



**MONITORING THE EFFECTIVENESS OF THE
FOUNDATION – YEAR 10 AUSTRALIAN CURRICULUM**

2019

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1. EXECUTIVE SUMMARY

The Australian Curriculum, Assessment and Reporting Authority (ACARA) summarises stakeholder feedback on the implementation of the Australian Curriculum (AC) in a report titled *Monitoring the Effectiveness of the Foundation – Year 10 Australian Curriculum*. This report reflects an annual process of collecting and synthesising information that will inform future curriculum renewal. The report for the 2018–19 monitoring cycle is provided here.

Since 2009, the staged release of the three-dimensional AC has brought new opportunities and challenges to all who have an interest in school education in the 21st century. In 2016 the first generation of the national curriculum for students in Foundation – Year 10 was completed, labelled version 8.3. Updates to this version have resulted in the current Version 8.4.

The 2018–19 year continued the progression from the development and publication of the curriculum to the development and publication of resource materials and supporting documentation. In addition, it continued a program of national and international research to inform future iterations of the AC.

The 2019 monitoring report contains feedback collected between 1 July 2018 and 30 June 2019. Responses were received from departmental, school and curriculum authorities in all Australian states and territories. Feedback was also collected from ACARA's advisory and reference groups.

Respondents were asked to place a particular emphasis on key themes emerging from the previous four monitoring reports and the program of research being undertaken. These themes were: the nature and scope of essential content; the place of general capabilities (GCs); the recognition of Australia's First Peoples within the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority (CCP); and support for curriculum implementation.

The key findings from this process of monitoring suggest a desire for refinement of the AC within its existing structure and design, rather than any wide-ranging revision. Submissions confirm support for the existing overarching structure of the AC – that is, the three-dimensional design; the organisation into content descriptions and achievement standards; the presentation in years/stages F–10; and the online publication of the curriculum, with improved and different functionality to support connections and interrelationships.

Submissions argue for refining the AC to focus on prioritising depth and rigour over breadth of content, with particular emphasis on strengthening connections across content in F–6 and a clearer alignment between learning area content and GCs. There is wide support for the Aboriginal and Torres Strait Islander Histories and Cultures CCP, with the suggestion that this priority be further resourced to assist implementation. There is also an indication that further support materials would benefit some jurisdictions in their implementation of the AC as a whole.

The findings from this monitoring report will contribute to informing ACARA's advice to education ministers on the scope of refinement of the AC by mid-2020. Specifically, the key

findings arising from the 2019 monitoring process against the four themes include:

Essential content

- a. Strong desire to refine current learning area content to ensure consistency and coherence across learning areas and subjects at strand and sub-strand levels, as well as some consideration of further alignment to suit the needs of different phases of learning, particularly F–6.
- b. Majority view that disciplinary knowledge be retained as the basis of essential content, with a minority of stakeholders expressing interest in exploring the potential of using the capabilities as an organisational focus for curriculum content for at least some years/phases of schooling.
- c. Strong support to sharpen curriculum content to focus on what is essential by:
 - reducing content to privilege depth and rigour over breadth, especially in the primary years, with a focus on foundational skills in early years
 - developing a framework to guide greater consistency and clarity of language and cognitive alignment between content descriptions and achievement standards within and across learning areas
 - organising content to facilitate transdisciplinary learning, especially in primary years
 - organising content around core concepts, especially in Mathematics, Science and HASS
 - aligning the Foundation to Year 2 curriculum more explicitly to the Early Years Learning Framework (EYLF).

General capabilities

- a. Suggestions to refine the AC by:
 - reviewing the scope, number and organisation (including grouping) of GCs
 - showing better connections between the GCs and learning area content and achievement standards
 - recognising that not all GCs need to be treated in same way, nor in all learning areas.
- b. An overall desire that teachers be provided with more support to plan, teach and assess using the three dimensions of the AC.

Recognition of First Peoples in the cross-curriculum priority

- a. Strong support to maintain and strengthen the focus on the Aboriginal and Torres Strait islander Histories and Cultures CCP by:
 - developing new content elaborations in other learning areas (similar to the recent new elaborations the AC: Science)
 - providing more teacher support through materials, access to culturally appropriate resources, and assistance with strategies to engage with local communities.

- b. Overall desire that ACARA continue to provide ongoing resources and advice materials to support implementation of the CCP, with particular mention made of elaborations, work samples and illustrations of practice.

Support for implementation

There are suggestions for ongoing provision of advice and resources to support implementation of the AC, with the requested nature and scope of ACARA's role in the provision of further or different resources varying depending upon jurisdiction. Smaller sectors requested ongoing, additional and different resources, and larger jurisdictional authorities maintained the importance of their roles in providing implementation support relevant to their own contexts.

Suggestions for additional and different support include:

- interactive and digital resources
- resources to showcase the integration of the three dimensions of the AC
- teaching and learning advice and planning tools
- advice about the relationship between achievement standards and A–E reporting.

Google analytics of AC website use

Website usage reported for the 2018–19 monitoring period cannot be compared with analytics reported in previous reports. Until mid-2017, the AC website was hosted by Education Services Australia. ACARA now hosts the AC website, incorporating a different website structure. At the changeover on 12 July 2017, the former Google Analytics tracking code was replaced. The new structure means that data cannot be extracted in the same manner to perform an identical comparative analysis in a different reporting period.

Key findings in the report relating to website use in 2018–19 are:

- Queensland recorded the greatest number of pageviews of the AC website, as in the previous monitoring period. Pageviews increased for most states and territories.
- Of the learning areas, the Mathematics entry page registered the most visits, followed by English, then HASS. This was also a similar finding in the 2017–18 period.
- The general capabilities overview page captured the largest and an increased audience for this dimension, followed by the general capabilities, literacy webpage.
- Of the cross-curriculum priorities pages, the Aboriginal and Torres Strait Islander priority again logged the most pageviews, significantly above other pages for this dimension.
- Work samples portfolios, illustrations of practice, the national literacy and numeracy learning progressions, and resources such as those on the Digital Technologies in Focus project pages captured audiences of very varying numbers.
- Of all the illustrations of practice provided on the AC website, Aboriginal and Torres Strait Islander Histories and Cultures' were the most viewed in 2018–19, higher than in the previous reporting period.

Media monitoring of curriculum issues

Data collected by monitoring the media throughout the reporting period show the following:

- Media interest in students' literacy and numeracy skills, and performance in national and international tests remains high, as in previous years.
- Teacher expertise and qualifications in STEM-related subjects, initiatives to increase teacher supply, as well as student engagement in these subjects were topics widely reported.
- Interest was indicated in the development of students' knowledge, understanding and skills in a range of capabilities and specialised areas of disciplinary learning, with articles and reports recommending a wide range of curriculum inclusions such as 21st century literacies including financial literacy, civics education, physical education including swimming, online safety and security, comprehensive arts education, access to learning Aboriginal and Torres Strait Islander languages and other community languages.

2. BACKGROUND

The *Shape of the Australian Curriculum* paper, first approved by the Council of Commonwealth and state and territory education ministers in 2009, guided the development of the AC. This paper reflects the position adopted by ministers collectively in their 2008 *Melbourne Declaration on Educational Goals for Young Australians*. The most recent version of the *Shape of the Australian Curriculum* v4.0 was approved by the ACARA Board in late 2012, reflecting the evolving processes used in the development of the AC.

The process of curriculum development involved four interrelated phases: shaping, writing, implementation, and monitoring and evaluation.

Over a period of eight years, the AC was developed in eight learning areas for Foundation – Year 10. In 2015, the Education Council endorsed what is now version 8.4 of the AC, with the publication of the final subjects and framework in the *Australian Curriculum: Languages (AC: L)* in 2016.

Since 2012 and in addition to the Foundation – Year 10 curriculum, 15 senior secondary subjects have been endorsed as the agreed common base for the development of, and inclusion in, state and territory curricula, according to their own processes and timelines.

Australia's federal system of government allocates responsibility for the delivery of school education to the states and territories. Therefore, all jurisdictions' curriculum and school authorities have determined the pace and nature of the implementation of the AC. Decisions are made in each jurisdiction in relation to changing any existing state or territory-based curricula, ensuring the readiness of teachers, schools and systems, making resources and other support available and engaging constructively with ACARA.

The annual monitoring process is described in the paper noted in 2013 by Education Council: *Monitoring and Evaluation of the Australian Curriculum*.

With the completion of the AC, states and territories are in a position to reflect on the three-dimensional nature of the AC. For most stakeholders, this monitoring cycle continues a sustained period of curriculum stability with a focus on implementation.

During the 2018–19 period, the AC was enhanced by the development of resources to support implementation of the curriculum, such as the AC: Science content elaborations and related teacher background information to support the Aboriginal and Torres Strait Islander Histories and Cultures CCP, the development of Digital Technologies resources and professional learning materials, new and refreshed student work samples and further illustrations of practice.

For the 2018–19 monitoring cycle, all states and territories were invited to provide specific feedback on four themes that have emerged from previous annual monitoring processes (2015–2018) and ACARA's program of research. These themes were related to: essential content, the place of general capabilities, the place of Australia's First Peoples within the Aboriginal and Torres Strait Islander Histories and Cultures CCP, and support for curriculum implementation.

3. METHODOLOGY

The *Monitoring the Effectiveness of the Foundation – Year 10 Australian Curriculum 2019* report summarises feedback from states and territories, which reflects the monitoring cycle of 1 July 2018 – 30 June 2019. The main sources of feedback are curriculum and school authorities.

The report also summarises issues arising from direct enquiries to ACARA in relation to the AC, curriculum matters raised in the media, and an analysis of AC website use.

ACARA's Chief Executive Officer, Mr David de Carvalho, wrote to state and territory departments and school authorities in April 2019 to invite participation in the monitoring process. Comment was requested on any aspect of the Foundation – Year 10 AC, but with a specific request to consider the following four questions:

1. Essential content: Is there room for improving the content of the Australian Curriculum to allow more depth and rigour over breadth?
2. The place of the general capabilities: Are there better ways of embedding the general capabilities into the learning area content and achievement standards?
3. Recognition of First Peoples: Is the place of Australia's First Peoples appropriately covered by the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority?
4. Support for implementation: What should be the focus of ACARA's future advice and activity to better support teachers to implement the curriculum?

Sixteen submissions were received from departmental, curriculum and school authorities. The submissions are representative of federal and all states' and territories' authorities, and sectors in most states and territories. Some responses were both specific and detailed, while others chose to provide high-level feedback.

The NSW Educational Standards Authority (NESA) indicated that it would not respond in detail given its current undertaking of a curriculum review. The NSW Curriculum Review Interim Report developed by Professor Geoff Masters was released on 22 October 2019. Reform directions proposed relate to three key areas: the content of the curriculum, the structure of the curriculum, and the senior school curriculum. The final report to the NSW Government is due in 2020.

The list of responders is provided in appendix A.

4. RESPONSES TO MONITORING REPORT 2017–18

a. Findings from the 2017–18 monitoring of the Australian Curriculum

The 2018 monitoring report focused on two key issues – the AC: Technologies and the ICT capability, and literacy and numeracy across the curriculum.

In relation to the implementation of the AC: Technologies curriculum and the ICT capability, the report found that:

- The Technologies learning area and the two subjects within the learning area are supported as important aspects of the AC.
- ICT as one of the general capabilities is supported.
- While jurisdictions provide advice and support for the implementation of the learning area and the capability, there is some variability across schools and systems based on the local phase of implementation and capacity of teachers.
- Systems and schools would like further advice and support in relation to the coherence between, and complementarity of, Digital Technologies and the ICT capability.

In relation to the focus questions on the implementation of literacy and numeracy across the curriculum, the report found that:

- Systems and schools strongly support literacy and numeracy as foundations to student learning and value literacy and numeracy being embedded in the AC learning areas and the general capabilities.
- While jurisdictions expressed support for the development of the national literacy and numeracy learning progressions (NLNLP) as teaching and learning tools, there was variability of interest in commitment to, and uptake of, their use.
- Systems and schools would like further advice and support in relation to the coherence among literacy and numeracy in learning areas, capabilities and the learning progressions.

b. Responses to the 2017–18 monitoring of the Australian Curriculum

During the current monitoring period, ACARA has responded to these findings by:

- developing and publishing further resources to support the Digital Technologies curriculum on the AC website. These include advice materials, school stories, resources to support teaching and learning, and professional learning modules
- participating in the learning progressions and online formative assessment national initiative, along with Australian Institute for Teaching and School Leadership (AITSL) and Education Services Australia (ESA): www.lpofai.edu.au/

5. JURISDICTIONAL IMPLEMENTATION OF THE AC F–10: 2018–19

The information below summarises the responses provided by jurisdictions in updating the status of their implementation of the AC F–10.

English	
ACT	Implemented
NSW	K–10 English syllabus incorporates AC: E content and glossary; includes additional content
NT	Implemented
Qld	Implemented
SA	Implemented
Tas.	Implemented
Vic.	Implemented includes levels prior to Foundation
WA	Implemented
Mathematics	
ACT	Implemented
NSW	K–10 Maths syllabus incorporates AC: M content and glossary; includes additional content
NT	Implemented
Qld	Implemented
SA	Implemented
Tas.	Implemented
Vic.	Implemented includes additional content, algorithmic thinking and sets
WA	Implemented
Science	
ACT	Implemented
NSW	7–10 Science syllabus incorporates AC: S content and glossary; K–6 Science and Technology syllabus incorporates AC: S, AC: DT and D&T, syllabuses include additional content
NT	Implemented
Qld	Implemented
SA	Implemented
Tas.	Implemented
Vic.	Implemented
WA	Implemented
Humanities and Social Sciences	
ACT	Implemented
NSW	K–10 History & Geography syllabuses incorporate AC: H and AC: G content and glossary; Commerce 7–10 elective course under review to incorporate AC: EB and AC: CC content; Mathematics K–10 syllabus includes financial concepts and skills; BSW Work Education 7–10 course under review to incorporate AC: WS content; civics and citizenship, and work and enterprise incorporated as learning across curriculum
NT	Implemented
Qld	Implemented
SA	Implemented
Tas.	Department and Catholic schools implemented, independent schools implemented version 8.3 in 2018 for primary HASS, History and Geography, Civics and Citizenship, Economics and Business
Vic.	Implemented incorporates AC version 7.5
WA	Implemented combines the four disciplines of HASS F–10 with single set of HASS skills

Health and Physical Education	
ACT	Implemented in 2017
NSW	PDHPE K–10 syllabus incorporates AC: HPE content & glossary; includes additional content
NT	Implemented
Qld	Implemented in Catholic schools; implementation by end 2020 DoE and independent schools
SA	Implemented
Tas.	Implemented
Vic.	Implemented
WA	Implemented (separate reporting of H and PE)
The Arts	
ACT	Implemented
NSW	Draft K–6 Creative Arts syllabus incorporates AC content
NT	Implemented
Qld	Implementation of version 8.3 in DoE and independent schools by end 2020
SA	Implemented
Tas.	Department schools implementing version 8.3 by end of 2019 for secondary schools; primary schools commence implementation from 2019; Catholic schools implemented; independent schools implementing version 8.3 at own pace
Vic.	Implemented
WA	Implemented
Technologies	
ACT	Implemented in 2017; reporting in 2018
NSW	Technology 7–8 syllabus incorporates AC: 7–8 DT and D&T content and glossary; K–6 Science and Technology syllabus incorporates AC: S, DT, D&T; draft 7–10 syllabuses under review for Agricultural Technology, Design and Technology, Food Technology, Graphics Technology, Industrial Technology, Marine and Aquaculture Technology and Textiles Technology will incorporate AC: D&T content; syllabuses include additional content; 7–10 Information and Software Technology under review and will incorporate AC: DT content
NT	Implemented
Qld	Implementation of version 8.3 in DoE and Catholic schools by 2020; implementation in independent schools by end of 2020
SA	Implemented
Tas.	Catholic schools implemented, reporting in 2020. Department primary schools implemented, trialling implementation in secondary schools in 2019; independent schools implementing at own pace
Vic.	Implemented
WA	Implemented
Languages	
ACT	Implemented in 2017
NSW	Languages K–10 Framework published 2016; AC: L content incorporated in: syllabuses developed for Chinese, Japanese, French, German, Indonesian, Italian, Korean, and Spanish; draft syllabuses finalised in 2018 for Arabic, Modern Greek, Turkish, Vietnamese; syllabus being developed for Hindi
NT	Implemented
Qld	Implemented in Department and Catholic schools by 2020; implementing in independent schools by end 2020
SA	Implemented
Tas.	Department schools implementing from 2019; Catholic schools implementing by 2020; independent schools implementing at own pace
Vic.	Implemented
WA	Implemented from Year 3 2018, Year 4 2019 and by 2023 in Year 8

General capabilities	
ACT	Implemented as part of learning areas
NSW	Learning across curriculum content, including cross-curriculum priorities, general capabilities and other areas identified as important learning for all students, is incorporated into learning area content, identified by icons
NT	Implemented
Qld	Implemented as part of learning areas; implementation in independent schools as part of learning areas, school-based subjects or stand-alone subjects
SA	Implemented
Tas.	Department schools implemented as part of learning areas; independent and Catholic schools implementing at own pace
Vic.	Modified and developed achievement standards for Critical and Creative Thinking, Personal and Social capability, Ethical Understanding and Intercultural Understanding
WA	Implemented as part of learning areas
Cross-curriculum priorities	
ACT	Implemented as part of learning areas
NSW	Learning across curriculum content, including cross-curriculum priorities, general capabilities and other areas identified as important learning for all students, incorporated into learning area content, identified by icons
NT	Implemented as part of learning areas
Qld	Implemented as part of learning areas
SA	Implemented as part of learning areas
Tas.	Department schools implemented as part of learning areas; independent and Catholic schools implementing at own pace
Vic.	Implemented as part of learning areas
WA	Implemented as part of learning areas

6. STAKEHOLDER FEEDBACK

a. Submissions

Sixteen submissions were received from federal, state and territory education authorities, with some of these representing cross-sectoral perspectives. Some submissions were more detailed than others and this is reflected in the representation of views. The list is provided in appendix A.

ACARA's work plan (2016–17 to 2019–20) includes a commitment to providing advice to Education Council on the scope of refinements to the Australian Curriculum by mid-2020. To assist in preparing this advice, ACARA invited stakeholders to provide feedback on themes that were identified in previous monitoring reports and that have also surfaced in findings from the program of research on international trends in curriculum design. These are:

1. Essential content: Is there room for improving the content of the Australian Curriculum to allow more depth and rigour over breadth?
2. The place of the general capabilities: Are there better ways of embedding the general capabilities into the learning area content and achievement standards?
3. Recognition of First Peoples: Is the place of Australia's First Peoples appropriately covered by the Aboriginal and Torres Strait Islander Histories and Cultures CCP?
4. Support for implementation: What should be the focus of ACARA's future advice and activity to better support teachers to implement the curriculum?

In addition to the formal request for feedback, ACARA holds regular meetings with key stakeholder groups. These groups provide expert advice and/or jurisdictional perspectives to the ACARA executive (F–12 Curriculum Reference Group, Aboriginal and Torres Strait Islander Advisory Group, Students with Disability Advisory Group) or share experiences, collaborate on and support the Australian Curriculum implementation (Curriculum Directors' Group). Over the course of this monitoring period, these stakeholders have provided feedback through designated meetings on the four themes, with this feedback affirming the formal jurisdictional responses.

Overall, there is a high level of support for curriculum stability to allow time for sectors, systems, schools and teachers to better understand all three dimensions of the AC and develop programs for their effective implementation. However, there is also acknowledgement that aspects of the AC should be refined as evidence is collected for future iterations of the curriculum.

b. Key findings from the 2018–19 monitoring of the Australian Curriculum

The overall findings in the 2019 report suggest a strong desire from jurisdictions for refinement of the Australian Curriculum within its existing structure. There was consensus across submissions of the need to refine curriculum content to ensure consistency and coherence across and within dimensions, particularly in learning areas and subjects, as well as some consideration of alignment to suit the needs of different phases of learning.

The submissions provided specific feedback to areas of refinement related to the four themes, with some responses providing detailed comment in relation to learning areas.

The key finding, relating to the question posed about essential content, is that there is a strong desire to sharpen curriculum content to focus on what is essential by:

- reducing content to privilege depth and rigour over breadth, especially in the primary years with a focus on foundational skills in early years
- developing a framework to guide greater consistency and clarity of language and cognitive alignment between content descriptions and achievement standards within and across learning areas
- organising content to facilitate transdisciplinary learning, especially in primary years
- organising content around core concepts, especially in Mathematics, Science and HASS
- aligning the Early Years Learning Framework (EYLF) more explicitly with F–2 curriculum.

In relation to the question about the place of the general capabilities, submissions argued for the need to show better connections between the general capabilities and learning area content, and standards in the Australian Curriculum.

In relation to the question of recognition of First Peoples, there is wide support for maintaining and strengthening the focus on the Aboriginal and Torres Strait Islander Histories and Cultures priority by: developing new content elaborations in other learning areas; and providing greater teacher support through materials, access to culturally appropriate resources and assistance with strategies to engage with local communities.

In relation to the last question about support for implementation, overall there is support for ACARA's ongoing provision of advice and resources to support implementation of the Australian Curriculum, with the scope of ACARA's role varying depending upon jurisdiction. Smaller jurisdictions requested ongoing and additional support resources from ACARA, while larger jurisdictional authorities emphasised the importance of their role in providing locally developed support materials relevant to their contexts.

Website usage reported for the 2018–19 monitoring period cannot be compared exactly with analytics reported in previous reports. Until mid-2017, the AC website was hosted by Education Services Australia. ACARA now hosts the AC website, incorporating a different website structure. At the changeover on 12 July 2017, the former Google Analytics tracking code was replaced. The new structure means that data cannot be extracted in the same manner to perform an identical comparative analysis in a different reporting period.

