involvement and building a sustainable future	Thinking Using language, symbols and texts Managing self Relating to others Participating and contributing	Core values: self-awareness, self-management, social awareness, relationship management, responsible decision-making Civic literacy, Global awareness and Cross-cultural skills Critical and Inventive Thinking Communication, Collaboration and Information Skills

3.1.3. *Flexibility of student progress through the curriculum/ sequencing of the curriculum*

The BCC, FNCC, NZC and SC allow for high levels of flexibility at the local level in regard to programming and content delivery. This is achieved by providing explicit guidance that outlines requirements and strategies for developing local curriculum. This advice is supplemented by materials such as illustrations of practice published online, monitoring and professional learning. For example, the SC affords autonomy and resources to schools to enable them to build on their strengths and create "niches of excellence" (SME, 2017b). While the structure of the AC enables local flexibility regarding programming and content delivery, it provides minimal implementation advice compared with the other four curricula.

Each of the curricula considered in these comparative studies sets out content in a developmental sequence expressed by year, grade or level. In the AC, BCC, FNCC and SC, this is a one to one relationship. In The NZC, students progress through eight levels typically completing a level over a two- to three-year period. Advice around student progress is, in each context, a matter for local decision. A range of material such as professional learning materials, sample instruction outlines (BCC), tables indicating teaching strategies and 'topics' relevant to learning outcomes (SC) and learning progressions for literacy/English and numeracy/Mathematics (The NZC) are provided to support schools to monitor student progress.

3.1.4. *Nature of curriculum content*

The learning areas/subjects are central components in each of the curricula in the comparison studies. Variations are evident in:

- the name, status and content of other curriculum components
- the relationship between each set of curriculum components
- the scope and status of advice provided about appropriate curriculum planning strategies and pedagogies to enact the intended curriculum.

British Columbia sets out the curriculum in a three-part model which includes*:*

- big ideas
- learning standards – curricula competencies and content
- core competencies.

The curriculum for each subject area is set out using these organisers. For example, in Science at Grade 4, one Big Idea is that "All living things sense and respond to their environment". This connects to content relating to the scientific skills of 'questioning and predicting' and knowledge of topics such as biomes or the effect of temperature on particle movement (Province of British Columbia, 2018a). This structure is concept-driven and places less emphasis on prescribed content and pedagogical direction than the previous version of the BCC.

The FNCC consists of two parts:

- objectives and core content for teaching all subjects including the mission, values and structures of education
- conceptions of learning and goals for developing the learning environment, school culture and working methods (FNBE, 2016a), as well as the principles of guidance, differentiation, and assessment.

The advice in the FNBE (2016a) and associated materials detail expectations about the learning environment and working approaches, and sets out requirements for time allocations and inclusion of multidisciplinary projects that incorporate disciplines and a deliberate focus on the Transversal Competencies.

The NZC is a framework that connects an overarching vision for learning supported by:

- values
- key competencies
- learning areas including achievement objectives. (NZME, 2017)

The NZC is underpinned by a set of principles and alongside it there is guidance regarding purpose and scope, effective pedagogy and local decision making. Information about planning local curriculum, appropriate pedagogy etc. is provided in the curriculum and supported by an extensive range of resources and professional learning material. Further development of materials to support this approach is continuing in New Zealand. Ongoing engagement between with the NZME as this work unfolds will provide valuable reflections for ACARA about interactions between intended and enacted curriculum in a 21st century context.

The SC combines a focus on:

- a framework for 21st century competencies (21CC) and student outcomes
- subject syllabuses. (SME, 2015)

The 21CC framework aims to provide students with holistic education, both in academic and non-academic spheres. This focus is embodied in the mantra 'Teach less, learn more' (SME, 2017b). This mantra is the focus of professional learning around curriculum implementation. Detailed information about the relationship between the framework and learning content is provided in each of the syllabus documents. This can include advice about pedagogy, assessment, the learning environment, and approaches to developing specific attitudes and values.

There are significant differences in the status and relationships between the curriculum components for each of the curricula. For example, the BCC 'Know-Do-Understand' conceptual model places concepts at the centre of curriculum design, whereas the SC presents the syllabuses and the 21CC framework separately, particularly for secondary schools. In each case detailed advice is provided about the intended relationship between components of the curriculum and how this should be reflected in local curriculum and pedagogy.

Humanities and STEM

In terms of curriculum design, each of the curricula considered in the comparative studies includes a 'traditional' range of Humanities disciplines and the disciplines that underpin STEM. The competencies/capabilities identified with each of the curricula also include themes/concepts that relate to both Humanities and STEM. The universal nature of many of the competencies means they can be considered from both a Humanities and a STEM perspective. For example, the purpose of the Transversal Competencies in the FNCC is to foster students' "development as a human being and as a citizen" and competencies such as 'participation and influence, building the sustainable future' are developed through knowledge from both Humanities and STEM perspectives.