Key findings in the report related to website use in 2018–19 are:

- Queensland recorded the greatest number of pageviews of the Australian Curriculum website, as in the previous monitoring period. Pageviews increased for most states and territories.
- Of the learning areas, the Mathematics entry page registered the most visits, followed by English, then Humanities and Social Sciences pages. This was the same as in the 2017–18 period.
- The general capabilities overview page captured the largest and an increased audience for this dimension, followed by the general capabilities and literacy webpages.
- Of the cross-curriculum priorities pages, the Aboriginal and Torres Strait Islander priority again logged the most pageviews, significantly above other pages for this dimension.

Data collected by monitoring the media show that media interest in students' literacy and numeracy skills and performance in national and international tests remains high, as in

previous years. Other issues of particular media interest and focus related to STEM-related initiatives and the development of 21st century skills.

c. Theme: essential content

There was a majority view that disciplinary knowledge forms the basis of essential content, with a minority of stakeholders expressing interest in exploring the potential of using the general capabilities as an organisational focus for curriculum content.

All stakeholders support the privileging of depth and rigour over breadth, with evidence provided from teachers and schools about breadth creating perceptions of overcrowding and a focus on superficial engagement with curriculum content. Sample responses are provided below:

The ACT identifies there is room for sharpening the essential content to allow more depth and rigour over breadth. A refined and nuanced understanding of the three-dimensional design and its inherent flexibility in delivery may amplify opportunity to provide greater depth and rigour in conceptually rich ways. (ACT)

Recent consultations with South Australian teachers and leaders in government schools indicated that the amount of content in the three-dimensional curriculum is considered an overwhelming challenge when planning and programming. The department recommends reducing the content of the learning areas and improving the content to allow for more depth and rigour over breadth. (SADfE)

... there is too much content in the curriculum to allow teachers to develop depth and rigour - particularly in the primary years. (ISQ)

Particularly in the early release subjects: English, Mathematics, Science and History, there is too much detailed content. This can create constraints for teachers as designers of learning relevant to the contexts of their students. (CET)

Some schools feel continually overwhelmed by the amount of content contained within curriculum areas. (IST)

Teachers in schools from Transition to Year 12 all believe that the current Australian Curriculum is overcrowded with many unable to completely teach the whole of the curriculum in a school year. Discrete learning areas/content demands are also very high, and questions abound about the relevance of some of the content for all students in Australia. For example, a Year 9 student in remote Australia who has little connection with the western world finds it difficult to engage with the Year 9 Content Descriptions: 'the nature and significance of the Industrial Revolution and how it affects living and working conditions, including within Australia'. (CENT)

The submission from NESAs noted the synergies between the focus of the review of the curriculum in NSW and the question posed by ACARA in relation to essential content and breadth, depth and rigour of content. Common issues cited include:

- how volume in the curriculum could be reduced
- how the curriculum can support the progression of common learning
- whether key learning areas should be adjusted or reframed.

Jurisdictions noted the importance of the relationship between curriculum and pedagogy for effective planning and provided examples of local advice to enable a focus on essential content in learning programs:

The authority has developed a model for curriculum planning that draws teachers to the learning area overview as the focus for developing teaching and learning programs that foreshadow the interrelationship and connections between curriculum content, and to avoid a 'checklist' approach. (SCSA)

Stakeholders presented a high degree of consensus on how refinement of the AC might strengthen the focus on depth and rigour to meet the needs of the next generation of students. Responses emphasised the need to reconsider some current curriculum content to ensure consistency and coherence across and within LAs. The potential value of organising essential content around concepts or 'big ideas' was referenced in a significant number of responses. Equally, the importance of curriculum content that suits the needs of different phases of learning was highlighted. In particular, ways of integrating learning across LAs in F–6 were strongly suggested.

Concerns about an 'overcrowded curriculum' came from teachers working in the primary years (P–6) of schooling. Primary teachers who have all the learning areas to teach believed there was too much content for them to teach and they are not able to plan, teach and assess a curriculum that was sufficiently engaging and demanding... Implications of having too much content in the curriculum included: skimming over content ... not being able to differentiate learning, no time for deeper investigations, poor transfer of skills to other areas, and misalignment between English and Mathematics and NAPLAN testing. (QCEC)

There was recognition that determining the nature and definition of essential content will require careful and collaborative consideration and that teacher voice needs to be reflected in any refined curriculum. The importance of teacher input into the refinement process reflecting teaching and learning expertise in curriculum phases, including the early years of learning, was emphasised in some responses.

There is widespread support for changing the content of the AC in order to privilege depth and rigour over breadth, acknowledging that this will require careful balancing of the curriculum so as not to be either overly prescriptive or overly broad ... Much discussion in the focus groups centred around the need for pedagogy which assists students to access the depth and rigor of the AC and that it was a matter for schools to determine how best to implement the AC. Despite widespread support, the sector feedback on how this might be best achieved often reflects its diversity. (AISSA)

ISQ school personnel strongly believe that the Australian Curriculum should clearly articulate what MUST be taught to all Australian students and then what MIGHT be covered if teachers have time and that these decisions are the providence of ACARA. (ISQ)

The future focus of learning needs to shift from viewing knowledge of content for its own sake to an application or transference of knowledge in the real world. (QCEC)

We recognise the importance and benefits of all states and territories working together on any future improvements or changes to the Australian Curriculum. Any efforts to review the curriculum in relation to essential content need to be carefully considered in the context of jurisdictional perspectives and policy directions, and emerging evidence from the international comparison studies undertaken by ACARA. (DoETAS)

The responses from Western Australia (SCSA) and ISQ also noted that teachers need time to embed the content [of the AC] in their teaching, learning and assessment practice.

An improved organisational alignment within and among learning areas was a common suggestion. Examples included:

- an establishment of an overarching framework to inform curriculum refinement and to support consistent language and coherent cognitive demand
- consistent strand and sub-strand structures to allow integrated learning opportunities
- a unanimous call for sharper coherence between content descriptions and achievement standards
- elaborations to be framed in a consistent manner and specifically illustrate linked content descriptions
- a need for consistency of language and structure across achievement standards.

Some responses foreshadowed the need for discussion of the relationship between essential content in the early years of learning and approaches to ensuring that students acquire functional literacy and numeracy.

The possibility of reorganising content within the AC to meet the needs of learners in different phases of learning; for example, F–2, 3–6, 7–10, was raised in several responses. Options included the development of a common conceptual approach across learning areas that would allow the possibility of integration in F–2 and/or F–6 content, and more evident interdisciplinary opportunities in Years 7–10. A more explicit alignment between the Early Years of Learning Framework (EYLF) and the AC for Foundation – Year 2 was also suggested.

Addressing the lack of consistent language and cognitive demands across learning areas, particularly in achievement standards, was noted as essential in any refinement of the curriculum. Such refinement was viewed as providing teachers with the clarity needed to better understand the developmental sequences that underpin the AC. Numerous responses indicated the perceived inconsistencies between achievement standards, work samples and requirements to report on a five-point scale as issues of concern for teachers.

Some jurisdictions provided detailed comments about the ways in which individual learning areas and/or subjects could be refined to meet the need to reduce breadth in favour of depth and rigour. These are detailed in table 1.

d. Theme: Place of general capabilities

Including a dimension that addresses capabilities in the AC was unanimously endorsed in responses. It was widely recognised that a curriculum for the 21st century and beyond requires a cohesive approach to disciplinary knowledge and the skills and capabilities that enable students to thrive. Stakeholders recognised that capabilities are a focus of local and international research and contemporary design for school curricula.

There were differing interpretations of how the GCs, as currently defined, could be better embedded in the learning area content and achievement standards. Recommendations included:

- organising the curriculum around or with a focus on the GCs for some or all phases of schooling
- reviewing the scope, number and organisation of GCs
- prioritising and/or grouping some GCs to better articulate the relationship between

GCs and learning areas

- reducing disciplinary content and making GC skills more explicit
- reconsidering the way GCs are tagged to learning area content to ensure that the GCs are explicitly taught as part of content.

The cross-sectoral response submitted by VCAA on behalf of the government, Catholic and independent school sectors in Victoria noted that adaptations for the Victorian Curriculum, which included reducing and refining the number and scope of the GCs had, in part, addressed concerns about the 'over-crowded curriculum'.

Jurisdictions reported that teachers are requesting guidance in finding connections between GCs and learning areas, including:

- more specific links in learning areas, such as examples or elaborations
- two-way links to support planning for the GCs in authentic learning area contexts
- examples of using GCs to develop big questions or real-world challenges that support connected learning
- learning area exemplars, illustrations of practice and work samples that specifically show how the GCs are embedded in learning area topics and concepts
- more explicit learning area advice about how the GCs are interrelated and can be integrated for each learning area
- embedding explicit examples of how the GCs could be taught within each learning area.

Literacy and numeracy were seen as critical foundations for the curriculum. However, some jurisdictions cited confusion from teachers about the positioning of literacy and numeracy, particularly given the existence of both the national literacy and numeracy learning progressions and the literacy and numeracy continua.

Further options to refine the scope and number of GCs included suggestions: that GCs be grouped together; that GCs be aligned to specific learning areas and/or priorities such as to align Intercultural Understanding with the Aboriginal and Torres Strait Islander Histories and Cultures CCP, to the Languages curriculum and to HASS; and to consider more future-focused capabilities. For example:

Refining the general capabilities and reducing the number of capabilities to a more manageable and coherent set of transversal skills ... A main challenge for schools was identified as the sheer number of capabilities making it difficult for teachers to explicitly build capacity in seven distinct areas. Some respondents recommended removing literacy, numeracy and ICT as capabilities given their strong presence within key learning areas. Others suggested that there should be two core capabilities (Critical and Creative Thinking and Personal and Social capability) and the other capabilities be strengthened as contexts for the two core capabilities. (AISSA)

Firstly, [a] review of the 21st century competencies/capabilities/skills so that they are future focused, and a reduction in the number of capabilities to broader capabilities such as communication (including Information and Communication Technology) and Personal and Social capabilities). There is an opportunity to look beyond and determine knowledge, skills, attitudes and values that will help students learn in different phases of learning, prepare for the shifting nature of work and improve their well-being. (QDoE)

A further layer to the complexity of this issue is that there are beliefs in some schools and the broader community that the literacy capability belongs in English, the numeracy capability belongs in mathematics and similarly, that ICT is covered in digital technologies ... Teachers commented that “it does not make sense to embed all capabilities in all learning areas equally. There are places where they fit naturally and complement the learning area specific content or skills and places where this is not the case. They should be used to enrich the curriculum and add the extra transferable dimension to the learning”. (ACT)

The VCAA response noted that:

... the design of the Victorian Curriculum, where each of the four capabilities are presented as a learning area in their own right ... enables teachers to both track student progress in each of the four capabilities and determine the best contexts in which the capabilities are taught. (VCAA)

The importance of the GCs in enhancing differentiated learning programs to cater for students of all abilities was recognised, with the necessity to provide stronger alignment with content and achievement standards highlighted. The GCs are not embedded clearly enough in achievement standards was seen to de-emphasise their importance in some responses and a reason that teachers do not see them as a priority in their teaching and learning programs.

Improved contextualisation of the GCs within the AC three-dimensional framework was recommended as an area for further work. Suggestions included taking advantage of more contemporary functionality of the AC website to enhance the way users can connect appropriate GCs with relevant learning area content. Learning area exemplars, illustrations of practice and work samples were also suggested as resources to support better understanding of the alignment of the GCs and disciplinary content.

e. Theme: Recognition of First Peoples

The importance of the Aboriginal and Torres Strait Islander Histories and Cultures CCP was affirmed by all stakeholders along with its significance for Australia’s future. Responses suggested that its status could be enhanced with further support and advice to assist teaching and learning programs.

The placement of Aboriginal and Torres Strait Islander Histories and Cultures as a cross-curriculum priority in the Australian Curriculum appropriately reflects the intent of the Melbourne Declaration on Educational Goals for Young Australians. The challenge for all ACT schools is: how can we as educators support, embrace and model the mindset that Aboriginal and Torres Strait Islander Histories and Cultures are part of the curriculum, and embed Aboriginal and Torres Strait Islander Histories and Cultures at every opportunity in delivery of all learning areas? (ACT)

Questions around the terminology of ‘priority’ and the title of the priority were raised, and suggestions that consideration be given to the way First Peoples are recognised in the curriculum.

Leaving Aboriginal and Torres Strait Islander Histories and Cultures as a cross cultural priority does not impress on educators that this is a high-level expectation of the Australian Curriculum... Educators need clear statements of the need to engage with this aspect of the Curriculum with research conducted by Aboriginal and Torres Strait Islander educators, reflecting Aboriginal and Torres Strait Islander ways of knowing, being and doing, which must play a significant role in the curriculum. (CENT)

Responses indicated that the resources published to date on the AC website meet the need for targeted and quality materials. There was particular affirmation of the newly published Science content elaborations and teacher background information, and calls for similar resources to be provided in other learning areas. SADfE responded:

The department recognises the importance of improving educational outcomes for Aboriginal and Torres Strait Islander students and the role of the curriculum to achieve this goal. The department acknowledges the supporting materials provided by ACARA, in particular, the recent additional science elaborations. (SADfE)

A significant issue raised in responses is the degree of confidence teachers have to deliver learning about Aboriginal and Torres Strait Islander Histories and Cultures respectfully in the classroom. Some responses indicated that teacher confidence was a barrier to effective implementation and jurisdictions shared some of the strategies in place to build capacity and confidence. These include:

- an evidence-based model underpinned by the principle of Aboriginal self-determination developed in NSW syllabi
- developing local, contextualised, programs (for example, SADfE – Science, NTDoE - History and Languages)
- developing school reconciliation action plans
- developing publicly available resources in collaboration with local Aboriginal communities such as The Orb (Tas.).

The VCAA indicated that Victoria is currently considering the place, scope and status of the priority with a view to enabling better attention to Aboriginal and Torres Strait Islander knowledges across the full curriculum.

The close relationship between the priority and the Intercultural Understanding GC was highlighted as a way of assisting teachers to incorporate First Peoples' perspectives in programs:

There is a synergy between the Intercultural Understanding general capability and the Aboriginal and Torres Strait Islander cross-curriculum priority, which supports teachers in realising that all learning areas contribute to a deepening of students' knowledge and understanding of Australia and Australia's First Peoples. (ACT)

Some responses raised concerns that that the priority was perceived to have 'optional status' as it has limited, explicit presence in content descriptions and achievement standards. A response from IST:

Concerns expressed that some aspects can be tokenistic and not reflecting 'deep learning'. (IST)

Further resources and advice were requested of ACARA focusing on identifying authentic opportunities to enable embedding the priority in teaching and learning programs, such as mapping the priority across learning area content to illustrate development sequences of organising ideas. Other suggestions included providing advice about how schools can access resources held in cultural organisations and institutions and the protocols for engagement with these materials.

f. Theme: Support for implementation

State and territory responses provided strong endorsement of the resources and advice materials that ACARA had published to support implementation of the AC. Particularly commended were work samples, illustration of practice and the recently published elaborations and teacher background information in Science.

The AG DoE noted the value to teachers of quality curriculum support materials:

The Department believes that effective and adaptable resources have an important role in providing teachers with the time to teach... We see the need to improve resources that will aid implementation of all aspects of the Australian Curriculum as a priority. (AGDoE)

Jurisdictions offered varying perspectives on the nature and scope of further resource development. There were calls from some sectors for more and different kinds of resources, closely aligned to teaching and learning. Other responses affirmed the different roles of ACARA and their own sectors in supporting teaching practice and the significance of sector support for implementation in their individual contexts.

... support for implementation is best placed with state and territory authorities who contextualise advice to ensure it supports local needs, priorities and implementation approaches. (QCAA)

Recommendations from those sectors requesting further ACARA-developed resources included illustrations showing how the three dimensions of the AC interrelate for program planning or unit of work design; for example, providing planners for connecting content across learning areas, or achieving manageable connections across learning area content and relevant GCs. Some sectors suggested more interactive and digital resources designed to support teachers of students in different phases of schooling, and there were suggestions for resources linked to specific learning areas, in particular, for teaching Mathematics and Science in Foundation – Year 6.

Many jurisdictions called for clarifying documentation about the relationship between the AC achievement standards and work samples, and the requirements to report against a five-point A–E scale. The necessity for ACARA to align resources to state and territory initiatives and requirements was stressed by a number of respondents. ISQ responded:

Rubrics have not been developed and with the current work samples it is difficult to moderate a 'B' standard or work from an 'A' standard of work. It is very difficult to achieve consistency across our school, let alone across other schools. (ISQ)

The value of providing, on a national scale, access to, advice on, or resources to, support collaborative processes in relation to moderation of student work and related consistent teacher judgement was highlighted in some submissions.

Other sectors stressed the differences in responsibilities between ACARA's role in developing the curriculum, and state and territory implementation roles linked to ongoing resources for teachers.

The challenges of this delineation, and the recognition of the intrinsic connections between curriculum design and pedagogy and practice were reflected in several submissions, such

as the cross-sectoral response from the ACT:

In acknowledging the interplay between curriculum and pedagogy, and in particular the choice of pedagogy when implementing curriculum in teaching and learning programs, ACT teachers and leaders indicated a desire for more clarity in this area. An articulation of the role of national, state and territory bodies, as well as systems and schools, in relation to the continuous implementation of the Australian Curriculum may assist teachers in their work. The ACT can see the potential for future collaboration between ACARA and AITSL to provide support and guidance including examples of exemplary, evidence-informed curriculum and pedagogy. (ACT)

Table 1. Learning area feedback

Learning Area	Themes	Comments
ENGLISH	<p>Emphasise</p> <ul style="list-style-type: none"> • transferability of skills to other learning areas • wording of achievement standards (AS) to focus on concepts that are essential for learning at higher levels <p>Reduce</p> <ul style="list-style-type: none"> • content <p>Clarify</p> <ul style="list-style-type: none"> • relationship among AC English, Literacy GC and continua, NLP and NAPLAN • cognitive and literacy demands across years 	<p>Particularly in the early release subjects: English, Mathematics, Science and History, there is too much detailed content. This can create constraints for teachers as designers of learning relevant to the contexts of their students. (CET)</p> <p>ISQ recommends that the achievement standards and content descriptions of the Australian Curriculum: English and Australian Curriculum: Mathematics be reworked to remove the 'clutter' and to provide teachers with a clear focus on what is critical for all students to know and to be able to do. (ISQ)</p> <p>Achievement standards are inconsistent with the other learning areas: There should be consistency in the cognitive demands with other learning areas and also include language from Critical and Creative Thinking general capability. (QDoE)</p> <p>The rigour and specifics of reading and writing are not prominent enough in the achievement standards. (QCAA)</p>
MATHEMATICS	<p>Emphasise</p> <ul style="list-style-type: none"> • use of concepts to organise content • progression of skills through wording of AS • focus in AS on concepts that are essential for learning at higher levels • number strand • cohesion <p>Reduce</p> <ul style="list-style-type: none"> • content • complexity • density of Year 6 content <p>Clarify</p>	<p>Particularly in the early release subjects: English, Mathematics, Science and History, there is too much detailed content. This can create constraints for teachers as designers of learning relevant to the contexts of their students. (CET)</p> <p>ISQ recommends that the achievement standards and content descriptions of the Australian Curriculum: English and Australian Curriculum: Mathematics be reworked to remove the 'clutter' and to provide teachers with a clear focus on what is critical for all students to know and to be able to do. (ISQ)</p> <p>Mathematics was overwhelmingly signalled as needing further improvements. Comments ranged from support for the rigour of the Year 10 curriculum to the need for the entire Mathematics curriculum content to be reduced at each level to allow opportunities for greater depth and time to address the needs of all learners ... The Achievement Standards could be better expressed particularly in Mathematics; they are too content focused and not representative of a progression of skills across levels. For example, at Year 10, 'finding unknown values after substitution into formulas' is vague, easily misinterpreted and therefore renders assessment difficult without looking at complexity, fluency, problem solving etc. (AISSA)</p>

	<ul style="list-style-type: none"> • relationship between CDs, AS and proficiencies • repetition across other learning areas • expectations re progression across learning areas at topic/concept level • connection between essential concepts and content descriptions 	<p>Mathematics: content could be structured around big ideas or key concepts for each year level or across a phase (F–2, 3–6, and 7–10). Key developmental concepts such as additive thinking, multiplicative thinking and proportional reasoning could be progressively developed through the content and proficiencies. (QCEC)</p> <p>Reduce the amount of content descriptions by grouping content up into higher level concepts. Additional information can be added to elaborations. For example: Year 8 Number and algebra strand currently includes 5 sub-strands and 12 content descriptions. Currently the proficiencies are described in the year level description. They need to be incorporated throughout the content descriptions and then embedded in the achievement standards. Achievement standards are inconsistent with the other learning areas: Achievement standards need to be consistent in structure across learning areas. Mathematics achievement standards need to reflect understandings and skills, rather than list content. For example, in Foundation, 'Students count to and from 20 and order small collections'. The Curriculum design paper v3.1 states that, 'Achievement standards are to emphasise skills and understandings in two separate paragraphs. In describing understandings include an active component, that is, the 'how', not just the 'what'. (QDoE)</p> <p>The Number strand should be prioritised above the others, if decisions are being made about which content to focus on. (ISQ)</p> <p>Teachers commented that the 'year 10 maths content is too full' and mathematics teachers feel 'there are too many concepts and too much repetition'. (ACT)</p> <p>Breadth: There is repetition across learning areas, e.g. using data is taught in Science. Teachers feel there is too much content. There is no advice about how to structure an ongoing program for consolidation. Clarity: Some concepts lack clarity and cohesion between the achievement standard, content descriptions and elaborations e.g. it is not clear what range of numbers are involved in simple addition in Year 1. Achievement standard: They carry out simple additions and subtractions using counting strategies; Content Descriptor: Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts. Elaboration: Developing a range of mental strategies for addition and subtraction problems. Conceptual understanding: There is no advice on prioritisation or weighting e.g. in Year 1, understanding place value is far more critical for further sound mathematical knowledge than creating a pictograph (see Attachment B for an example of how the NT is doing this). Some concepts are omitted, and teachers must interpret</p>
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		<p>across year levels e.g. telling time to the hour is omitted, going straight to telling time to the half-hour in Year 1. (NTDoE)</p> <p>Reduction of content for each year level is recommended. Achievement standards appear to be a summary of some aspects of content, without a consistent build of essential mathematical concepts, i.e. if the achievement standards were the focus of learning, essential mathematical concepts that underpin the achievement standards at higher levels would be missed. Year 6 Mathematics is very dense compared to Year 7. (QCAA)</p> <p>In mathematics improvements could be made by ensuring the content descriptions clearly define the concepts within the curriculum. Specific recommendations for improving Mathematics to allow for more depth and rigour include:</p> <ol style="list-style-type: none"> a. a greater emphasis on "The Big Ideas in Number" to increase the development of mathematical thinking b. placing the proficiency strands within the content and achievement standards c. restructure the strands into overarching concepts and combine relevant content descriptions, making explicit the cohesive links between strands d. shift some content to other learning areas, for example, time and map reading skills belong in geography and/or science; scaled timelines in history e. improve the alignment between achievement standards and expectations of the numeracy continuum. (SADfE)
HASS	<p>Emphasise</p> <ul style="list-style-type: none"> • use of core/essential concepts in curriculum design at F–6 offers an approach that supports development of rigour and depth over breadth • identification of concepts, essential questions, big ideas and deep understandings to assist teachers to make curriculum connections 	<p>Particularly in the early release subjects: English, Mathematics, Science and History, there is too much detailed content. This can create constraints for teachers as designers of learning relevant to the contexts of their students. (CET)</p> <p>The design of learning areas such as the F–6/7 HASS which identifies core concepts and essential questions was a useful resource for teachers to assist with the integration of learning areas across the curriculum. This is one way to support the development of rigour and depth over breadth ... Consider the identification of concepts, essential questions, big ideas and deep understandings of learning areas to assist teachers to make curriculum connections ... Technology and the Humanities were signalled as often being too open and vague. (AISSA)</p>

	<ul style="list-style-type: none"> • relevance of content for students in schools across <i>all</i> of Australia <p>Reduce</p> <ul style="list-style-type: none"> • amount of content at F–6 • number of depth studies at 7–10 <p>Clarify</p> <ul style="list-style-type: none"> • degree of prescription, for example, year level specific content • links with other subjects such as science where content aligns • relationship between content and real-world focus • relationships between the strands and how they can be integrated in a teaching program 	<p>Make content less prescriptive in HASS to take vertical groupings in small schools into account. (IST)</p> <p>Anecdotally it is reported that in the early years of schooling (F–2) the main focus is on the acquisition of literacy and numeracy skills due to the excessive content in some learning areas, e.g. Technologies, The Arts and HASS ... HASS: Reduce content in the upper primary levels to enable time for teachers to teach and assess the required skills and inquiry processes. (QCEC)</p> <p>The evidence suggests that some teachers are including an Aboriginal and Torres Strait Islander perspectives in learning design, with the perspective sitting most comfortably in studies of society and culture, humanities and the arts. (ACT)</p> <p>In Humanities and Social Sciences in years 7–10 it is recommended to reduce the requirements relating to the number of depth studies, while maintaining the overview for each year level. (SADfE)</p> <p>Breadth: Teachers comment that there are too many content descriptions. There should be links with other subjects such as science when there is similar content. Teachers are shifting focus from breadth to depth. However, to reach real world context and deeper understanding, a review of content descriptions is requested. Clarity: The relationship between the strands and how they are integrated in a teaching program is still developing. Teachers are developing content but it’s not clear how to make it context and developmentally appropriate. (NTDoE)</p> <p>In Years 7–10 it is recommended to reduce the requirements relating to the number of depth studies, while maintaining the overview for each year level. (SADfE)</p> <p>Questions abound about the relevance of some of the content for all students in Australia. For example, a Year 9 student in remote Australia who has little connection with the western world finds it difficult to engage with the Year 9 Content Descriptions: ‘the nature and significance of the Industrial Revolution and how it affects living and working conditions, including within Australia’. (CENT)</p>
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<p>SCIENCE</p>	<p>Emphasise</p> <ul style="list-style-type: none"> • focus on scientific literacies • depth and breadth • essential content • rigour <p>Reduce</p> <ul style="list-style-type: none"> • repetition • wordiness • complexity <p>Clarify</p> <ul style="list-style-type: none"> • essential content and developmental sequence of concepts • relationship of generic inquiry, problem-solving, decision-making, design-thinking skills with CCT continuum • progression in complexity of core scientific concepts 	<p>Particularly in the early release subjects: English, Mathematics, Science and History, there is too much detailed content. This can create constraints for teachers as designers of learning relevant to the contexts of their students. (CET)</p> <p>The structure used to develop the content descriptions using key concepts of each Science Understanding sub-strand does not provide a consistent development of science concepts across year levels. Alternating the conceptual threads e.g. forces and energy, creates difficulty when developing teaching, learning and assessment programs for multi-age classrooms. (QCAA)</p> <p>The content in year 10 science is also too full. (ACT)</p> <p>In the secondary years, the majority also felt that Science was repetitive and that both depth and breadth are lacking. Science is too verbose, repetitive and is too complex in the primary years given that teachers aren't science specialists. Respondents identified the need to support teachers to teach this content with several schools commenting that they have acted to appoint specialist science teachers to resolve this issue for primary staff. (AISSA)</p> <p>Teachers lack confidence with scientific concepts which resulted in loss of critical STEM capabilities ... the resource Primary Connections provides a valuable platform to build scientific literacies. (QCEC)</p> <p>Describing generic inquiry, problem-solving, decision-making and design-thinking skills consistent with continuum of Critical and Creative Thinking rather than current discipline-specific approach ... describe expectations for teaching inquiry skills in a similar yet different way... Increase content ... This learning area has less content than learning areas that are allocated less indicative time, for example HASS... Improve opportunities for depth of learning with rigorous content particularly in Years 9 and 10. This will better align to the four science subjects in Senior Secondary. This will significantly improve student preparedness for learning in the discipline. (QDoE)</p> <p>The Science curriculum in the secondary years as an example feels more like a list of different content each year than a genuine progression in complexity of core scientific concepts. There is little progression in the Science Inquiry strand across 7–10 at all. (CET)</p> <p>Breadth: Much of the content and science understanding is being taught in silos through each Science Understanding (e.g. Biological Sciences) and the opportunity to</p>
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		<p>build within and across year levels is limited ... Greater emphasis on the links/connections between other learning areas and science would enhance the interconnectedness of many concepts and skills e.g. Geography, Mathematics, Technologies. Conceptual understanding: Science should have a more system level approach with greater content/concept connections to give students multiple opportunities to demonstrate their knowledge and understanding of concepts in a variety of applications. (NTDoE)</p>
<p>LANGUAGES</p>	<p>Emphasise</p> <ul style="list-style-type: none"> • that language learning programs need to allow time for consolidation • language structures to be taught for specific languages <p>Reduce</p> <ul style="list-style-type: none"> • breadth • content in CDs and AS • prescription in AS <p>Clarify</p> <ul style="list-style-type: none"> • structure to support phases of language learning 	<p>Breadth: Needs advice on time for ongoing practice to consolidate language acquisition. Many teachers feel there is too much breadth and not enough time to consolidate. Clarity: The statements related to the content in the different strands and across different languages are generally consistent and indicate that acquisition in different languages involves the same/similar processes and development; to add to the rigour of the content and help practitioners' understanding, there should be unpacking of the specific language structures to be taught, currently the elaborations provide some indication of what needs to be taught but more details and analysis are needed to support teachers' understanding and practice.(NTDoE)</p> <p>Consider restructuring to support phases of language learning - beginner, intermediate and advanced language learners. This would allow flexibility to commence language learning at the appropriate stage. (QCAA)</p>
<p>TECHNOLOGIES</p>	<p>Emphasise</p> <ul style="list-style-type: none"> • content that is transferable across contexts • detail about inquiry, problem-solving, decision-making and design-thinking (consistent with CCT) <p>Reduce</p> <ul style="list-style-type: none"> • complexity by being specific about expectations at each year level <p>Clarify/provide</p>	<p>Technology ... signalled as often being too open and vague. (AISSA)</p> <p>Anecdotally it is reported that in the early years of schooling (F–2) the main focus is on the acquisition of literacy and numeracy skills due to excessive content in some learning areas, e.g. Technologies, The Arts and HASS ... Design and Technology: some teachers believed the balance between breadth and depth is appropriate, however, it was very easy to 'swamp students with lots of interesting stuff' that does not transfer to other contexts. (QCEC)</p> <p>Describing generic inquiry, problem-solving, decision-making and design-thinking skills consistent with continuum of the Critical and Creative Thinking rather than the current discipline specific approach ... describe expectations for teaching inquiry skills in a similar yet different way. (QDoE)</p>

	<ul style="list-style-type: none"> resources to develop teachers' content knowledge for F–6, particularly Digital Technologies 	<p>The 'over-crowded curriculum' ... is highlighted in the arts and technologies in primary schools is lower due to the breadth in areas that are typically taught by specialist teachers in high schools. (ACT)</p> <p>Design and Technologies' breadth is complex. More specificity is needed in each year level to describe what students are expected to be able to do. Teachers require significant content knowledge to teach the Technologies curriculum in F–6, particularly for digital technologies. (QCAA)</p>
<p>HEALTH & PHYSICAL EDUCATION</p>	<p>Emphasise</p> <ul style="list-style-type: none"> content that is relevant to each of Health and Physical Education understanding and skills in the content descriptions inquiry skills focus areas <p>Reduce</p> <ul style="list-style-type: none"> high level content descriptions that could apply to either Health or Physical Education <p>Clarify</p> <ul style="list-style-type: none"> wording of achievement standards by using a similar approach across all learning areas 	<p>There was a view that Health and Physical Education could be separated into two distinct disciplines Improvement in content ... ensure consistency coherence across bands. (AISSA)</p> <p>Content interrelated: HPE provides an example of how curriculum could be constructed. High level content descriptions with areas of specific focus highlighted elsewhere, in the 12 focus areas found in the Structure section of the curriculum elements. The content descriptions need to adhere to the construct of understandings and skills. They are too interrelated. For example, in Years 9 and 10 students have to propose, practise and evaluate responses in situations where external influences may impact on their ability to make healthy and safe choices. There is no development of understandings of the contributing factors for healthy and safe choice. HPE would benefit from content for inquiry skills. Realign achievement standards: Achievement standards need to be consistent in structure across learning areas. They also need to ensure that the cognition/action verb at the start of each aspect of the achievement standard aligns to the intent of the relevant paragraph (understandings and skills). For example, paragraph one has cognition typically related to skills rather than understandings like describe, explain, identify. There should be greater correlation to the Critical and Creative Thinking general capability and its use of cognitive verbs. There is no communication thread in the achievement standard, yet it is a requirement. (QDoE)</p> <p>Breadth: Need for advice about time distribution between Health/Physical Education, and how this relates to time for physical activity every week. Clarity: There needs to be clarity about students' needs for physical wellbeing, and how this relates to health or physical education. Understanding the wellbeing effects of hygiene and communicable disease is not prominent in the curriculum. Conceptual understanding: The Achievement standard can be met through the content, however there is a risk that certain focus areas are favoured/repeated more often than other more controversial focus areas, such as Alcohol and Other Drugs and Relationships and Sexuality. (NTDoE)</p>

<p>THE ARTS</p>	<p>Emphasise</p> <ul style="list-style-type: none"> • specific knowledge and skills in content • language accessible to all teachers • opportunities to address organising ideas in Aboriginal and Torres Strait Islander Histories and Cultures CCP <p>Reduce</p> <ul style="list-style-type: none"> • breadth <p>Clarify</p> <ul style="list-style-type: none"> • relationship between content and learning area achievement standards 	<p>Anecdotally it is reported that in the early years of schooling (F–2) the main focus is on the acquisition of literacy and numeracy skills due to the excessive content in some learning areas e.g. Technologies, The Arts and HASS ... Visual Art: due to highly technical language used in the achievement standards, even experienced teachers do not share a common understanding about what learning was to be assessed and reported. For example, Year 9–10 excerpts from Achievement standard: ‘Analyse connections between visual conventions, practices and viewpoints that represent their own and others’ ideas’. (QCEC)</p> <p>The Arts has an achievement standard in Prep–Year 6 but subject no content: Like HASS, provide content for The Arts learning area in Prep to Year 6. Include additional content: The Arts learning area content needs to be enhanced. Examples of knowledge and skills should be refined and included in the content descriptions and elaborations, rather than hidden as an additional resource found only in the individual subject 'Understand how [subject] works'. This will ensure greater consistency with other learning areas. Revise achievement standards: Both the learning area and subject achievement standards are not commensurate to the available content nor the indicative times. (QDoE)</p> <p>The ‘over-crowded curriculum’ ... is highlighted in the arts and technologies in primary schools is lower due to the breadth in areas that are typically taught by specialist teachers in high schools ... The evidence suggests that some teachers are including an Aboriginal and Torres Strait Islander perspective in learning design, with the perspective sitting most comfortably in studies of society and culture, humanities and the arts. (ACT)</p> <p>The Arts are very vague, and do not provide sufficient description in the content descriptions and achievement standards. Having five subjects to implement in primary schools means each subject does not receive adequate coverage. Visual Arts Year 9 and 10: difficult to develop a common understanding of what is required as the language used in the achievement standards and content descriptions is too technical for teachers. (QCAA)</p>
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7. THE AUSTRALIAN CURRICULUM WEBSITE 2018–19

a. Overview

The AC is delivered solely in electronic format. An analysis of the use of the AC website from 1 July 2018 to 30 June 2019 forms a part of the annual monitoring of the Australian Curriculum. ACARA continues to be mindful of the importance of monitoring the website's usability and functionality, informed by Google Analytics.¹

A project to redevelop the AC website was completed during the 2016–17 monitoring period, incorporating stakeholder feedback on the site's usability and functionality from the 2015–16 monitoring report and user surveys. The current website, launched in 2017, is flexible in design and usability, and incorporates a variety of navigation options. Content updates to the website occurred over the 2018–19 reporting period.

Prior to mid-2017, the AC website was hosted by Education Services Australia. ACARA now hosts the website, incorporating a different structure. At the changeover on 12 July 2017, the former Google Analytics tracking code² was replaced. These changes have impacted the results delivered in the 2017–18 report and have also impacted comparative results in this report. The 'new' structure means that data cannot be extracted from former reporting periods to perform identical comparative analyses. Due to the changes in tracking codes, this report presents comparative data for a two-year period only, from 2017–18 to 2018–19.

b. Analysis of website usage

General demographics

For the 2018–19 monitoring period, over 1.6 million users accessed the AC website, with almost 19 million pageviews. This represents an increase in the number of users and pageviews, when compared with the 2017–18 monitoring period, which reported over 1.3 million users and almost 17 million pageviews. Over the current reporting period, the month of May 2019 registered the heaviest website traffic.

This analysis of website usage refers to versions 8.3 and 8.4 of the AC. Version 8.3 was launched on 14 December 2016, following the inclusion of AC: Languages (Classical and Auslan), and represented four months of the 2018–19 monitoring period, from 1 July 2018 to 25 October 2018. The remainder of the reporting period refers to the current version 8.4 launched on 26 October 2018. Version 8.4 includes new elaborations for the Aboriginal and Torres Strait Islander Histories and Cultures CCP in the AC: Science, Foundation to Year 10, and minor updates to the AC: Humanities and Social Sciences.

¹ Google Analytics is a web analytics tool to track and report website traffic

² Google Analytics tracking code for 2015–17: UA-17486320-4; for 2017–19: UA-17486320-15

Website structure

The AC website is structured to encourage easy navigation. Five tabs across the top of the entry webpage invite the user to take advantage of drop-down menus to access further information, as demonstrated in table 2.

Table 2. *The AC home page tab structure and drop-down menus*

F–10 curriculum				Parent Information *	Student Diversity	Resources / Publications
DROP DOWN MENUS	F–10 curriculum overview					
	Learning areas	General capabilities	Cross-curriculum priorities		Student diversity	Resources
	Overview	Overview	Overview		Overview	Overview
	English	Literacy	Aboriginal and Torres Strait Islander Histories and Cultures		Students with disability	Aboriginal and Torres Strait Islander histories and cultures
	Mathematics	Numeracy	Asia and Australia’s engagement with Asia		Gifted and talented students	Curriculum connections
	Science	ICT Capability	Sustainability		Students for whom EAL/D	Digital Technologies in focus
	Humanities and Social Science	Critical and Creative Thinking				General capabilities and career education
	The Arts	Personal and Social Capability				National literacy and numeracy learning progressions
	Technologies	Ethical Understanding				Mathematics proficiencies
	Health and Physical Education	Intercultural Understanding				Primary curriculum
	Languages					STEM
	Work Studies (optional)					Work samples
						Publications:
						Primary Matters
						Program of research

*A drop-down menu is not provided under the tab ‘Parent information’

An analysis of each drop-down item is featured in the 2018–19 monitoring report.

Website usage

Usage by state/territory

State and territory website usage based on pageviews³ is demonstrated in figure 1. In the 2018–19 reporting period, Queensland again recorded higher usage than any other state or territory, with almost 6 million pageviews, over 650,000 more pageviews than the 2017–18 reporting period. The following pageviews were recorded for each state in the 2018–19 reporting period: South Australia over 3.3 million pageviews; New South Wales, over 2.8 million; Victoria, over 2.6 million; Western Australia, over 1.3 million; Tasmania, over 860,000; the ACT, over 770,000; and the Northern Territory, over 300,000.

The number of pageviews recorded in a reporting period may be impacted by the implementation of local versions of the curriculum. Additionally, teachers may regularly refer to hard-copy curriculum documents, and this will not be reflected in digital curriculum usage results.

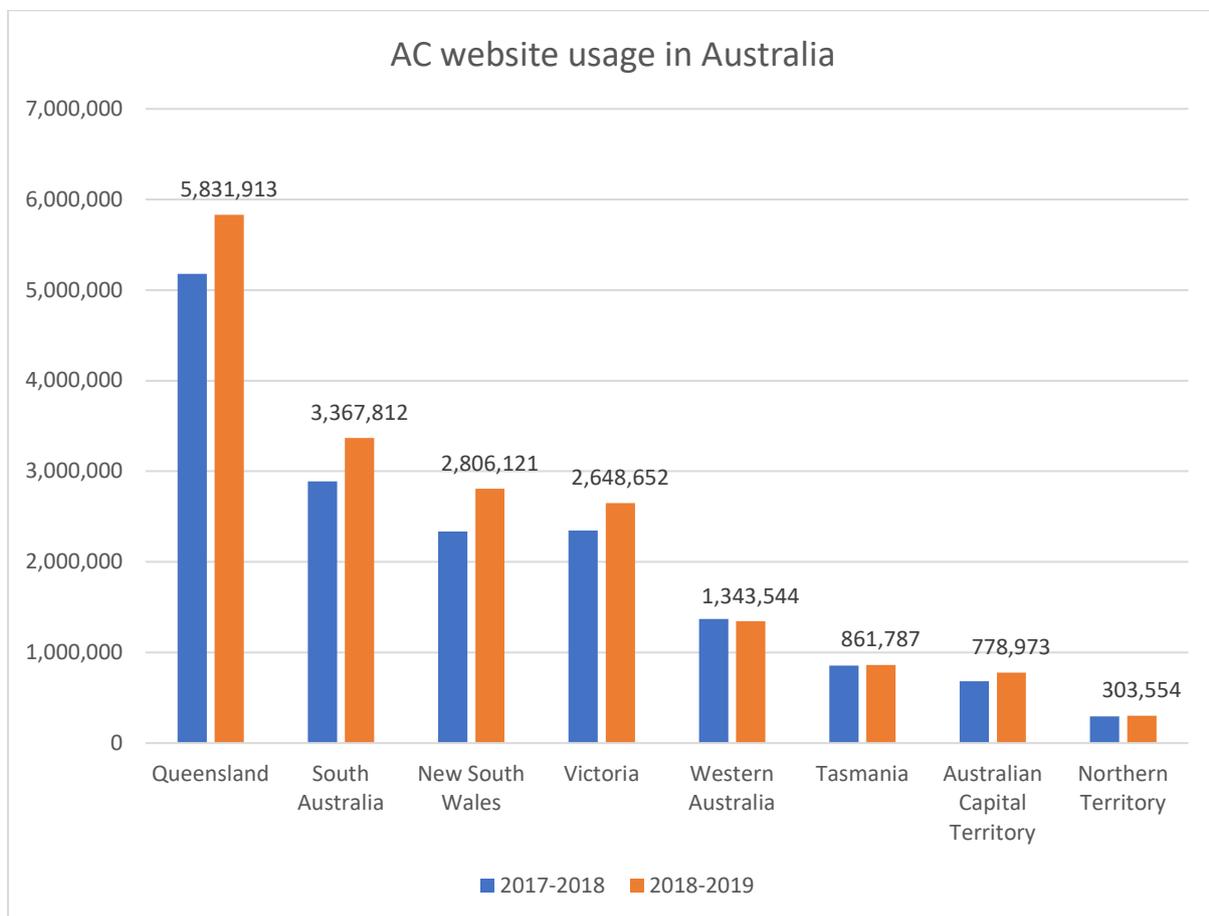


Figure 1. AC website usage by states and territories, based on pageviews, 2017–19

³ Pageviews is a metric defined as the total number of pages viewed (Google Analytics, 2018)

Figure 2 provides statistics for the population of each state and territory in Australia. This can be used to compare the AC website usage by pageviews and population. Pageviews are lower when compared with population in states using their own website versions of the AC.