ICT General Capability/Technology

Across the curricula, ICT is positioned as either a specific competency/capability or discipline-specific ICT knowledge and skills embedded in the learning area/subject content.

Table 3.3 demonstrates how ICT is incorporated into each curriculum.

Table 3. 3 *ICT representation in the curriculum*

Australian Curriculum	British Columbia Curriculum	Finnish National Core Curriculum	The New Zealand Curriculum	Singapore Curriculum
General Capability: ICT	Core Competency: Communication	Transversal Competence: Digital competence	Key Competency: Using language, symbols, and texts	21CC framework: Communication, collaboration, and information skills
Subject: Digital technologies	Subject: Applied Design, Skills, and Technologies		Subject: Technologies	

Literacy and Numeracy

Literacy and numeracy are identified as fundamental and central to all learning in each of the curricula (see Table 3.4). The rationales for this are also quite similar and emphasise that while literacy is commonly associated with English/mother tongue and numeracy with Mathematics, these capabilities can be developed and applied across all learning areas/subjects.

Table 3. 4 *Literacy and numeracy representation as capabilities/competencies in the curriculum*

Australian Curriculum	British Columbia Curriculum	Finnish National Core Curriculum	The New Zealand Curriculum	Singapore Curriculum
General Capabilities: Literacy and Numeracy	Fundamental to all learning	Transversal Competence: Multiliteracy	Key Competencies: Using language, symbols, and texts	21CC framework: Communication, collaboration, and information skills

3.1.5. *Presentation of content and achievement standards*

The AC provides statements of what students should learn in the content descriptions, and of the quality of learning expected of them in the achievement standards. Elaborations are provided as examples of approaches for content delivery.

Like the AC, the BCC is presented in a web-based format and makes extensive use of hyperlinks. The curriculum for a year level in each subject is set out on a single web page. For example, the curriculum for Grade 3 Mathematics includes Big Ideas such as 'Development of computational fluency in addition, subtraction, multiplication, and division of whole numbers requires flexible decomposing and composing'. The Curricular Competencies include skills/proficiencies such as 'Develop mental math strategies and abilities to make sense of quantities' and the content (knowledge) is expressed in short statements such as 'number concepts to 1000' (Province of British Columbia, 2018b). In the AC similar content is covered in Year 2 through two content descriptions 'Recognise, model, represent and order numbers to at least 1000 (ACMNA027) and Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA28) supported by information in the Proficiencies and elaborations.

The BCC, FNCC and SC all present curriculum using an 'on a page' approach that might be worth exploring in any revisions to presentation of the AC so that teachers get stronger support to connect curriculum content, capabilities, cross-curriculum priorities and support resources.

The FNCC is presented in table format that connects objectives of instruction, content areas and Transversal Competencies. The content areas include information related to knowledge and skills. For example, in FNCC Grades 1 and 2, Mathematics C1 focuses on 'Thinking Skills' and C2 is about 'Numbers and Operations'. A short paragraph describes each of these content areas. This additional text unpacks the information provided in the table.

In The NZC, achievement objectives are provided and are structured in a similar way to the AC's content descriptions. Relationships between objectives are implied within each learning area.

The SC's syllabuses are organised around content strands and process strands. They also identify underpinning concepts or a framework for each subject. The curriculum for each subject uses a different format, although each provides the same range of information including specific learning outcomes linked to pedagogical advice. Information about 'What

makes a good school' includes the following point "a good school ensures all students acquire strong fundamentals of literacy and numeracy and develops them holistically, in character, knowledge and critical competencies" (SME, 2017c).

The key components of the five curricula structures examined in the international comparative studies are outlined in Table 3.5.

Table 3. 5 *Key components of the five curricula structures*

Australian Curriculum	British Columbia Curriculum	Finnish National Core Curriculum	The New Zealand Curriculum	Singapore Curriculum
Learning areas • Content descriptions • Achievement standards General capabilities Cross-curriculum priorities	Learning areas • Concepts • Big ideas • Learning standards • Core competencies	Subject-specific objectives and core content Transversal Competencies	Learning areas • Achievement objectives Core competencies	Learning Outcomes in syllabuses 21CC Framework

3.1.6. *Student agency*

Student agency can be defined as "the capacity and propensity to take purposeful initiative… agency involves having a sense of purpose, planning and taking action to achieve goals, reflecting on feedback and advice, and taking responsibility for actions" (OECD Education 2030, Curriculum Content Mapping Draft [unpublished], 2018).