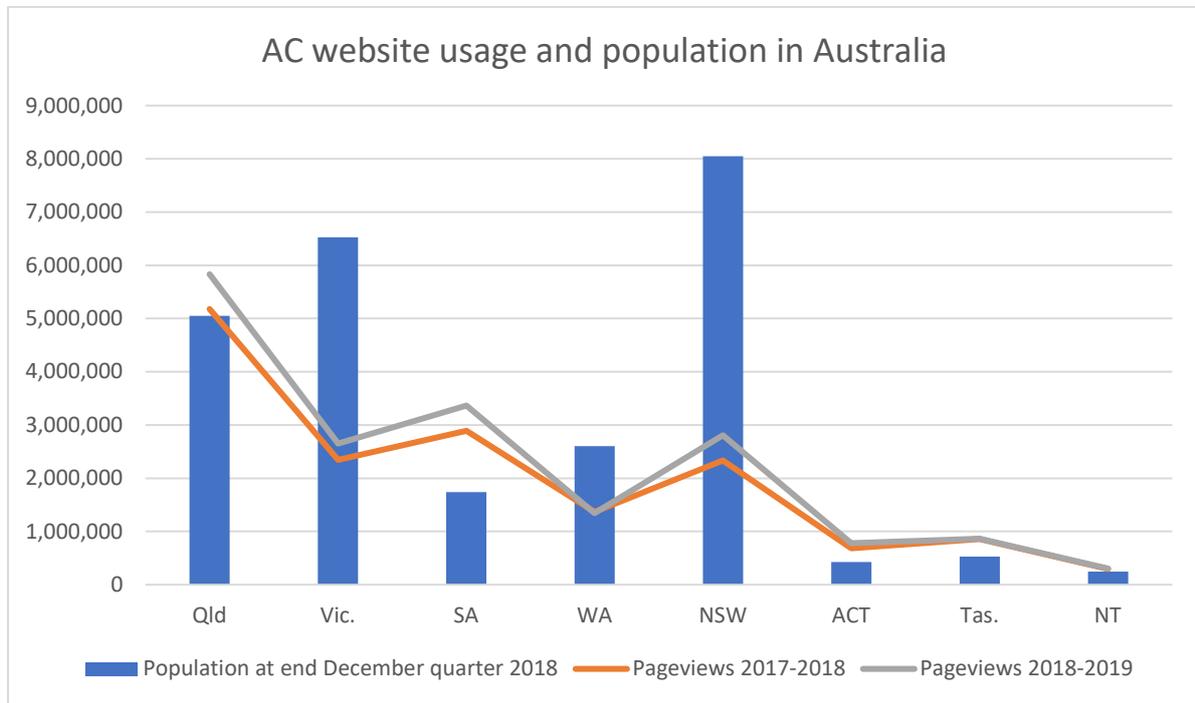


Figure 2. AC pageviews compared with Australian population in December 2019.⁴ Based on and includes data supplied by the ABS.

For the purposes of this analysis, ACARA considers that website bounce rates⁵ below 40 per cent are desirable. In the eight learning areas entry webpages, during the 2018–19 reporting period, bounce rates ranged from 8.81 per cent to 21.11 per cent, as demonstrated in figure 3. The lowest bounce rate was recorded on the ‘Science’ learning area entry webpage. The ‘Languages’ learning area entry webpage registered the highest bounce rate, although it was well within the desirable range. The optional learning area, ‘Work Studies’, registered a bounce rate of 34.17 per cent, also below 40 per cent. Bounce rates within the optimal range indicate that website users were able to navigate the website to access engaging information.

⁴ Australian Bureau of Statistics (2019). Retrieved from www.abs.gov.au/ausstats/abs@.nsf/0/D56C4A3E41586764CA2581A70015893E?Opendocument

⁵ *Bounce rate* is the percentage of all sessions on a site where users view only one page and trigger only one request to the Analytics server. There is no interaction with the webpage. (Google Analytics, 2018)

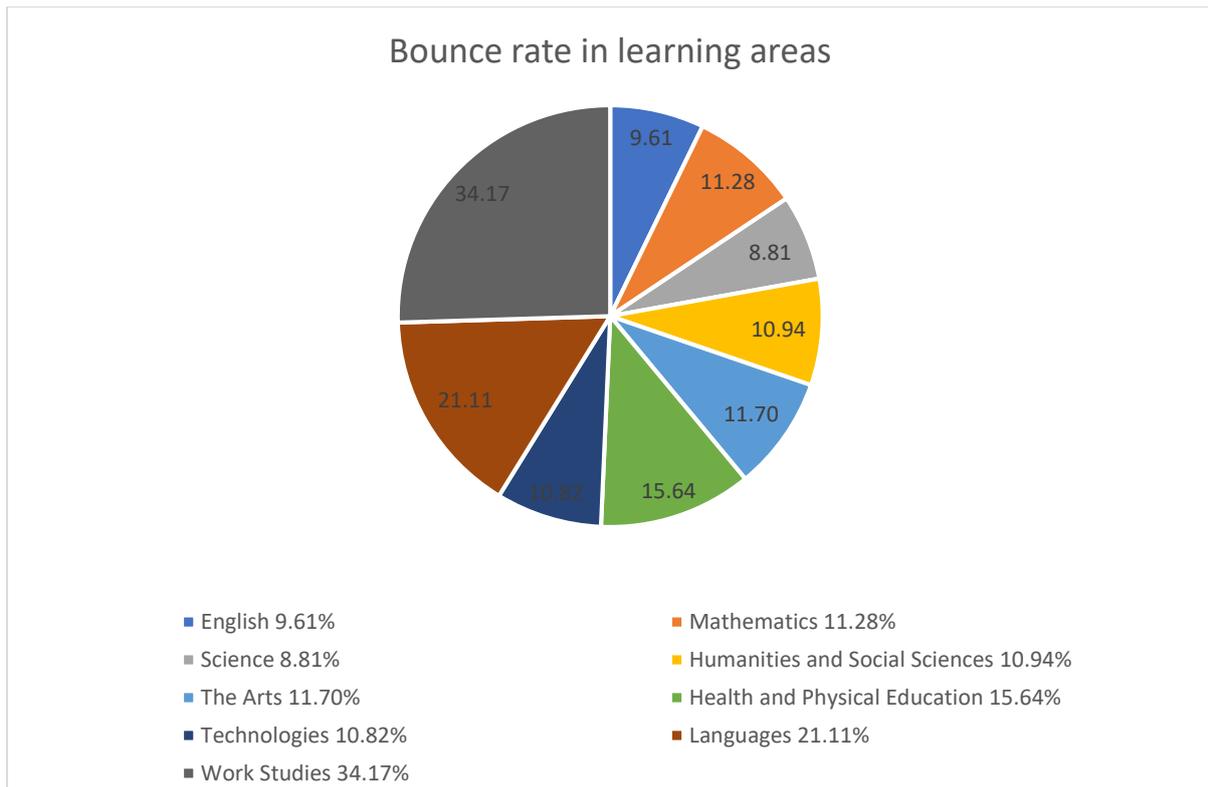


Figure 3. Bounce rate in learning area webpages for the 2018–19 reporting period

Australian-based users represented the majority of visitors to the AC website in the 2017–18 reporting period, at 88.42 per cent, and results were similar during the 2018–19 reporting period, with Australian-based users representing 86.01 per cent of all users. Figure 4 represents the relative percentage for Australian users in each state and territory, when measured by sessions.⁶

⁶ A session is a period a user is active on a site. If a user is inactive for 30 minutes or more, then by default, a future activity is counted as a new session. If a user leaves the site and returns within 30 minutes, it is counted as part of the original session (Google Analytics, 2018)

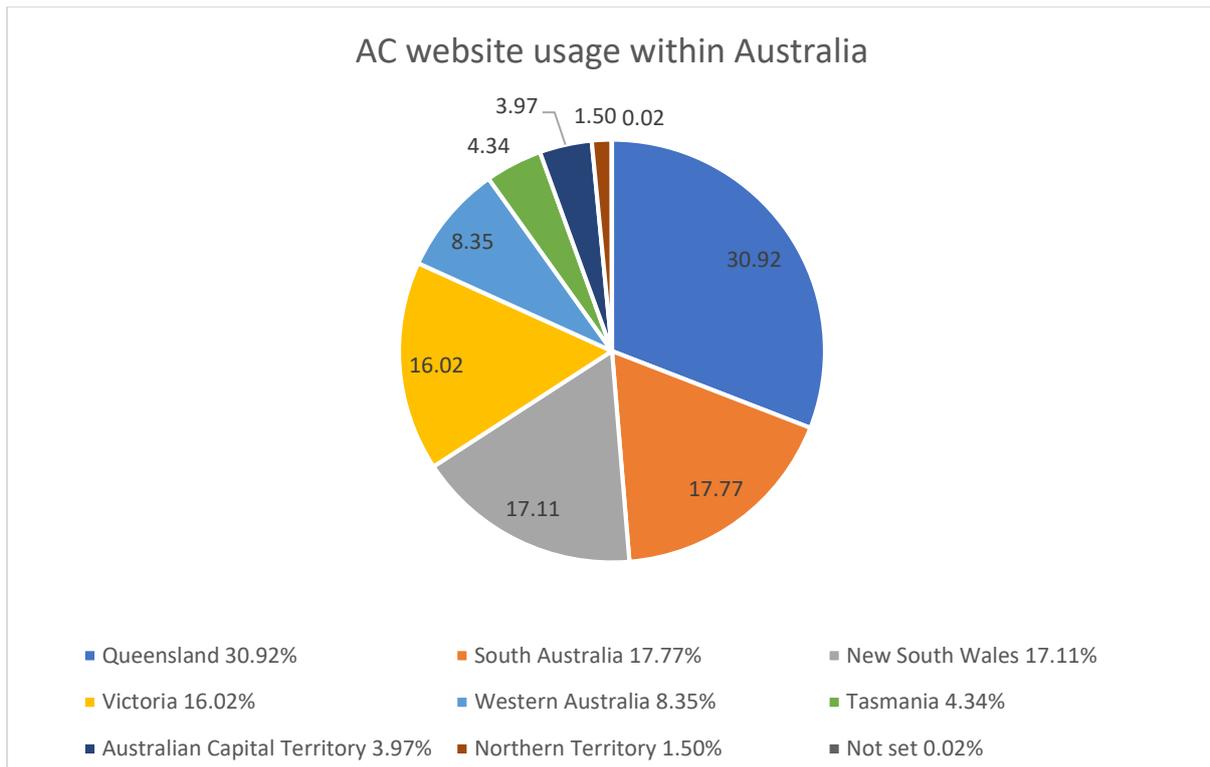


Figure 4. AC website usage within Australia, based on sessions, 2018–19

In the 2017–18 reporting period users were located in 222 different countries; the 2018–19 reporting period registered almost identical results at 224.

Of all website users in the 2018–19 reporting period, 71.16 per cent identified as new (first time) visitors, almost identical to the last reporting period. Returning visitors were reported to be 28.84 per cent.

It is important to note that users are assigned a client ID when they first visit a website. This client ID will not be recognised if the same user accesses the same website from a different device – the client will receive a new client ID. Thus, new users may actually be returning users accessing the website using a different device.

A returning visitor record of 28.84 per cent and anecdotal evidence in the field suggests that users need to be encouraged to revisit the AC website to take advantage of new material in website updates.

Almost 31 per cent of all users were aged between 25 and 34 years, over 23 per cent were aged between 35 and 44 years, and almost 22 per cent were 18 to 24 years old.

In the 2018–19 reporting period, website users from locations outside Australia were again dominated by the United States. In fact, the AC website users located in the United States more than doubled since the last reporting period, with almost 57,000 users: nearly 27 per cent were users in Illinois, over 11 per cent were users in California and 10 per cent were users in New York. The second largest number of users outside Australia was located in India, followed by the Philippines, the United Kingdom and Indonesia. There was continued interest from the Asian region, as portrayed in figure 5.

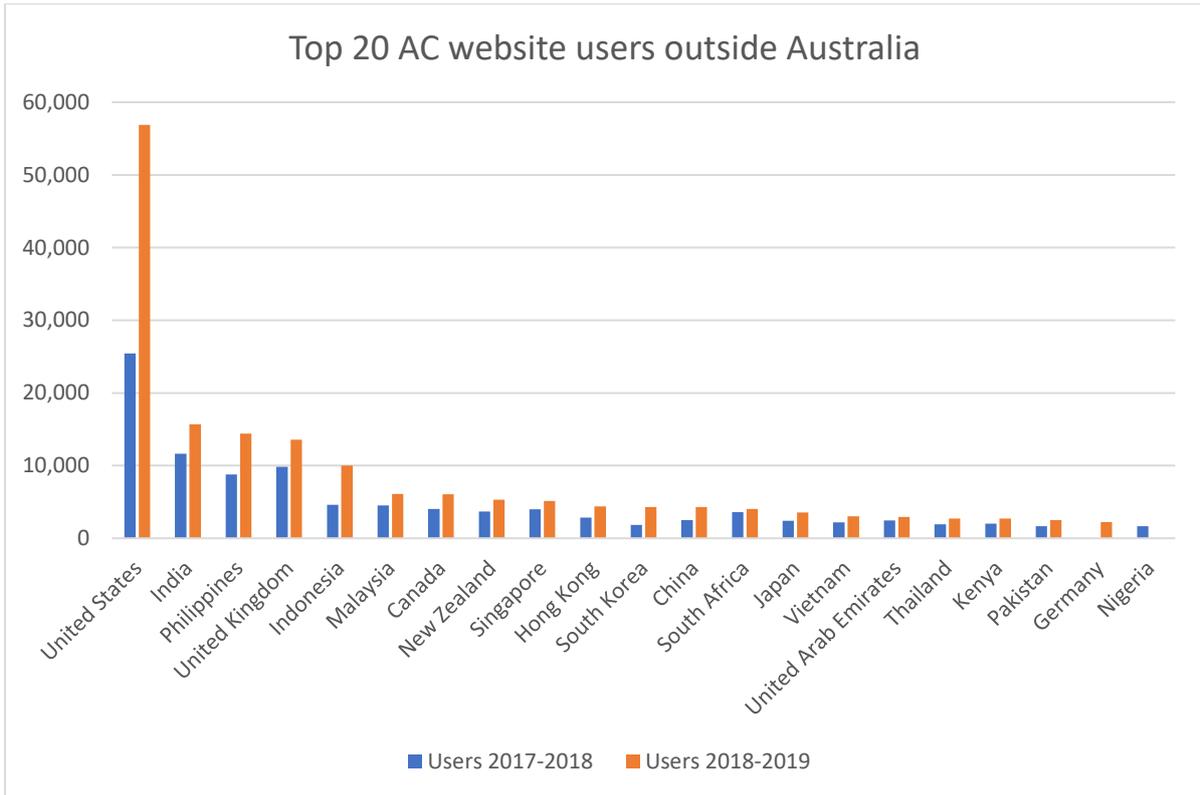


Figure 5. Top 20 users outside Australia, 2017–19

Browser and device preference

As noted in the three previous monitoring reports, ranking data indicated that Google Chrome remained more popular than Safari, Internet Explorer, Microsoft Edge and Firefox. In the 2018–19 reporting period, Google Chrome was preferred by over 52 per cent of users. Internet Explorer and Firefox diminished in popularity in the 2018–19 reporting period.

Sessions, rather than pageviews, were used to measure browser and device use. The results are demonstrated in figures 6 and 7.

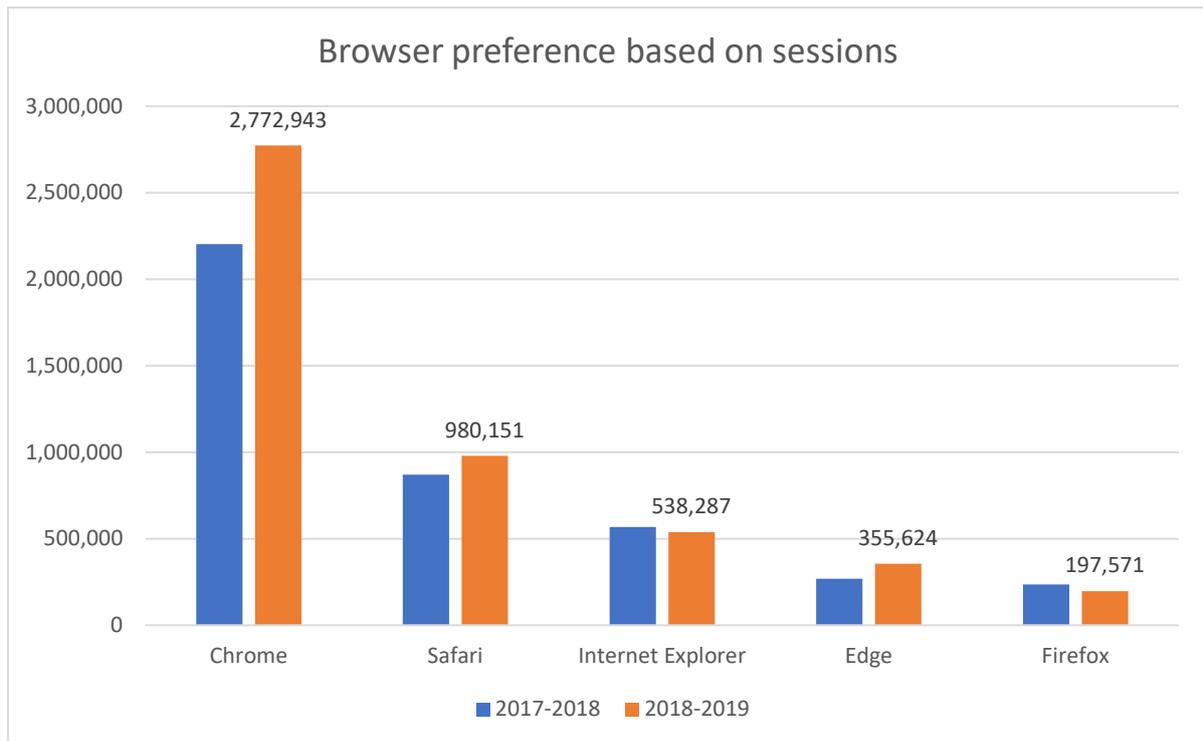


Figure 6. Browser preference to access AC, based on sessions, 2017–19

By sessions, Windows ranked as the most widely used operating system in the 2018–19 reporting period at 59.28 per cent, followed by Macintosh at 25.63 per cent, iOS at 10.48 per cent and Android at 3.97 per cent.

Sessions indicated that the most popular screen resolution used to access the AC website measured 1366x768 pixels, followed by 1440x900, 1920x1080, 1280x720 and 375x667. Larger monitors usually support a higher resolution.

Desktop computers were the most popular device used to access the Australian Curriculum website in both the 2017–18 and 2018–19 monitoring periods, as noted in figure 7.

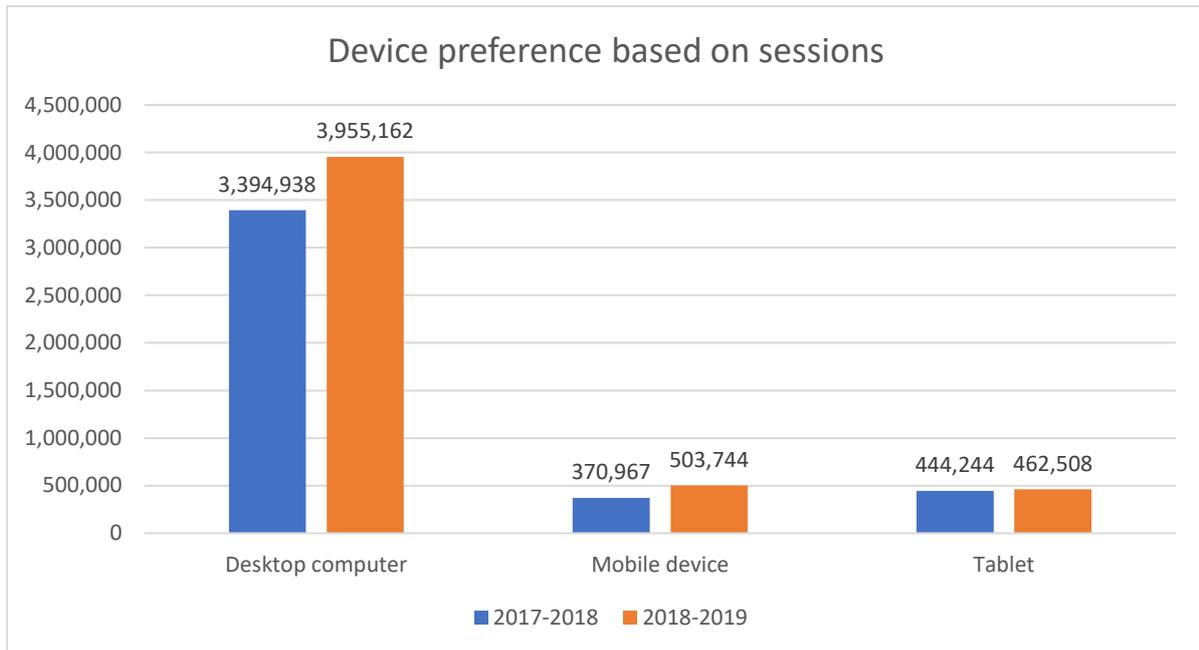


Figure 7. Device preference, based on sessions, 2017–19

Over 80 per cent of users accessed the website with a desktop computer; 10 per cent, with a mobile device; and 9 per cent, with a tablet. Device preferences will continue to be monitored to ensure that changes or trends are considered in future website updates so that accessibility is maintained across ACARA’s broad range of users.

Language settings

Over the reporting period, Google Analytics collected data on the browser language setting; this data may not reflect a user’s native language. Language codes may be region specific, as demonstrated in the top 10 results for language settings presented in table 3.

Table 3. Top ten language code settings, 2018–19

Language Code	Language	Users	New Users
en-us	English – United States	651,020	599,439
en-au	English – Australian	611,231	566,987
en-gb	English – Great Britain	286,694	267,001
zh-cn	Chinese – Mainland China	12,873	12,408
en	English	7,863	7,483
ko-kr	Korean	4,182	4,130
zh-tw	Chinese – Taiwan	2,867	2,825
es-es	Spanish – Castilian	2,680	2,660
id	Indonesian	2,465	2,456
en-ca	English – Canada	2,348	2,310

In rank, English featured in the first, second, third, fifth and tenth places in the top 10 results, with 1,443,220 language settings for English, regardless of region. New users represented a large proportion of users.

F–10 curriculum

Learning areas

Overall, the learning area entry webpages attracted around 3.2 million pageviews in the 2018–19 reporting period. This represented an increase of 380,000 pageviews compared with the 2017–18 reporting period.

The ‘Mathematics’ learning area entry webpage attracted the most interest, as shown in figure 8. All learning areas demonstrated an increase in the number of entry webpage pageviews since the 2017–18 reporting period, with the exception of Humanities and Social Sciences that reported a slight decrease in pageviews.

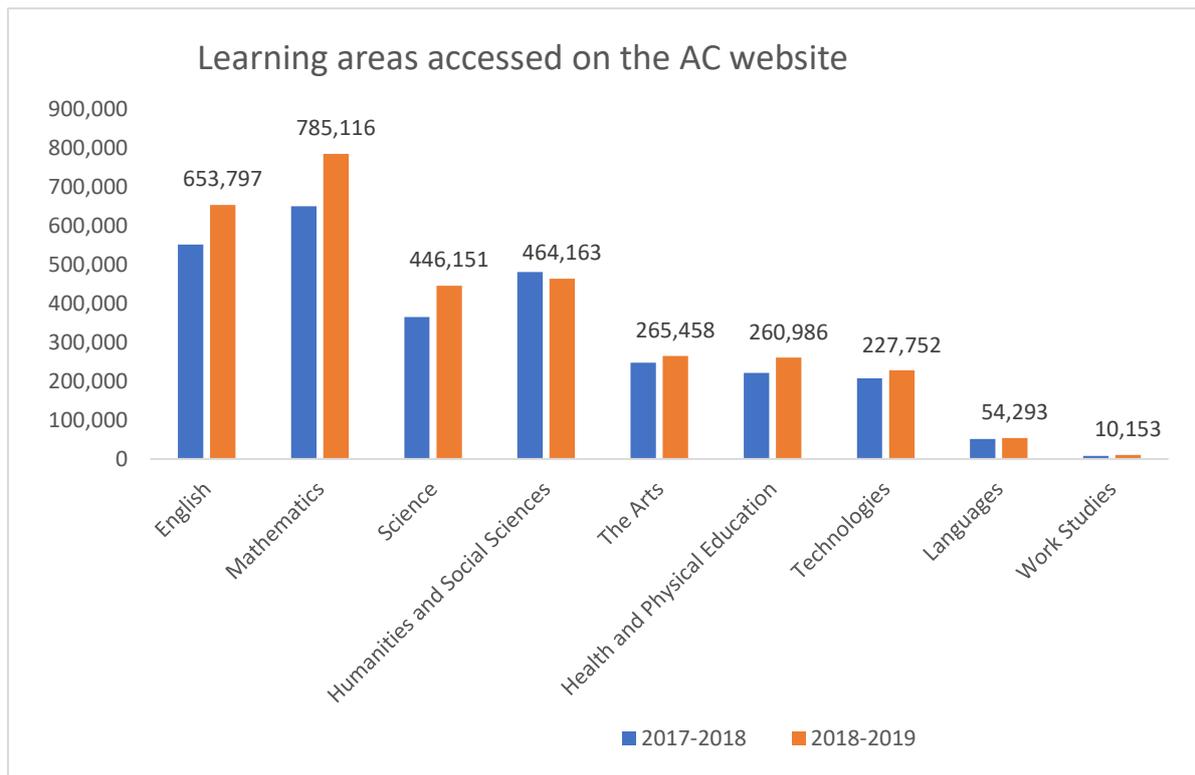


Figure 8. Learning areas accessed in AC, based on pageviews, 2017–19

The average amount of time users spent on the ‘Mathematics’ learning area entry webpage was 24 seconds, with the ‘English’ learning area entry webpage recording 25 seconds.

General capabilities

In the 2018–19 reporting period, almost 274,000 pageviews were recorded for the ‘General capabilities: Overview’ webpage. In the top results for ‘General capabilities’ webpages, aside from the ‘Overview’ webpage, the ‘Literacy’ webpage was the most accessed with 147,879 pageviews: ‘Critical and Creative Thinking’ received 101,009 pageviews, ‘Personal and Social capability’ received 100,178 pageviews, and ‘Numeracy’, 91,637 pageviews. The top eight pageviews results for GCs exceeded pageviews reported in the 2017–18 reporting period, as illustrated in figure 9.

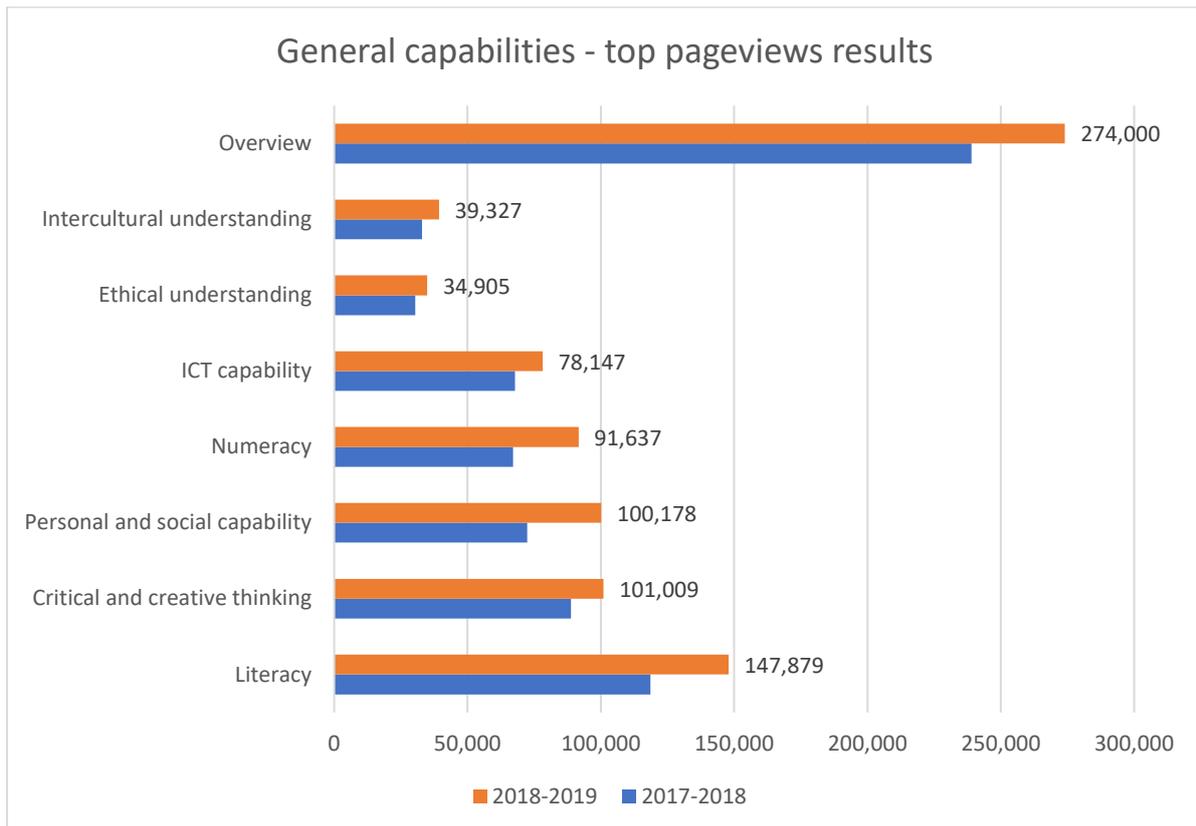


Figure 9. Top general capabilities webpages, based on pageviews, 2017–19

The top general capabilities pageviews by states and territories indicated that Queensland was the heaviest user in the 2018–19 reporting period, with South Australia and New South Wales following, as portrayed in figure 10. Tasmania was the only state that did not exceed the number of pageviews recorded in the previous reporting period. Users from outside Australia have not been included in figure 10.

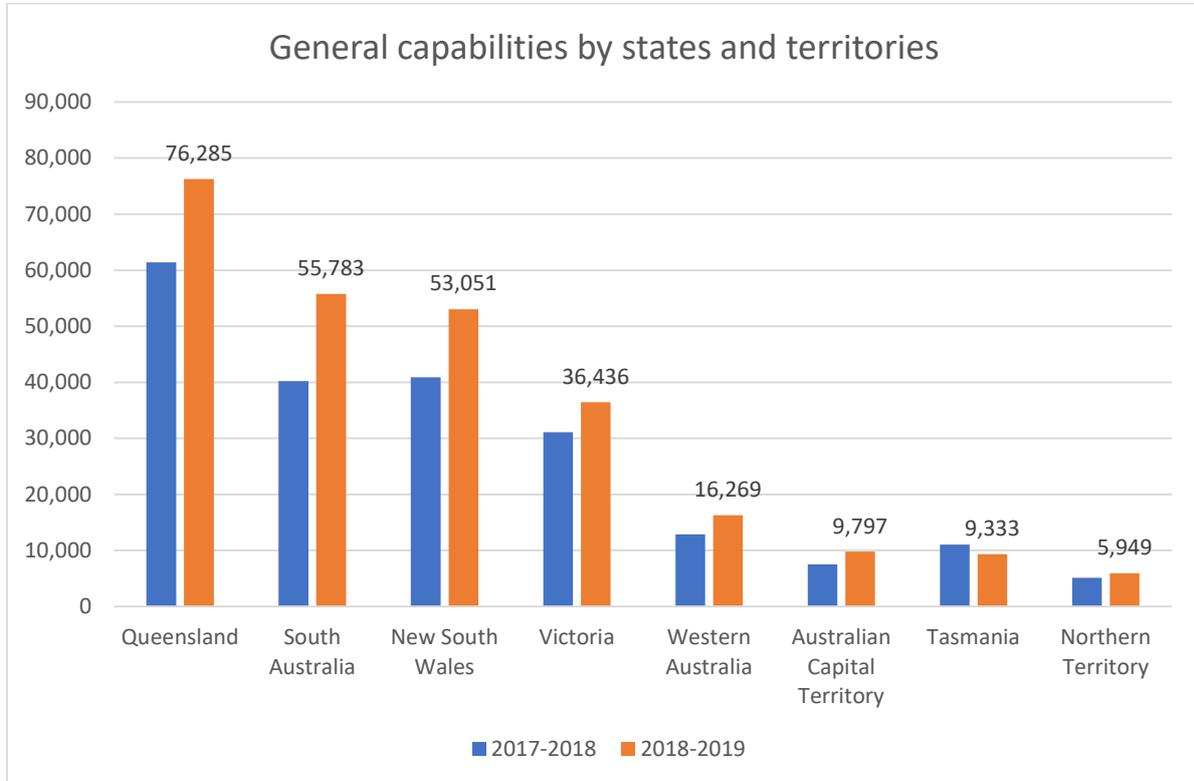


Figure 10. General capabilities by states and territories, based on pageviews, 2017–19

The bounce rate of the ‘General capabilities: Overview’ webpage was just within the recommended range at 39.01 per cent.

Cross-curriculum priorities

Interest in the cross-curriculum priorities remained strong during the 2018–19 monitoring period. The ‘Overview’ webpage registered almost 81,000 pageviews. The ‘Aboriginal and Torres Strait Islander Histories and Cultures’ priority webpage reported the most pageviews at over 104,000, aligning with the strong interest in the illustrations of practice. The ‘Sustainability’ cross-curriculum priority recorded 50,000 pageviews in the 2017–18 monitoring period, and almost 58,000 pageviews in 2018–19, as demonstrated in figure 11.

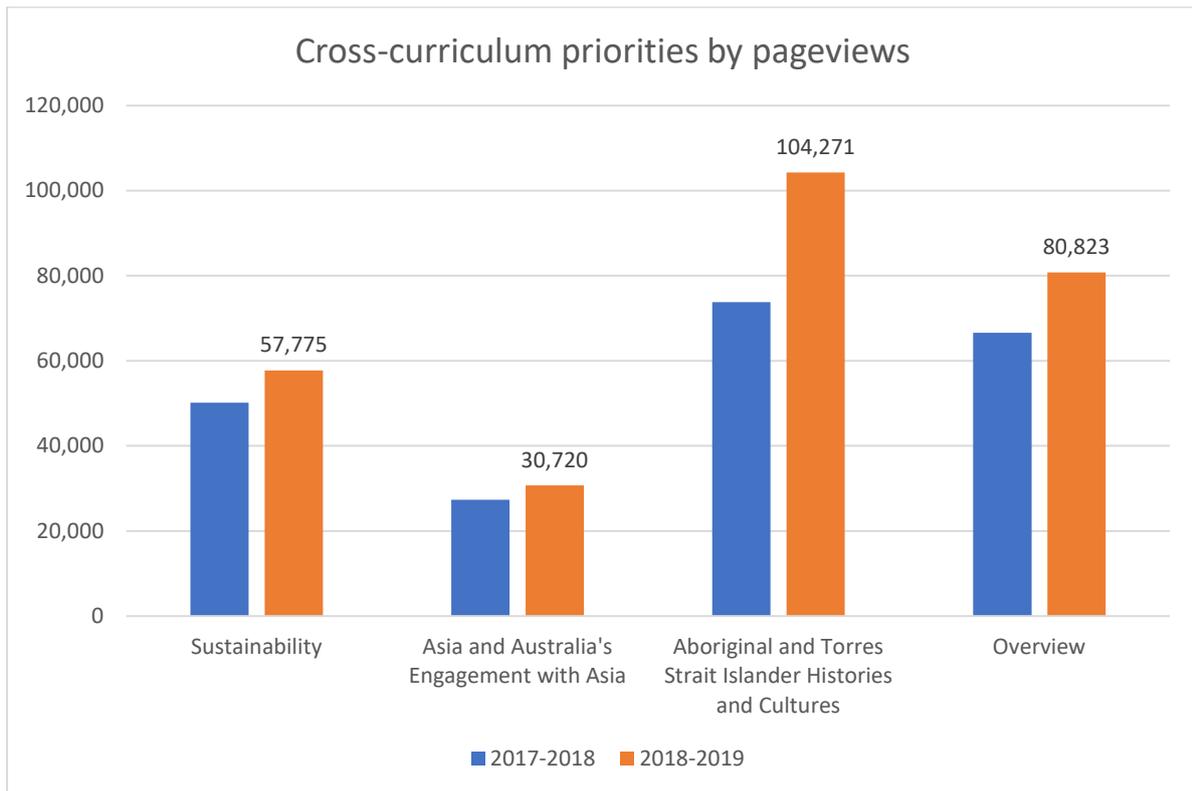


Figure 11. Cross-curriculum priorities, based on pageviews, 2017–19

The bounce rate of the ‘Cross-curriculum priorities: Overview’ webpage was within the desirable range at 34.34 per cent.

Parent information

The 'Parent information' tab on the AC homepage does not provide a drop-down menu. The webpage opens to an overview with a link providing download access to 'The Australian Curriculum: an overview for parents'. This pdf document is housed on the ACARA website.

The 'Parent information' webpage offers handy links to access:

- 'national literacy and numeracy learning progressions: a guide to the progressions for parents'
- further information in learning areas, student diversity, general capabilities and cross-curriculum priorities
- contact details for jurisdictions in states and territories.

Another section provides answers to frequently asked questions. Both 'Handy links' and 'Frequently asked questions' open to the same web address as the 'Parent information' webpage; therefore, the number of individual pageviews cannot be determined.

At the base of the webpage, tile links to the AC website provide access to year-level information in pdf format. These documents are stored on the ACARA website.

The 'Parent information' webpage recorded 57,402 pageviews and a bounce rate of 63.88 per cent.

The 'National literacy and numeracy learning progressions: a guide to the progressions for parents' page registered 9,195 pageviews with a bounce rate of 72.59 per cent.

Student diversity

The 'Student diversity: Overview' webpage attracted 64,558 users during the 2018–19 monitoring period, an increase of almost ten per cent compared with 58,742 users during 2017–18. The pageviews for the 'Overview' and three student diversity webpages are portrayed in figure 12. 'EAL/D (English as an additional language or dialect)' registered well over 54,000 pageviews, 'Students with disability' over 51,000 pageviews, and 'Gifted and talented' over 38,000 pageviews.

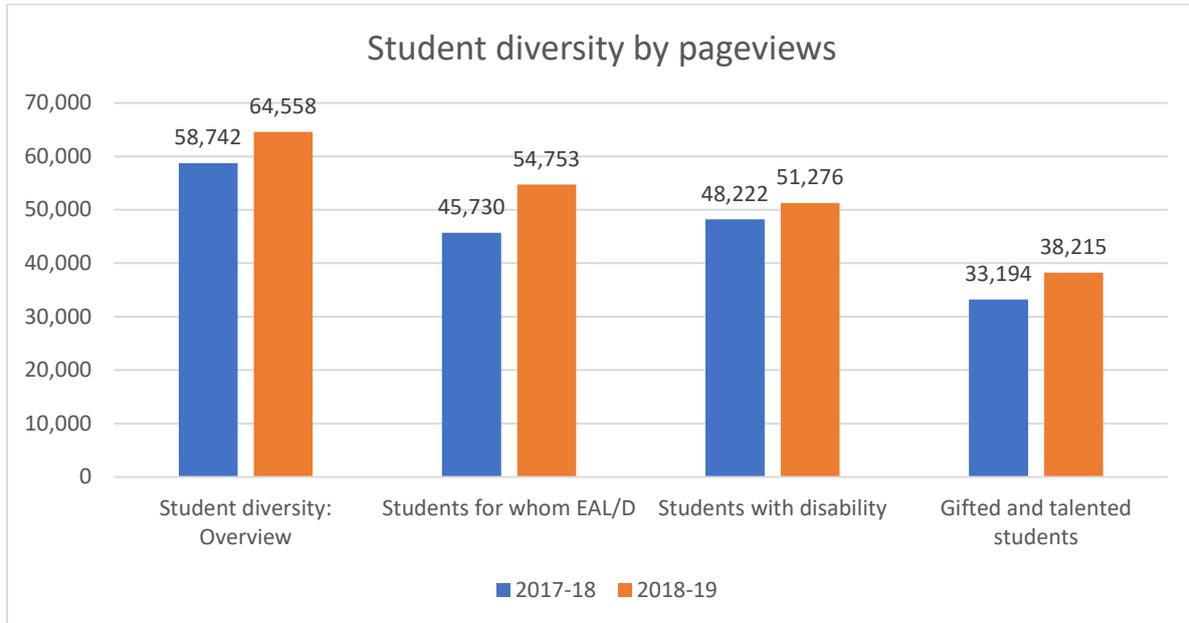


Figure 12. Student diversity webpages, based on pageviews, 2017–19

Resources and publications

Resources: Illustrations of practice

'Illustrations of practice' webpages are located under different items in the 'Resource' drop-down menu. The following represents an overview of the ranking of all the illustrations of practice. They are also referenced in section 8 of this report.

Illustrations of practice present information about professional practice in schools and include details about school location and context, planning documents and video footage of classroom practice. The top 10 pageviews for 'Illustrations of practice', with a total of over 82,000 pageviews, are displayed in figure 13. The top ranked 'Illustrations of practice' webpage in the last reporting period, 'Primary curriculum: illustrations of practice', dropped to second place with almost 15,000 pageviews, and was replaced by 'Aboriginal and Torres Strait Islander histories and cultures: illustrations of practice' with over 15,300 pageviews. 'Student diversity: students with disability: illustrations of practice' maintained the third rank, with almost 12,000 pageviews.