The AC website advises that teachers should "use the Australian Curriculum to develop teaching and learning programs that build on students' interests, strengths, goals and learning needs, and address the cognitive, affective, physical, social and aesthetic needs of all students. Advice and illustrations of practice are provided to:

- help ensure that all students are able to access and participate in the AC

- provide advice as to how the three-dimensional design of the AC may be used to address the learning needs of all students

- provide specific advice with regard to meeting the learning needs of students with disability, gifted and talented students, and students for whom English is an additional language or dialect

- provide examples illustrating how students with diverse needs can access and participate in the AC" (ACARA, 2017b).

British Columbia's newly revised curriculum embraces a focus on student agency. The redesign of the curriculum acknowledges that "not all students learn successfully at the

same rate, in the same learning environment, and in the same ways" (Province of British Columbia, 2018a). Specific advice about personalised learning is provided in the BCC Overview.

The FNCC describes learning environments and working methods noting that "feeling successful and experiences gathered in various environments and learning situations inspire pupils to develop their personal competence. The pupils take part in developing learning environments. The pupils' individual needs are taken into account in the planning of learning environment". This advice is supported by a government decree (FNBE, 2016b).

The 'High Expectation' principle in The NZC states that "the curriculum supports and empowers all students to learn and achieve personal excellence, regardless of their individual circumstances" (NZME, 2012). This principle informs advice around planning for local curriculum content and delivery.

This focus is also evident in the way that the most recent revisions to the SC have privileged the 21CC framework. The educational goal for Singapore is "to provide every child with the opportunity to develop holistically and maximise his or her potential" (SME, 2017b).

3.1.7. *Strategies to address student diversity with respect to demographic characteristics*

The AC provides advice and materials to guide teachers in personalising learning for students with disability, gifted and talented students and those from Culturally and Linguistically Diverse (CALD) backgrounds. Largely, catering for student diversity is a matter for the jurisdictions.

The BCC has an overarching commitment to equity and diversity and identifies 'personalised learning' as a pillar of the curriculum (Province of British Columbia, 2018a). An extensive range of material is available to enable schools to make the curriculum accessible for all students.

The FNCC provides specialised support for students with diverse needs through subject or activity programs. Advice in the introduction to the curriculum focuses schools' attention on the importance of catering for students' needs in individual or group settings. Professional learning and advice about planning local curriculum emphasise the importance of personalising and differentiating student's learning experiences. A national approach to monitoring also supports schools to achieve these goals (FNBE, 2016a).

The NZC includes specific advice around inclusive practices that ensure progress and achievement for all students. Teachers, students and whanau (the community) are positioned at the centre of the inclusive curriculum and they work together to gather knowledge about each student, their abilities and needs (NZME, 2007). This knowledge informs the provision of relevant learning programs for all students and a range of resources are provided by the NZME to support teachers' practice.

Singapore's revised curriculum includes a greater focus on 21st century skills such as collaboration. However, in Singapore students unable to attend primary school due to

physical or intellectual disabilities have been exempt from compulsory education, but this will change from 2019 (SME, 2018a).

3.1.8. *Strategies to address student diversity with respect to indigenous perspectives*

The AC includes Aboriginal and Torres Strait Islander Histories and Cultures as one of three cross-curriculum priorities. Specific opportunities to teach aspects of this priority are identified in the content descriptions and elaborations across the learning areas, although the priorities do not constitute curriculum on their own (ACARA, 2017c). The languages curriculum includes a framework for Aboriginal languages and Torres Strait Islander languages (ACARA, 2017d).

In the BCC, indigenous perspectives and knowledge are evident in all subjects. The curriculum includes a comprehensive focus on First Peoples' Principles of Learning. The Curriculum Overview notes that "References to Aboriginal perspectives and knowledge are both explicit and implicit in the redesigned curriculum and are evident in the rationale statements, goals, learning standards, and some of the elaborations" …and …. "In all of the areas of learning, teachers are encouraged to teach in ways that respect the place in which the students are" (Province of British Columbia, 2018a). Teachers are asked to consider the school learning environment and the local community context in their planning and teaching. The BCC languages template can be used to create a local indigenous language curriculum. Note, the template is currently being updated to reflect the redesigned curriculum.

In Finland, schools are positioned as learning communities that are part of a culturally transformative and diverse society. A range of strategies and advice are provided through the curriculum to reinforce the importance of Sami culture and various minority groups whose learning is delivered in their mother tongue (FNAE, 2017).

New Zealand provides a separate Maori-medium curriculum, *Te Marautanga o Aotearoa*, based on Maori philosophies. Maori perspectives and opportunities to learn the language and culture are also included in the English-medium NZC (NZME, 2007).

Singapore places an emphasis on a culturally responsive curriculum including consideration of indigenous Malay history and culture. All students in Singapore are afforded the opportunity to become proficient in at least one mother tongue language (Chinese, Malay or Tamil) and English (SME, 2018b). Students sit examinations in at least one mother tongue language at the end of primary school (SME, 2016) and study of a mother tongue language is compulsory at secondary school (SME, 2018c).