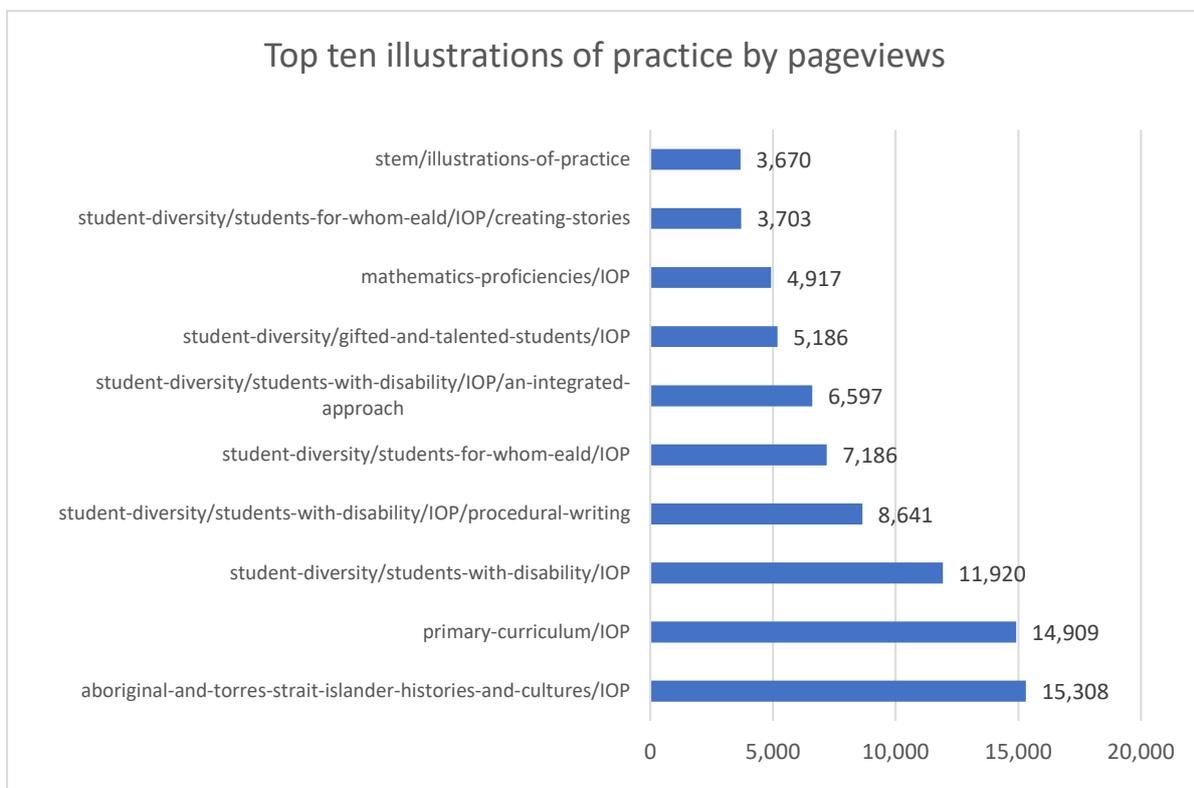


Figure 13. Top 10 illustrations of practice, based on pageviews, 2018–19

Resources: Aboriginal and Torres Strait Islander histories and cultures

The 'Aboriginal and Torres Strait Islander histories and cultures' entry webpage includes an introduction, a video featuring Professor Mark Rose, supporting documentation, and a tile link to a webpage featuring 12 illustrations of practice.

The most popular webpage featured the 'Aboriginal and Torres Strait Islander histories and cultures: illustrations of practice' with 15,308 pageviews, followed by the 'Aboriginal and Torres Strait Islander histories and cultures' entry webpage with 14,893 pageviews. Both webpages featured close to the recommended upper bounce rate with 41.47 and 39.73 per cent respectively.

The illustration of practice with the most pageviews was 'Expressing culture and learning through narrative' with 1,781 pageviews followed by 'Fire: a burning question' with 1,613 pageviews, as portrayed in figure 14.

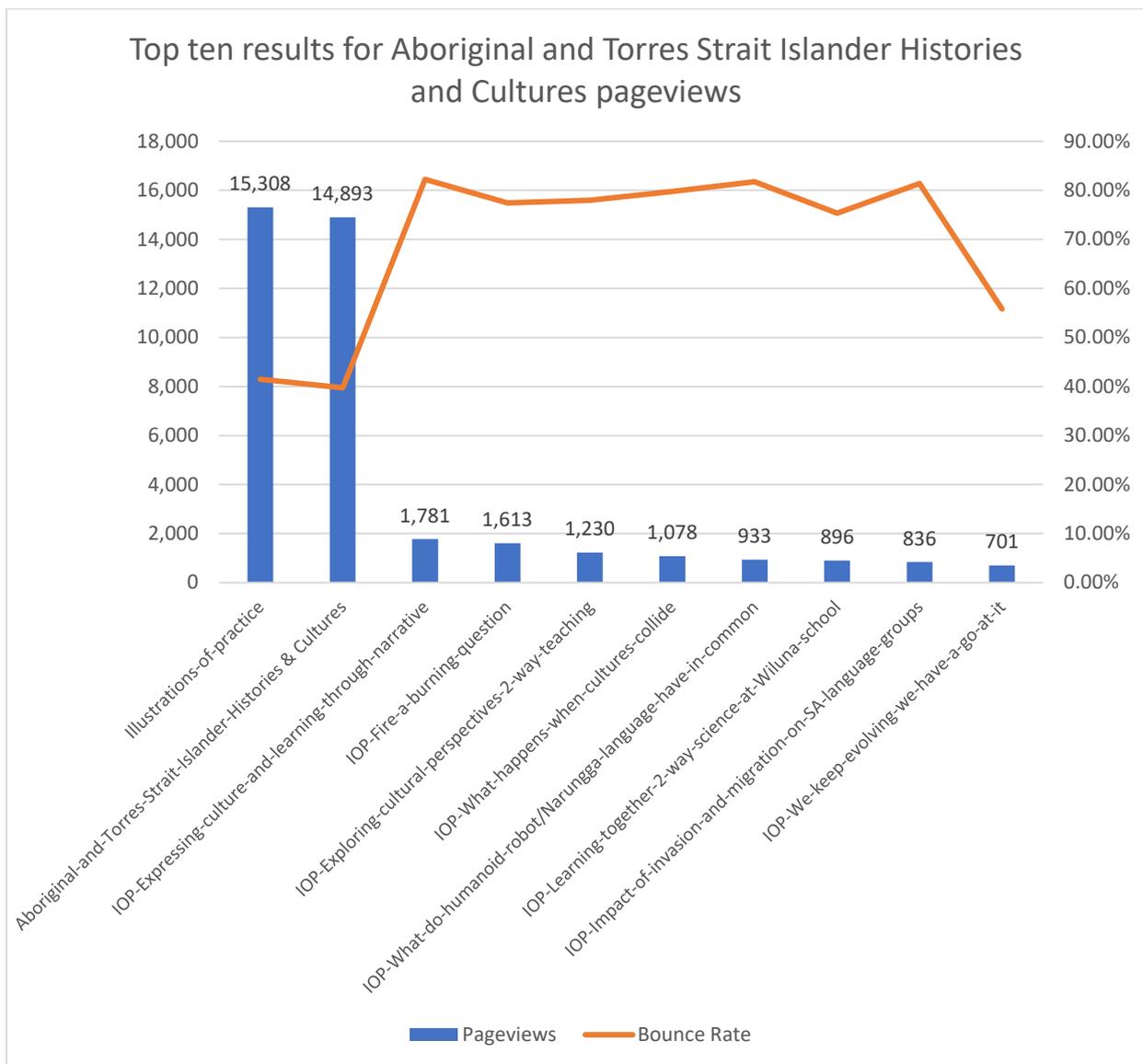


Figure 14. Top 10 Aboriginal and Torres Strait Islander histories and cultures pageviews

Resources: curriculum connections

The curriculum connections resources support educators to draw thematic connections across the dimensions and learning areas of the AC for various conceptual themes.

Curriculum connections resources have been developed for the following:

- consumer and financial literacy
- food and fibre
- food and wellbeing
- outdoor learning.

The curriculum connections entry webpages recorded 22,775 pageviews over the 2018–19 reporting period, compared with 21,894 pageviews in 2017–18.

The top five pageviews results for curriculum connections portfolios are listed in the following table. All bounce rates were over the recommended range as portrayed in the tables below.

Table 4. *Pageviews and bounce rates for curriculum connections portfolios*

Page: Portfolios	Pageviews	Bounce rate
Food and wellbeing: general capabilities	11,778	51.49%
Outdoor learning	8,267	73.66%
Food and wellbeing	6,211	50.89%
Consumer and financial literacy	5,772	59.51%
Food and fibre	4,692	65.70%

The top five pageviews results for curriculum connections resources are reported below. Three bounce rates were within the recommended range.

Table 5. *Pageviews and bounce rates for curriculum connections dimensions*

Page: Resources	Pageviews	Bounce rate
Consumer and financial literacy: Mathematics	992	37.09%
Food and fibre: Foundation to Year 2	451	50.00%
Consumer and financial literacy: Foundation Year	431	53.12%
Food and wellbeing: Foundation to Year 2	408	20.00%
Food and wellbeing: Years 7 and 8	350	33.33%

Resources: Digital Technologies in focus

Digital Technologies in focus (DTiF) is an Australian Government funded project as part of the National Innovation and Science Agenda. The project has been designed to encourage whole-school and inter-school collaboration in the implementation of the AC: DT curriculum.

DTiF webpages were launched on 28 November 2018, five months into the 2018–19 reporting period. In the following seven months of the 2018–19 reporting period, the 'Digital technologies in focus' entry webpage registered 29,436 pageviews. Data information in the table 6 represents the top five pageviews for DTiF, and the first entry 'Digital Technologies in focus' represented 58.5 per cent of all pageviews with a bounce rate of 32.30 per cent, within the recommended range.

Table 6. *Digital Technologies in focus*

Page: Digital Technologies in focus	Pageviews	Bounce rate
Digital Technologies in focus	17,213	32.30%
Resources	6,916	69.41%
Professional learning	1,583	69.95%
About	1,409	58.90%
School stories	1,352	40.26%

Resources: General capabilities and career education

Throughout the reporting period, ACARA developed career education illustrations of practice to support the implementation of Future Ready: A student focused National Career Education Strategy, 2019. The strategy is an Australian Government initiative to prepare students for their future careers, with an emphasis on building the skills and general capabilities that are needed in the workplace. ACARA published nine IoPs in June 2019 and a further three in August 2019. Data will be provided in the next reporting period.

Resources: National literacy and numeracy learning progressions

The 'National literacy and numeracy learning progressions' (NLNLP) entry webpage is structured to open in concertina style to access further information under the heading 'Understand how the national literacy and numeracy learning progressions work'. Nine questions, a guide for parents, version history and pdf documents are listed with a short explanation and an optional link to 'read more'. Figure 15 portrays the 2018–19 reporting period pageviews and bounce rates that were registered when a user opted to 'read more' under each heading, thus opening a new webpage at a new web address.

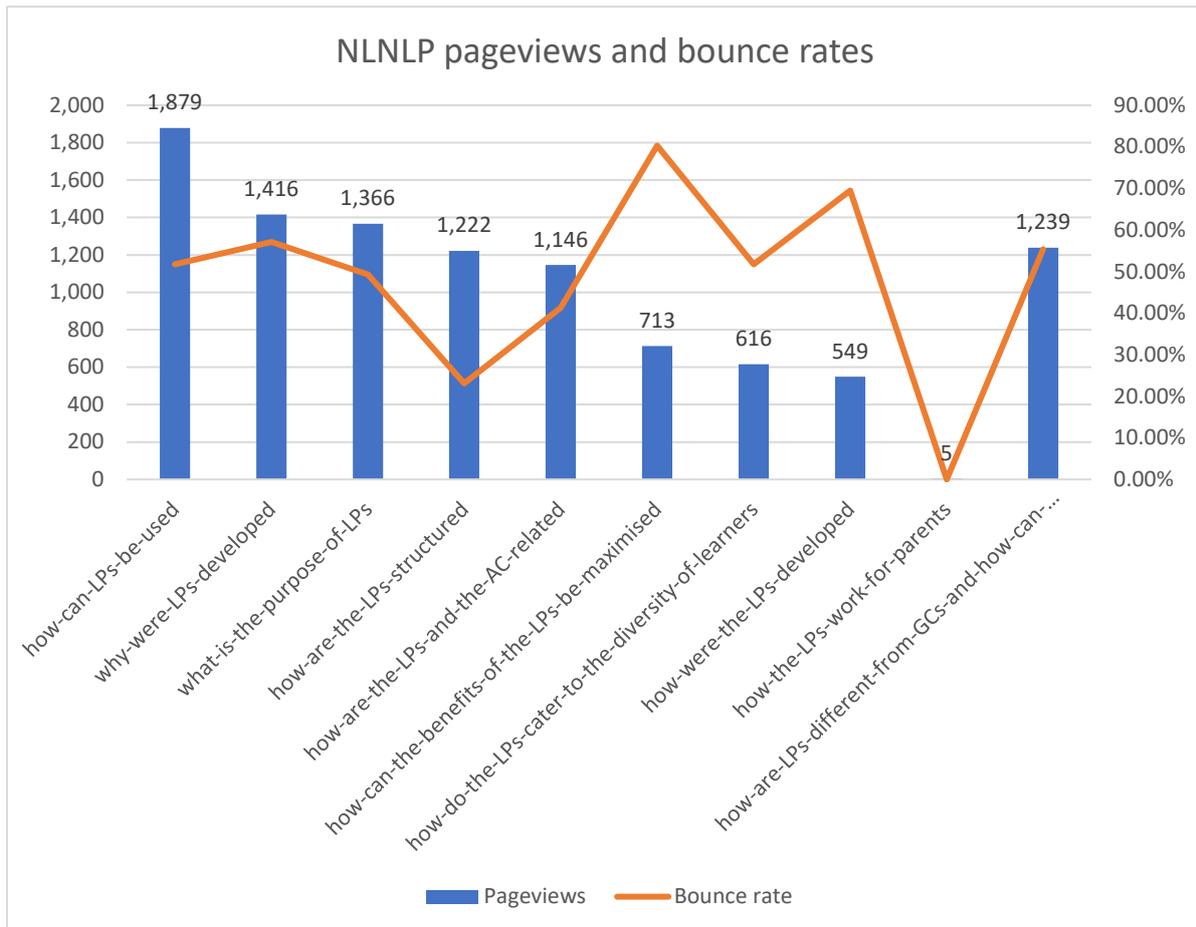


Figure 15. NLNLP pageviews and bounce rates, 2018–19

The NLNLP webpage provides options to explore the individual progressions, the National Literacy Learning Progression (NLLP) and the National Numeracy Learning Progression (NNLP).

- National literacy learning progressions (NLLP)

The top 50 results were analysed and results for the most popular webpages are portrayed in figure 16. The NLLP entry webpage features tiles for three elements: 'Writing', 'Reading and viewing' and 'Speaking and listening'. These elements recorded the top three NLLP pageviews results and achieved acceptable bounce rates. However, all other NLLP webpages recorded bounce rates over the recommended 40 per cent, ranging from 41.68 per cent for 'Literacy learning area advice' to 83.96 per cent for 'Literacy learning area advice: The Arts'.

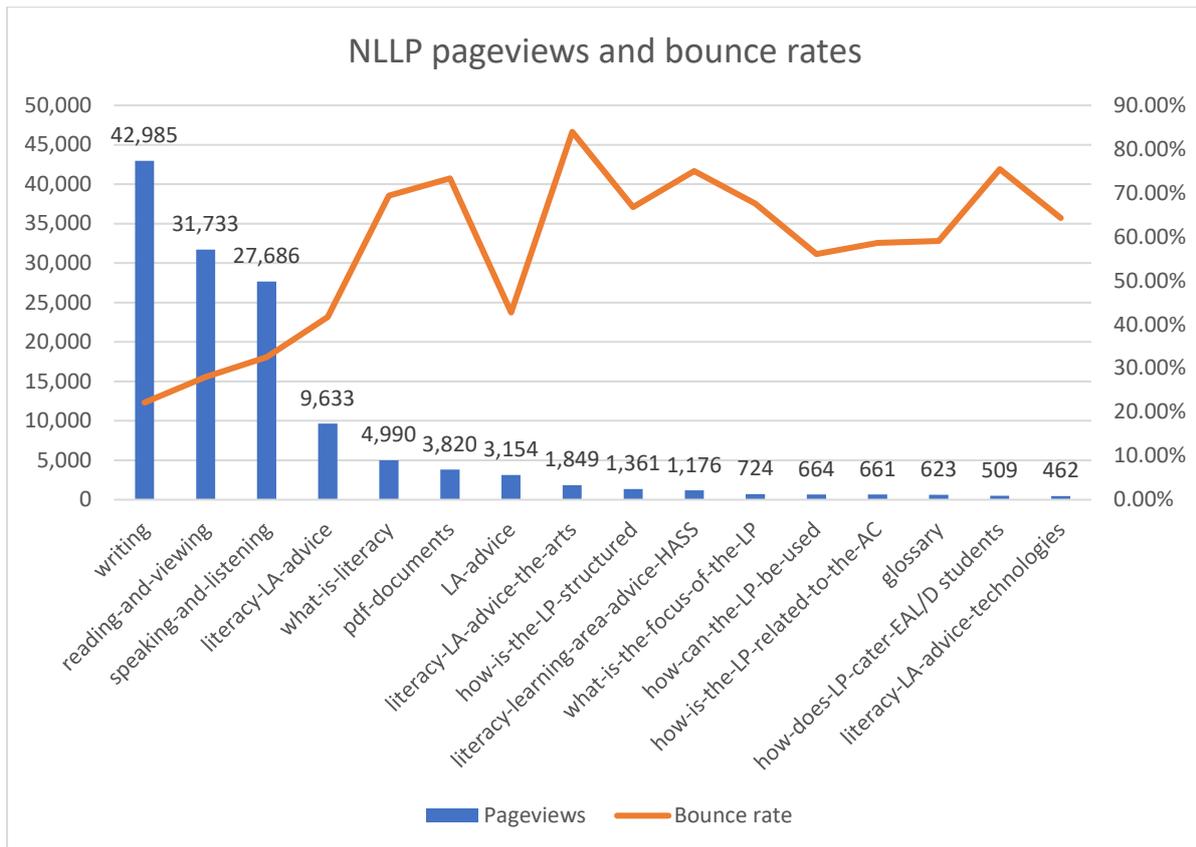


Figure 16. NLLP pageviews and bounce rates, 2018–19

- National numeracy learning progressions (NNLP)

The top 50 results were analysed and results for the most popular webpages are portrayed in figure 17. A wide range of pageviews was recorded for the three ‘element’ tiles featured on the NNLP entry webpage; ‘Number sense and algebra’, ‘Measurement and geometry’ and ‘Statistics and probability’. The latter did not achieve a place in the top three pageviews as in all the other NLNLP elements. Pageviews for the ‘Number sense and algebra’, ‘Measurement and geometry’, ‘Numeracy learning area advice’, ‘Statistics and probability’ and ‘Numeracy learning area advice: The Arts’ recorded acceptable bounce rates. However, all other webpages recorded bounce rates over the recommended 40 per cent, ranging from ‘Numeracy learning area advice: HASS’ at 47.62 per cent to ‘pdf documents’ at 71.29 per cent.

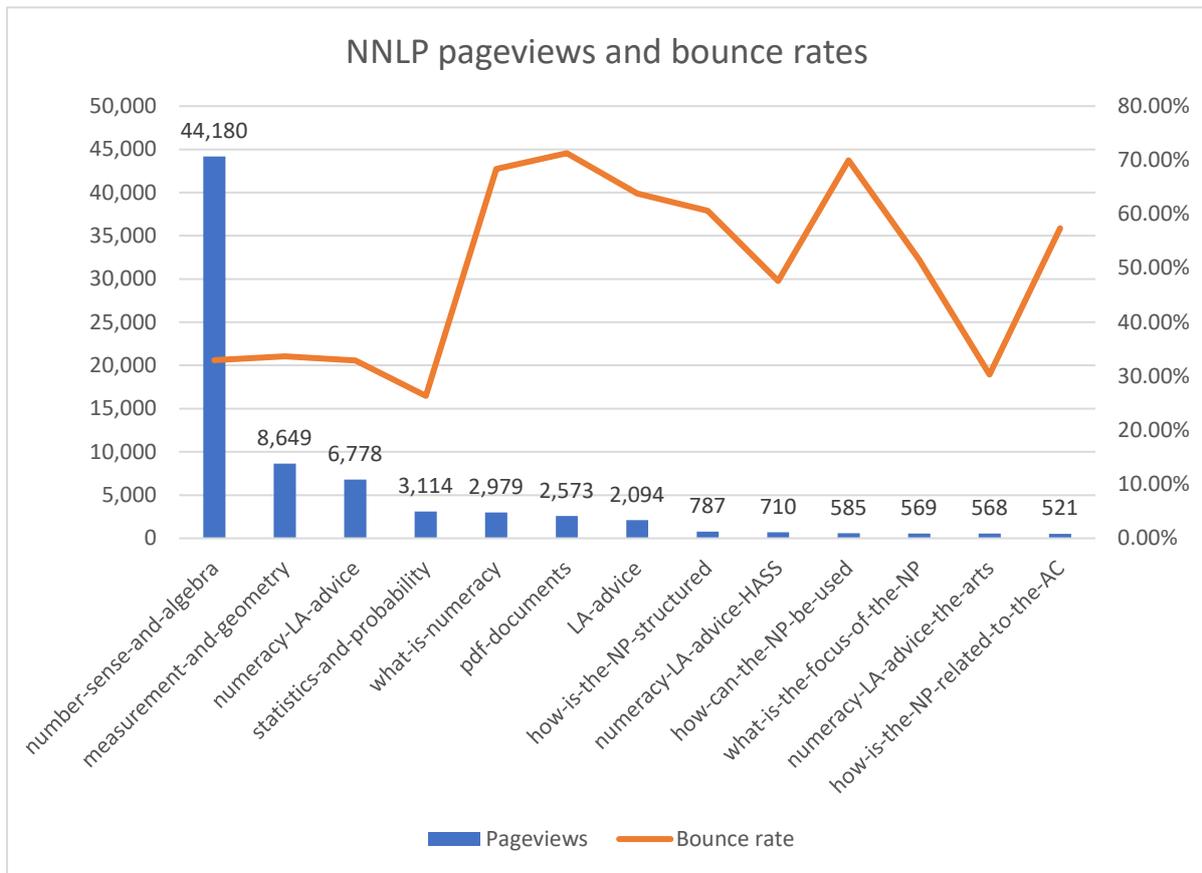


Figure 17. NNLP pageviews and bounce rates, 2018–19

Resources: Mathematics proficiencies

Over the 2018–19 reporting period, the ‘Mathematics proficiencies’ entry webpage recorded 39,485 pageviews, an increase of over 9,000 pageviews or 30 per cent compared with 30,360 pageviews in 2017–18. The top results for pageviews are listed below. The ‘Understanding’ portfolio was the only one within the recommended bounce rate range.