These approaches reflect national contexts. For example, content relating to Maori perspectives is embedded throughout The NZC reflecting the Treaty of Waitangi (one of the principles that underpins the curriculum) (NZME, 2015). In the AC and the other international curricula there is less direct representation of indigenous perspectives, although each provides extensive advice and support material in this area.

4. REFERENCES

Australian Curriculum, Assessment and Reporting Authority. (2017a). *F-10 curriculum: General capabilities.* Retrieved from https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/

Australian Curriculum, Assessment and Reporting Authority. (2017b). *Student diversity.* Retrieved from https://www.acara.edu.au/curriculum/student-diversity

Australian Curriculum, Assessment and Reporting Authority. (2017c). *F-10 curriculum: Cross-curriculum priorities.* Retrieved from https://www.australiancurriculum.edu.au/f-10-curriculum/cross-curriculum-priorities/

Australian Curriculum, Assessment and Reporting Authority. (2017d). *F-10 curriculum: Framework for Aboriginal Languages and Torres Strait Languages.* Retrieved from https://www.australiancurriculum.edu.au/f-10-curriculum/languages/framework-for-aboriginal-languages-and-torres-strait-islander-languages/

Finnish National Agency for Education. (2017). *Education in Finland: Finnish education in a nutshell.* Retrieved from https://www.oph.fi/download/146428_Finnish_Education_in_a_Nutshell.pdf

Finnish National Board of Education. (2016a). *Finnish National Core Curriculum for Basic Education 2014.* Next Print Oy: Helsinki.

Finnish National Board of Education. (2016b). *New national core curriculum for basic education: Focus on school culture and integrative approach.* Retrieved from https://www.oph.fi/download/174369_new_national_core_curriculum_for_basic_education_focus_on_school_culture_and.pdf

New Zealand Ministry of Education. (2007). *The New Zealand curriculum for English-medium teaching and learning in years 1 – 13.* Retrieved from http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum

New Zealand Ministry of Education. (2012). *High expectations.* Retrieved from http://nzcurriculum.tki.org.nz/Principles/High-expectations

New Zealand Ministry of Education. (2015). *Principles: Foundations of curriculum decision making.* Retrieved from http://nzcurriculum.tki.org.nz/Principles

New Zealand Ministry of Education. (2017). *The New Zealand Curriculum.* Retrieved from http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum#collapsible3

Province of British Columbia. (2018a). *Curriculum overview.* Retrieved from https://curriculum.gov.bc.ca/curriculum/overview

Province of British Columbia. (2018b). *Mathematics Core Competencies.* Retrieved from https://curriculum.gov.bc.ca/curriculum/mathematics/core/introduction

Singapore Ministry of Education. (2015). *21st Century Competencies.* Retrieved from https://www.moe.gov.sg/education/education-system/21st-century-competencies

Singapore Ministry of Education. (2016). *Primary School curriculum.* Retrieved from https://www.moe.gov.sg/education/primary/primary-school-curriculum

Singapore Ministry of Education. (2017a). *Singapore curriculum philosophy.* Retrieved from https://www.moe.gov.sg/about/singapore-teaching-practice/singapore-curriculum-philosophy

Singapore Ministry of Education. (2017b). *Education system: Nurturing students.* Retrieved from https://www.moe.gov.sg/education/education-system/nurturing-students

Singapore Ministry of Education. (2017c). *Every school a good school.* Retrieved from https://www.moe.gov.sg/education/education-system/every-school-a-good-school

Singapore Ministry of Education. (2018a). *Special education needs.* Retrieved from https://www.moe.gov.sg/education/special-education

Singapore Ministry of Education. (2018b). *General information on studying in Singapore.* Retrieved from https://www.moe.gov.sg/admissions/returning-singaporeans/general-information-on-studying-in-singapore

Singapore Ministry of Education. (2018c). *Normal (academic) course for secondary school.* Retrieved from https://beta.moe.gov.sg/courses/normal-academic/

5. LIST OF TABLES

6. LIST OF ABBREVIATIONS

21CC	21st Century Competencies
AC	Australian Curriculum
ACARA	Australian Curriculum, Assessment and Reporting Authority
BC	British Columbia
BCC	British Columbia Curriculum
CALD	Culturally and Linguistically Diverse
FNBE	Finnish National Board of Education
FNAE	Finnish National Agency for Education
FNCC	Finnish National Core Curriculum
ICT	Information and Communications Technology
OECD	Organisation for Economic and Cultural Development
SC	Singapore Curriculum
SME	Singapore Ministry of Education
STEM	Science, Technology, Engineering and Mathematics
NZC	The New Zealand Curriculum
NZME	New Zealand Ministry of Education