Table 7. Pageviews and bounce rates for Mathematics proficiencies portfolios

Page: Portfolios	Pageviews	Bounce rate
Understanding	7,776	39.37%
Problem-solving	6,819	61.37%
Fluency	3,953	53.36%
Reasoning	3,755	53.73%

The ‘Illustrations of practice’ entry webpage recorded almost 5,000 pageviews and was well within the recommended bounce rate range. Individual school illustrations reported high bounce rates.

Table 8. Pageviews and bounce rates for Mathematics proficiencies IOP

Page: Illustrations of practice	Pageviews	Bounce rate
Illustrations of practice	4,917	26.27%
Toowoomba Grammar School	1,075	81.97%
Girraween Primary School	973	67.95%
Hale School	689	76.47%
St. Felix Catholic Primary School	673	74.44%

The ‘Number and algebra’ work samples represented four of the top five Mathematics proficiencies work samples. All five recorded bounce rates over the recommended range.

Table 9. Pageviews and bounce rates for Mathematics proficiencies work samples

Page: Work samples	Pageviews	Bounce rate
Number and algebra: Who are we? WS1	1,910	53.49%
Number and algebra: My thinkboard WS2	1,604	61.79%
Number and algebra: Fractions and decimals and percentages WS4	1,588	57.73%
Measurement and geometry: The combined area of spaces WS3	971	66.27%
Number and algebra: Game show licence to solve WS6	529	84.09%

Resources: primary curriculum

The 'Primary curriculum' resources entry webpage reported almost 38,000 pageviews and 'Primary curriculum: Illustrations of practice' almost 15,000 pageviews. Both webpages recorded bounce rates within the desirable range.

Table 10. *Pageviews and bounce rates for primary curriculum webpages*

Page	Pageviews	Bounce rate
Primary curriculum	37,807	33.97%
Primary curriculum: illustrations of practice	14,911	38.18%

The top five 'Primary curriculum: Illustrations of practice' are represented below.

Table 11. *Pageviews and bounce rates for Primary curriculum illustrations of practice*

Page: illustrations of practice	Pageviews	Bounce rate
Our Lady of Mercy Catholic School	1,371	84.29%
Alice Springs School of the Air	927	83.59%
Brighton Primary School	723	71.62%
Landsdale Primary School	635	82.50%
Lansdowne Crescent Primary School	598	79.63%

Resources: STEM

The 'STEM' resources entry webpage reported 37,390 pageviews, an increase of almost 5,000 pageviews compared with 32,444 pageviews recorded in the 2017–18 reporting period. Bounce rates for STEM webpages are documented in the information below.

Table 12. *Pageviews and bounce rates for the STEM entry webpage*

STEM	Pageviews	Bounce rate
STEM	37,390	57.49%

STEM portfolios pageviews are listed below. 'Sustainability' was the most popular portfolio with over 5,000 pageviews, followed by 'Environment' with over 4,000 pageviews. The bounce rates for both portfolios fell within the recommended range.

Table 13. *Pageviews and bounce rates for STEM portfolios*

STEM portfolios	Pageviews	Bounce rate
Sustainability	5,051	39.12%
Environment	4,070	39.38%
Force and motion	3,442	55.50%
Product	2,921	57.72%

The 'STEM: Illustrations of practice' entry webpage was the most popular illustrations of practice webpage with 3,670 pageviews and a bounce rate of below 40 per cent, within the recommended range.

Table 14. *Pageviews and bounce rates for STEM illustrations of practice*

STEM illustrations of practice	Pageviews	Bounce rate
Illustrations of practice	3,670	36.23%
Simonds Catholic College	463	53.66%
Heathfield High School	346	87.88%
Henley High School	342	83.08%
Cherrybrook Technology High School	339	81.36%

A playground design project was the most viewed STEM work sample, with 1,463 pageviews. Table 15 demonstrates that bounce rates were over the recommended range.

Table 15. *Pageviews and bounce rates for STEM work samples*

STEM work samples	Pageviews	Bounce rate
Design project: The top playground-Cherrybrook	1,463	84.81%
Experimental investigation: Merici	1,044	79.25%
Mouse trap dragster: Canobolas	837	80.00%
App design: St. Michael	647	61.54%

Resources: Work samples

Over the 2018–19 monitoring period, the 'Work samples: Overview' webpage received over 98,000 pageviews, indicating an increase of almost 29,000 pageviews or 41 per cent when compared with 69,654 pageviews in 2017–2018 reporting period.

AC 'Work samples portfolios' webpages demonstrate student learning at different levels of achievement in relation to the achievement standard. Pageviews for 'Work samples portfolios' in all learning areas were monitored. The Arts work samples portfolios, including the subjects Dance, Drama, Media Arts, Music and Visual Arts, received the most pageviews with 86,175 pageviews, followed by the learning areas Technologies, English and Humanities and Social Sciences, as demonstrated in figure 18.

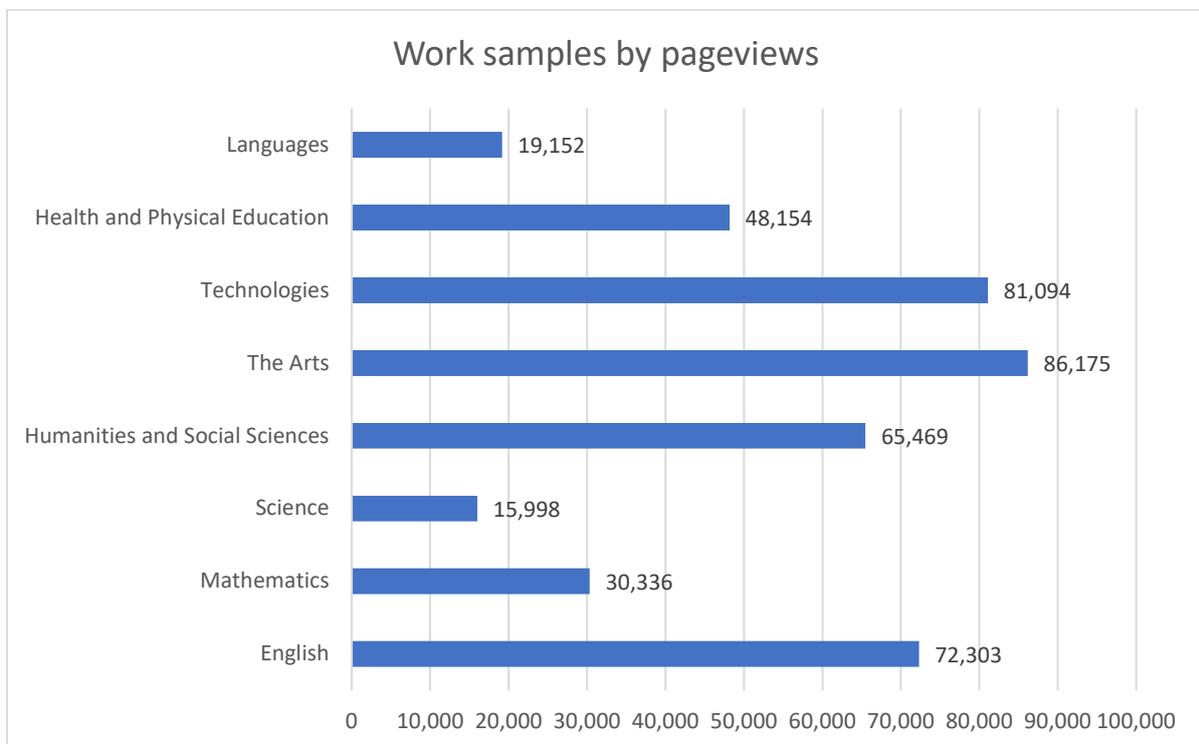


Figure 18. Learning area work sample pageviews, 2018–19

When the AC was first developed, work samples portfolios for English, Mathematics, Science and History were presented in static form as pdf files. However, more recent work samples portfolios are created in html format and are available for HPE, Languages, Technologies and The Arts. History work samples in pdf were removed when html files replaced them.

In the original AC, the learning areas of English, Mathematics and Science and the subject History statistics on pageviews, such as the number of pageviews of work samples at 'satisfactory' or 'above satisfactory' in English, cannot be accessed. As the AC evolved, and curriculum for more learning areas and subjects was added, file locations were changed. A breakdown is available for the more recent learning areas and subjects, revealing some interesting data reported in section 8, the individual learning area sections of this monitoring report, and in figure 19 below.

The most popular work samples portfolio registered almost 6,500 pageviews and was in Digital Technologies, Foundation to Year 2. It is interesting to note that all the top 20 work samples portfolios were accessed at the satisfactory level.

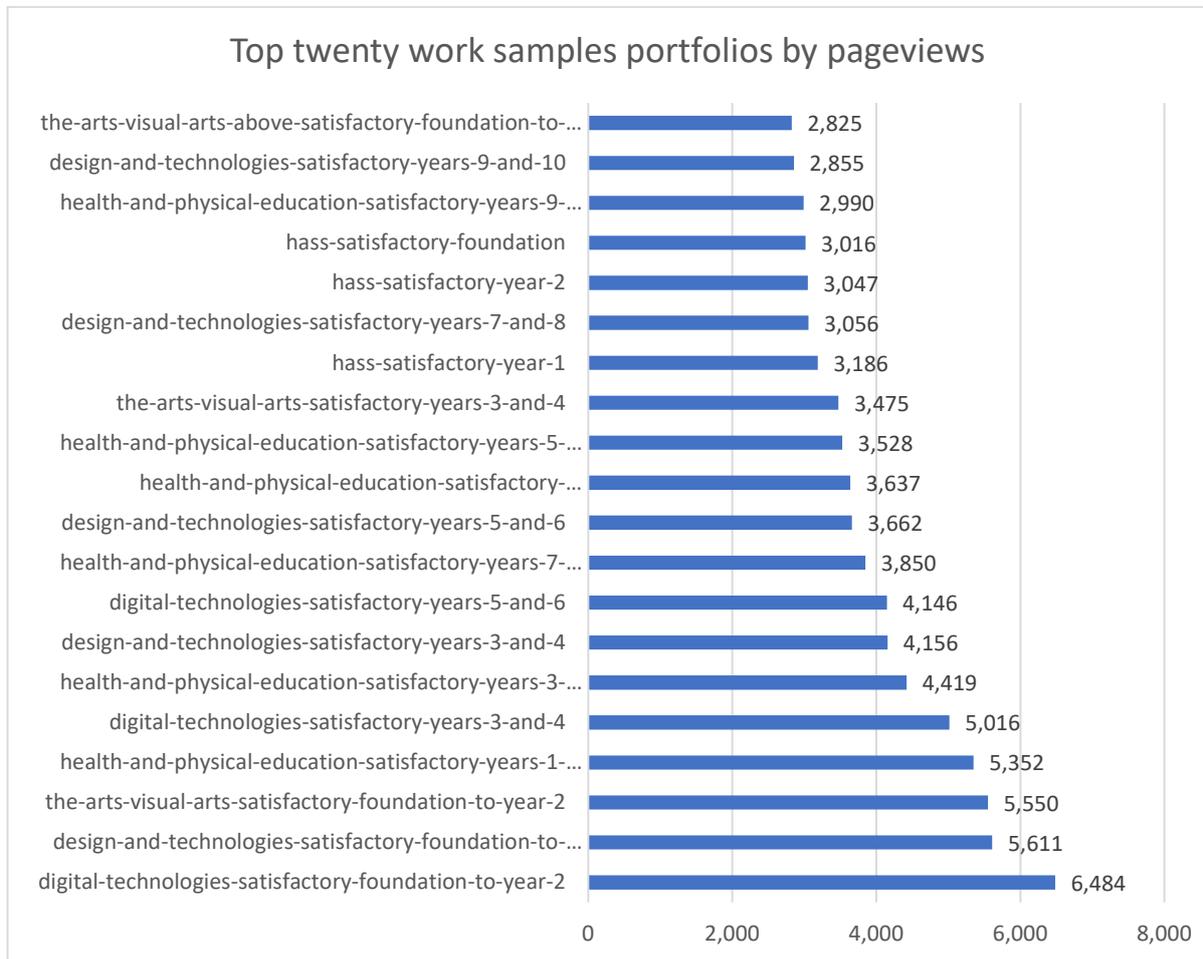


Figure 19. Top 20 work samples portfolios pageviews within learning areas, 2018–19

Prior to 2017, work samples were provided at ‘below satisfactory’, ‘satisfactory’ and ‘above satisfactory’ levels. From 2017, ACARA ceased publishing new work samples at ‘below satisfactory’. However, it is interesting to note that results for the 20 most popular pageviews in work samples reveal that ‘below satisfactory’ work samples continued to be viewed in Visual Arts, Media Arts, Drama, Dance, Music, Digital Technologies, Geography, and Health and Physical Education.

Publications: program of research (2017–2020)

The 'Program of research (2017–2020)' publications webpage provides a menu for six pdf documents including ACARA's four international comparative studies and an international comparative studies key findings paper.

Over the 2018–19 reporting period, the 'Program of research (2017–2020)' webpages attracted 7,098 pageviews. This result indicated an increase of 5,102 pageviews since the 2017–18 reporting period.

8. ENQUIRIES, MEDIA AND DATA ANALYSIS

a. Learning areas

English

The Australian Curriculum: English (AC: E) was endorsed by the Education Council in December 2010. The F–10 AC: E is organised into three interrelated content strands: Language (knowing about the English language), Literature (understanding, appreciating, responding to, analysing and creating literary texts), and Literacy (expanding the repertoire of English usage). The senior secondary curriculum for English includes four subjects: English, English as an Additional Language or Dialect, Essential English, and Literature. The common features across all year levels and courses is the development of students' knowledge, understanding and skills in listening, speaking, reading, viewing and writing standard Australian English.

Supporting the F–10 curriculum are student work samples that enhance teachers' understanding of the content and the achievement standards. During the 2018–19 monitoring period, work commenced to review, revise and enhance portfolios of work samples.

Enquiries

During the 2018–19 monitoring period, most enquiries related to the National Literacy Learning Progression. The enquiries came primarily from sector curriculum coordinators, school curriculum leaders and classroom teachers who were seeking clarification and guidance on ways in which to use the progression to best support their students and collaborate with colleagues. Many questions focused on whether the whole progression needed to be used and if the progression was a replacement for the AC: English. Teachers and leaders were interested to learn ways in which the progression could be used as a complementary tool alongside the English curriculum. There were some requests for further resources to support the progression.

Enquiries from parents were mainly concerned with individual school approaches to the teaching of English and literacy skills. These ranged from text choices to systems of reading instruction. Some parents were interested in how they could support their child's literacy development at home. There were a few enquiries offering suggestions about how the curriculum could be changed or enhanced. A small number of enquiries were from individuals who were interested in how their educational products could be connected to the curriculum.

Media

Throughout the 2018–19 monitoring period, there were several issues relating to English and literacy that received media attention. Key amongst these were: the National Assessment Program – Literacy and Numeracy (NAPLAN); the acquisition, development and assessment of literacy skills; interest in the proposed Year 1 phonics screening check; and specific discussion about opportunities and support for literacy growth in Aboriginal and Torres Strait Islander communities.

As in 2017–18, NAPLAN and the move to online testing were widely reported. There were diverse opinions about the ways in which NAPLAN data are used by schools, the differences in the online and paper-and-pencil experience and how the testing impacts on teachers, students and families. Examples of such articles included: ‘Education Minister Simon Birmingham admits failing system “needs to change” amid NAPLAN outcry’ (Dalley, *Channel 9 News*, 6 August 2018); ‘Why the NAPLAN results delay is a storm in a teacup’ (Tognolini, *The Conversation*, 13 August 2018); ‘NAPLAN results: online students did better in writing test than those on paper’ (McGowan, *The Guardian*, 28 August 2018); ‘NAPLAN 2018 summary results: a few weeks late, but otherwise little change from previous years’ (Savage, Holloway and Lewis, *The Conversation*, 28 August 2018); ‘NAPLAN: Differences do exist between online and pen-and-paper test results, document reveals’ (Robinson, *ABC News*, 18 October 2018); ‘Time to drop NAPLAN? We shouldn’t treat school like a competition’ (Berry, *The Sydney Morning Herald*, 20 March 2019); ‘NAPLAN online failures bring more calls from states for reform’ (McGowan, *The Guardian*, 16 May 2019).

Literacy levels and acquisition of literacy skills amongst Australian students garnered the attention of many journalists and experts. Some articles continued to reference the 2016 PISA scores for Australian students, while others examined the ways in which reading is taught in the primary years and then developed in later years. There was a range of opinions about the role of teacher librarians, and factors such as access to libraries and geographical location, on literacy development and performance; some articles drew comparisons with literacy programs in other countries. This diversity of thinking was seen in articles such as: ‘Ten ways teacher librarians improve literacy in schools’ (Merga, *The Conversation*, 18 January 2019); ‘NAPLAN shows boys catching up to girls in reading’ (Hiatt, *The West Australian*, 8 April 2019); ‘Testing literacy today requires more than a pencil and paper’ (Volante et al, *The Conversation*, 10 April 2019); ‘Australian students’ literacy skills not good enough for university, Productivity Commission report finds’ (Hiatt, *The West Australian*, 17 June 2019); ‘Parents resist efforts to raise literacy and numeracy in schools’ (Bolton, *The Australian Financial Review*, 18 June 2019); ‘Spotlight: Red alerts over reading’ (Callaghan, *The Age*, 22 June 2019).

Interest and debate continued about the proposal to introduce the Year 1 phonics screening check. This saw a range of views expressed through media outlets. Some commentators argued that a similar scheme had not been successful in the United Kingdom and therefore Australia should look for lessons in this example. Other opinions argued that the data could be valuable in capturing early issues with developing reading skills. These discussions could be seen in examples such as: ‘Strong case for evidence-based phonics check in Year 1’ (Buckingham, *The Daily Telegraph*, 15 May 2019); ‘The Coalition’s \$10 million for Year 1 phonics checks would be a waste of money’ (Exley, *The Conversation*, 15 May 2019); ‘Teachers told to ignore “NAPLAN-style” phonics test for six-year-olds’ (Singhal, *The Sydney Morning Herald* 17 June 2019).

There were wide-ranging reports on literacy skills in Aboriginal and Torres Strait Islander communities. While the 2018 NAPLAN data indicated improvements in the performance of Year 3 and Year 5 Indigenous students, there was significant commentary on the work that still needs to be done in closing the education gap for Aboriginal and Torres Strait Islander peoples. There were several articles that focused on the ‘Closing the Gap’ report and its implications. Examples of these include: ‘On current rates literacy gaps will remain until the

next century: ACARA warning' (Little, *Education HQ*, 8 April 2019); 'NAPLAN: Indigenous students making the most progress' (Cook and Baker, *The Age*, Herald 8 April 2019); 'Our people will lead the way to Close the Gap' (Turner, *SBS – NITV*, 15 February 2019); 'There's little reason for optimism about Closing the Gap, despite changes to education targets' (Hogarth, *VIW Magazine*, 15 February 2019); 'Adult literacy lessons transforming Aboriginal communities' (Singhal, *The Sydney Morning Herald*, 18 February 2019).

Data analysis: Google analytics

During the 2018–19 reporting period, the total number of pageviews for the English learning area entry webpage was 653,797. Compared with the 2017–18 reporting period, this number represented an increase of over 102,000 pageviews.

The greatest number of users was from Queensland, followed by South Australia, Victoria, New South Wales, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory.

Over the reporting period, the total number of pageviews for the 'National literacy learning progressions' resource entry webpage was 120,365. In the top 10 results for pageviews in literacy learning progressions, the elements of the 'National literacy learning progression: Writing' received 42,985 pageviews, 'Reading and viewing' 31,733 pageviews, and 'Speaking and listening' 27,686 pageviews.

There were 31,878 pageviews for English pdf documents over the reporting period, an increase of over 4,000 pageviews since the last reporting period. Queensland maintained a strong lead at 13,073 pdf-pageviews, followed by South Australia with 6,048, and New South Wales with 4,065. Outside Australia, users located in England registered 128 pdf-pageviews followed by Jakarta, Indonesia, with 59.

English work samples portfolios registered over 70,000 pageviews over the reporting period. Of these users, over 40,000 were returning visitors and over 28,000 were new visitors. Work samples portfolios for English are currently available in pdf format only. Future work samples portfolios will be published in html format.

The average time⁷ spent on English webpages overall was 1 minute and 48 seconds. The English learning area entry webpage registered an average time of 25 seconds and the bounce rate was well within the desirable range at 9.6 per cent.

⁷ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Mathematics

The Australian Curriculum: Mathematics (AC: M) Foundation – Year 10 was endorsed by the Education Council in December 2010. AC: M is organised into three interrelated content strands: Number and Algebra, Measurement and Geometry, and Statistics and Probability; and four proficiencies: understanding, fluency, problem-solving, and reasoning. The Number and Algebra strand focuses on using the techniques of discrete mathematics to solve problems in contexts. The Measurement and Geometry strand focuses on analysing and solving a wide range of geometrical problems. The Probability and Statistics strand focuses on acquiring systematic strategies based on the investigation process for answering statistical questions. These three strands provide the mathematical knowledge and skills that form the basis of the four senior secondary subjects.

There are four senior secondary subjects: Essential Mathematics, General Mathematics, Mathematical Methods and Specialist Mathematics. These subjects are differentiated and provide pathways that meet the different learning needs of senior secondary students. Essential Mathematics provides students with the mathematical knowledge, skills and understanding to solve problems in real contexts for a range of workplace, personal, further learning and community settings. General Mathematics develops the use of the techniques of discrete mathematics to solve problems in context. Mathematical Methods develops the use of calculus and statistical analysis. Specialist Mathematics provides opportunities, beyond those presented in Mathematical Methods, to develop rigorous mathematical arguments and proofs, and to use mathematical models more extensively.

Supporting the F–10 curriculum are student work samples that enhance teachers' understanding of the content and the achievement standards. During the 2018–19 monitoring period, work commenced to review, revise and enhance portfolios of work samples.

Enquiries

During the 2018–19 monitoring period, updates and briefings on the Australian Curriculum: Mathematics were provided to professional associations, such as the Australian Association of Mathematics Teachers (AAMT), at jurisdictional and conference presentations, network events and teacher workshops. Requests for ACARA representation and participation in various forums were also received and provided, including the Mathematics Education Research Group of Australasia (MERGA) 'Out-of-field' teaching forum and for various AAMT panels.

ACARA responded to enquires pertaining to the AC: M; common themes included requests for providing definitions of terms used within the AC: M, explanations of mathematical conventions, clarity around curriculum content connections and queries related to Year 10A curriculum content.

ACARA also received several enquiries on the National Numeracy Learning Progression. These related to exemplars, explanation of student behaviours at specific levels within elements of the Numeracy progression and the alignment between the NLNLP, NAPLAN and the AC: M.

Media

Media attention during the 2018–19 monitoring period focused on three main themes: the future direction of the AC: M and ACARA’s program of research, the growing issue of ‘out-of-field’ teachers implementing the AC: M, and the increasing number of students opting out of studying the more challenging mathematics courses in upper secondary.

In July 2018, the Center for Curriculum Redesign (CCR), chaired by Charles Fadel, announced it was collaboratively working with ACARA ‘to design a world-class Mathematics curriculum for schools K–12 that explicitly addresses the learning needs of students for life and work in the 21st century’ (CCR, July 2018). This prompted a number of media articles concerned that curriculum changes would result in an emphasis on competencies over core discipline content.

A recurring topic for discussion was the growing issue of Mathematics being taught by ‘out-of-field’ teachers, meaning those without the relevant university qualifications in both pedagogy and content required to implement the AC: M. There were calls for more training and support for educators in the area of STEM. ‘Engineers and scientists are being encouraged to make the switch to a career in STEM education to get high school students fired up about pursuing careers in these professions’ (*Create Digital*, July 2018). The ABC reported that all Australian high schools would need to employ qualified science and mathematics teachers under a new federal government plan and the then Minister for Education, Simon Birmingham, was quoted as saying, “It’s also about ensuring students are inspired to stick with maths, to stick with the sciences, so that they continue right through their schooling years and hopefully into further studies to give us more skilled scientists and more people skilled in the STEM disciplines” (ABC, July 2018).

Several media outlets cited Australia’s Chief Scientist, Dr Alan Finkel, who called for universities to reintroduce university prerequisites to combat the issue of students opting out of higher levels of Mathematics and in some instances disengaging from Mathematics altogether. The Australian Mathematical Sciences Institute (AMSI) posted a media release stating, “Transparency is needed on the status of mathematically prepared teachers in Australia, as swelling secondary student numbers and a drought in mathematically qualified teachers sounds crisis bells”, according to a report released by the Australian Mathematical Sciences Institute (AMSI) (AMSI, May 2019).

Shifting Australian society’s perception of mathematics as a way of improving students’ engagement with Mathematics was a theme in several articles. Eddie Woo wrote, “Without maths at our side, there are countless patterns and realities in human society and its environment that will sail over our heads,” advocating that, “society urgently needs to shift its view of mathematics. It’s time for everyone to regard numeracy with the same kind of importance as literacy – namely, essential to navigating and succeeding in our modern world” (*The Sydney Morning Herald*, May 2019). Several articles supported the need to apply mathematics to real and authentic situations in order to engage students in mathematics education. Relevance, authenticity and useful application in the 21st century world were approaches shared across a variety of articles (*The Sydney Morning Herald*, *The Financial Review*, *The Courier Mail*, 2019).

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the 'Mathematics' learning area entry webpage on the AC website was 785,116. Compared with the 2017–18 reporting period, this number represented an increase of over 135,000 pageviews.

The greatest number of users was from Queensland, followed by South Australia, Victoria, New South Wales, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory.

The total number of pageviews for 'National numeracy learning progressions' resource entry webpage was 70,260. In the top 10 results for pageviews in numeracy learning progressions, the elements 'National numeracy learning progression: Number sense and algebra' received 44,180 pageviews, and 'Measurement and geometry' received 8,649 pageviews. 'Statistics and probability' ranked outside the top ten with 3,114 pageviews.

Mathematics pdf documents registered 30,049 pageviews over the reporting period, with Queensland having the most with 10,517 pdf-pageviews, followed by South Australia with 6,157 pdf-pageviews. Within Australia, the Northern Territory registered the fewest pdf-pageviews at 444. Outside Australia, the most pdf-pageviews were from England at 99, followed by Ontario, Canada, at 89.

Mathematics work samples portfolios registered a total of 29,541 pageviews, indicating an increase of almost 10,000 pageviews since the last reporting period. Of these, approximately 59 per cent were returning visitors and 41 per cent were new visitors. Work samples portfolios for Mathematics are currently available in pdf file format only. Future work samples portfolios will be published in html format.

The average time⁸ spent on Mathematics webpages overall was 1 minute and 45 seconds. The 'Mathematics learning area entry webpage registered an average time of 24 seconds and the bounce rate was well within the desirable range at 11.28 per cent.

⁸ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Science

The Australian Curriculum: Science (AC: S) Foundation–Year 10 was endorsed by the Education Council in December 2010. The AC: S learning area is organised into three interrelated content strands: Science Understanding, Science Inquiry Skills, and Science as a Human Endeavour. These strands indicate the science knowledge and skills that are to be taught as well as inform the achievement standards at each year level. The Science Understanding strand is further subdivided into four sub-strands corresponding to the four disciplines of Biological, Chemical, Physical, and Earth and Space Sciences.

The senior secondary AC: S consists of the four subjects Biology, Chemistry, Earth and Environmental Science, and Physics. The senior secondary Science subjects build on student learning developed in the AC: S Foundation – Year 10 Science curriculum and incorporate the same three interrelated content strands.

During the 2018–19 monitoring period content elaborations were published for F–10 to support the Aboriginal and Torres Strait Islander Histories and Cultures CCP along with related background information for teachers for Years 5 to 10.

Supporting the F–10 curriculum are student work samples that enhance teachers' understanding of the content and the achievement standards. During the 2018–19 monitoring period work commenced to review, revise and enhance portfolios of work samples.

Enquiries

During the 2018–19 monitoring period, ACARA received several enquires pertaining to aspects of the F–10 AC: S. Enquiries made by teachers included requests for advice regarding the teaching of Science in multi-year classes and the combined teaching of Science and Geography in integrated teaching units. Several teachers enquired about the mandatory nature of content descriptions and achievement standards in the AC: S, voicing concern about the number of topics addressed and the lack of available teaching time to cover all of them in depth.

There was a request regarding a possible introduction of psychology as a subject of the senior secondary Science curriculum and a number of enquiries from private individuals and institutions seeking endorsement of science teaching resources.

The ACARA curriculum specialist responded to requests from state and territory jurisdictional authorities to present and provide updates on the development of new elaborations for the AC: S, which address the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority.

Media

During the 2018–19 monitoring period, several issues in relation to science education received recurring media attention. Considerable media attention has followed ACARA's publication of new Science elaborations and accompanying teacher background information in October 2018. Similar media interest has followed the publication of teaching resources

developed for Science and other learning areas as part of the National Aboriginal and Torres Strait Islander Curricula Project in April 2019. While the publications have met with widespread support from educators and representatives of Aboriginal and Torres Strait Islander communities, they have also attracted criticism from some education experts. Media articles in support of the new materials included: 'Indigenous Science – Setting the Record Straight' (Pearson, *IndigenousX*, 1 November 2018); 'Once again the Daily Telegraph prefers a culture war to facts' (Pearson, *The Guardian*, 2 November 2018); 'Experts say Indigenous knowledge will enrich science education' (Washington, *SBS News*, 5 November 2018); 'Kooriculum: Beyond Terra Nullius' (Matthews, *IndigenousX*, 7 December 2018); 'Teacher resources: Connecting the Science Curriculum to Indigenous culture' (Russell, *ACER Teacher Magazine*, 12 December 2018); 'Science works' (Mogensen, *Australian Educator*, Autumn 2019); 'Fire, water and astronomy: Aboriginal and Torres Strait Islander culture comes to life in the classroom' (Langton, *The Guardian*, 11 April 2019). Examples of articles voicing critical responses to the publications included: 'Fire starting and spear throwing make national science curriculum' (McDougall, *The Daily Telegraph*, 2 November 2018); 'Adding Indigenous understanding to STEM a curriculum fail' (Donnelly, *The Daily Telegraph*, 2 November 2018); 'Science knows nothing of your ridiculous human ways' (Blair, *The Daily Telegraph*, 2 November 2018); 'Not-so scientific method' (Donnelly, *The Daily Telegraph*, 16 April 2019).

In July 2018, media included coverage about 'out-of-field' teaching in STEM-related subjects and the growing shortage of qualified science teachers implementing the AC: S. Major media outlets reported on a government plan to provide incentives to professional engineers and scientists to switch careers in order to get more specialist mathematics and science teachers into schools (*ABC News*, *SBS News*, July 2018). See also media section in Mathematics.

Touching on the same issue of teacher qualification in the STEM disciplines, Chief Scientist Alan Finkel emphasised the importance of prioritising disciplinary concepts, facts and principles over teaching generic 'soft skills', such as collaboration or critical and creative thinking (*Campus Morning Mail*, 11 July 2018). See also media section in Mathematics.

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the Science learning area entry webpage on the AC website numbered 464,163. Compared with the 2017–18 reporting period, this number represented an increase of over 99,000 pageviews.

Science scope and sequence pdf documents reported 20,468 pageviews, an increase of over 2,600 pageviews since the 2017–18 reporting period.

The Science work samples portfolios webpage registered 15,681 pageviews. Of these, over 10,000 users were returning visitors and over 5,500 were new visitors. Work samples portfolios for Science are currently available in pdf file format only. Future work samples portfolios will be published in html format.

Within the reporting period, at the end of October 2018, ACARA released elaborations to support teachers to incorporate Aboriginal and Torres Strait Islander histories and cultures into teaching AC: Science. Teacher background information (TBI) was provided for each

elaboration in Years 7–10. TBIs for F–Year 6 are being published throughout 2019.

Over the reporting period, there were 5,302 Aboriginal and Torres Strait Islander histories and cultures Science elaboration TBI pageviews overall. The elaboration ‘Investigating chemical reactions employed by Aboriginal and Torres Strait Islander Peoples in the production of substances such as quicklime, plaster, pigments, acids, salts and ethanol (OI.5)’ reported the greatest number of TBI pageviews at 683, followed by the elaboration ‘investigating classification systems used by Aboriginal and Torres Strait Islander Peoples and how they differ with respect to approach and purpose from those used by contemporary science’ at 459 TBI pageviews.

The average time⁹ spent on Science webpages overall was 1 minute and 47 seconds. The learning area entry webpage registered an average time of 25 seconds and the bounce rate was well within the desirable range at 8.81 per cent.

Humanities and Social Sciences

The revised Australian Curriculum: Humanities and Social Sciences Foundation – Year 10 was endorsed by the Education Council in September 2015. The learning area comprises multiple subjects. In the Foundation – Year 10 curriculum, these are: F–6/7 Humanities and Social Sciences (HASS), 7–10 History (first introduced in 2010), 7–10 Geography (first introduced in 2013), 7–10 Economics and Business, and 7–10 Civics and Citizenship. F–6/7 HASS comprises four sub-strands: History and Geography (each of which commence in Foundation), Civics and Citizenship (which commences in Year 3) and Economics and Business (which commences in Year 5).

The senior secondary curriculum also comprises multiple subjects: Ancient History, Geography, and Modern History. Ancient History and Modern History were endorsed by the Education Council in December 2012, and Geography was endorsed by the Education Council in July 2013.

Supporting the F–10 curriculum are student work samples that enhance teachers’ understanding of the content and the achievement standards. During the 2018–19 monitoring period, work was completed to review, revise and enhance portfolios of work samples for F–6/7 HASS and work commenced to revise existing portfolios for History 7–10.

Enquiries

During the 2018–19 monitoring period, responses and support in relation to the AC: HASS were provided to a range of individuals and institutions from Australia and overseas. Australian enquiries were primarily associated with the structure of the curriculum in HASS, in particular the differences between the learning area and sub-strand achievement standards in F–6/7 HASS. Further enquiries related to the sequencing and programming of HASS and were referred to the appropriate jurisdictional authorities for specific advice and guidance to suit their contexts.

⁹ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Periodic updates and briefings on the HASS curriculum were provided to organisations and institutions such as the Australian Government Department of Education and the Australian Securities and Investments Commission, and support was provided to the Australian Broadcasting Corporation's education unit. A number of enquiries were made by individuals regarding the publication of new work sample portfolios in HASS and workshops were held to support the collection of representative work samples to demonstrate the 7–10 History achievement standards. Australian and overseas researchers and institutions were supported with information about the history of the subjects and sub-strands within the HASS learning area and its structural changes over time.

Media

During the 2018–19 monitoring period, several issues in relation to AC: HASS received recurring media attention. The most prominent, as it was in 2016–17 and 2017–18, was in relation to consumer and financial literacy and associated workplace readiness, with groups and individuals calling for an increased focus and engagement by schools and the curriculum in both of these areas. Example articles included: 'How much do your students know about tax and super?' (The Educator, *The Educator Australia*, 11 July 2018); 'HILDA Survey highlights impact of low financial literacy on young Australians' (Watson, *Mozo: The money saving zone*, 31 July 2018); 'Financial literacy in females continues to lag' (Sood, *Financial Standard*, 31 July 2018); 'The royal commission should result not only in new regulation but new education' (Baur, Ooi and Gerrans, *The Conversation*, 16 August 2018).

Another recurring topic, as it was in the previous monitoring period, was the civics and citizenship education of young Australians and its influence on notions of identity, political action and discourse. This was seen in articles such as: 'Why don't Australian school kids feel a sense of belonging?' (Allen, Kern, Waters and Bella-Brodrick, *Pursuit*, 16 July 2019); 'National News Literacy Curriculum' (Rafferty, *2SER FM*, 11 September 2018); 'Put our potential politicians to the test' (Simmons, *Canberra Times*, 28 October 2018); 'A lack of civics diminishes us all' (Wiltshire, *The Australian*, 19 November 2018); 'In our secular society, virtues must trump vapid, subjective values' (Donnelly, *The Australian*, 31 December 2018); 'The link between education and democracy' (Henebery, *The Educator Australia*, 10 January 2019); 'Schools cause OZ angst' (Donnelly, *The Daily Telegraph*, 24 January 2019); 'If students can strike, why shouldn't they have the vote too?' (Bessant, *The Sydney Morning Herald*, 18 March 2019).

Related issues were raised concerning influences upon the current and possible future versions of the AC, and the content and skills incorporated into humanities education. Contrasting opinions were evidenced in: 'The cultural-left's agenda has taken over our schools: academic' (Donnelly, *Education HQ Australia*, 14 August 2018); 'Learning fads land our brightest in dumbsville' (Morrow, *The Daily Telegraph*, 18 August 2018); 'How best do we prepare our future citizens?' (Scott, *The Sydney Morning Herald*, 10 September 2018); 'Hopes for a united front to tackle education have faded' (Mueller and Clary, *The Australian*, 5 October 2018); 'Liberal instincts forged our democracy' (Kemp, *The Australian*, 6 October 2018); 'Brave new world: our story inspired by liberalism' (Kelly, *The Australian*, 14 November 2018); 'Ignorance and Islamism are our greatest threats' (Donnelly, *The Australian*, 19 November, 2018).

At various times during the reporting period, there was consideration of the AC's inclusion of particular historical personalities or events. Example articles included: 'Cook history in the remaking as Whitby's ship comes in' (Magnay, *The Australian*, 25 August 2018); 'Holocaust education program and museum to remind students of dangers of anti-semitism' (Prosser, *ABC News*, 1 February 2019); 'Why don't more Australians know about the bombing of Darwin?' (Abram, *ABC News*, 19 February 2019); and 'SBS documentary adds colour and humanity to Australia's social history' (Northover, *The Sydney Morning Herald*, 1 March 2019).

There was again coverage of approaches to Aboriginal and Torres Strait Islander histories and cultures within the AC in general, and the Humanities and Social Sciences curriculum in particular. Discussion of this issue was evidenced in: 'Local stories and people put school students in touch with Indigenous history in new curriculum' (Tuffield, *ABC News*, 3 July 2018); 'Racism, citizenship and schooling: we still have some way to go' (O'Sullivan, *The Conversation*, 6 July 2018); 'Change seat of Cook to Deeral' (Miller, *First Nations Telegraph*, 27 August 2018); 'Think in the 'national language' and other assimilationist proverbs' (Thomas, *Overland*, 12 October 2018); 'Increasing knowledge of Australia's true history' (Joshi, *SBS World News Radio*, 29 March 2019); 'Program aims to teach history of Stolen Generations, seeks to close knowledge gap' (Dobson, *ABC News Western Plains*, 2 April 2019); and 'NRL legend Thurston wants greater recognition in school curriculum' (Pengilly, *The Sydney Morning Herald*, 27 May 2019).

As in previous periods, these articles and discussions all explored in some way the importance of intercultural understanding and ways in which the Australian Curriculum: Humanities and Social Sciences, in both the primary and secondary years, contributes to the creation and strengthening of Australian values and identity and equips all young Australians to be successful in the 21st century.

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the F–10 Humanities and Social Sciences (HASS) learning area entry webpage on the AC website was over 464,000, a reduction of over 16,784 pageviews since the last reporting period. However, within the F–10 HASS subject areas, the number of subject entry webpage pageviews demonstrated an increase in all subjects, as demonstrated in table 16.

Table 16. *Pageviews in Humanities and Social Sciences subjects, 2017–19*

Subject	Pageviews 2017–18	Pageviews 2018–19
F–6 / 7 HASS	283,893	334,127
7–10 Civics and Citizenship	34,393	43,712
7–10 Economics and Business	28,376	32,898
7–10 Geography	79,800	85,727
7–10 History	114,849	122,401

Over the reporting period pdf document pageviews were as follows: F–6/7 HASS, over 16,000; F–10 History, over 3,600; Geography, over 2,000; Economics and Business, over 1,700; and Civics and Citizenship, over 1,000.

Humanities and Social Sciences work samples portfolios registered a total of 14,599 pageviews over the period. Of these, almost 11,000 users were returning visitors and approximately 4,000 were new visitors.

For most of the reporting period, work samples portfolios for F–10 HASS were available in pdf format for F–Year 6/7 HASS and Years 7–10 History, and in html format for Geography, Economics and Business, and Civics and Citizenship. F–6/7 HASS pdf work samples were replaced in html format in June 2019, just within the reporting period. Year 7–10 History work samples will be published in html format in September 2019, outside the 2018–19 reporting period. All F–10 HASS work samples will then be in html format.

The average time¹⁰ spent on the Humanities and Social Sciences webpages overall was 1 minute and 15 seconds. The Humanities and Social Sciences learning area entry webpage registered an average time of 14 seconds and the bounce rate was well within the desirable range at 10.94 per cent.

The Arts

The Australian Curriculum: The Arts (AC: TA) F–10 was endorsed by the Education Council in September 2015. It consists of five related but distinct subject areas: Dance, Drama, Media Arts, Music, and Visual Arts. Each of these subjects organise learning and teaching through two interrelated strands: making (the knowledge, skills, techniques, processes, materials and technologies to explore arts practices and make artworks) and responding (exploring, responding to, analysing and interpreting artworks).

Supporting the F–10 curriculum are student work samples that enhance teachers' understanding of the content and the achievement standards.

Enquiries

During the 2018–19 monitoring period, ACARA responded to a range of enquires about The Arts curriculum. These included schools and teachers seeking general information about implementation, for example, which arts subjects should be taught at particular year levels during the primary years or whether schools need to ensure that only teachers with specialist qualifications deliver arts learning. Enquires about assessment requirements and the structure of the learning area in bands were also received.

ACARA also responded to requests to partner with other organisations to develop or to provide comment on curriculum resources. ACARA's The Arts curriculum specialist worked with a range of professional and cultural organisations to provide professional learning for teachers and teaching artists.

Media

Calls for The Arts to be part of the 'core curriculum' and accounts of ways that arts education enhances learning in STEM-related fields and develops the skills today's students will need for life and work dominated media coverage related to The Arts during the 2018–19 period.

¹⁰ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Examples were: ‘Will the arts seize centre stage in work and education as the robots’ rise continues?’ (Ford, *Newcastle Herald*, July 2018); ‘Creativity and arts as critical as maths in education’ (Ross, *ABC News Tasmania*, August 2018); ‘Creative skills for the future economy’ (*Australian Government Bureau of Communications and Arts Research*, February 2019); ‘Music education could help future-proof kids against the AI revolution’ (Miller, *The New Daily*, July 2018); ‘Helping refugees be successful learners’ (*Creative Victoria* media release, and *Teacher*, July 2018); ‘The school combining Auslan and music to make sure everyone’s singing along’ (Warhurst, *ABC Radio*, November 2018).

A significant number of reports focused on evidence that quality arts programs enhance students’ learning outcomes and engagement across the curriculum and the implications of cutting or minimising arts programs in schools, ‘Creative path serves a higher purpose’ (Cervini, *The Australian*, October 2018); ‘Why we need both STEM and the Arts’ (Lister, *HundEd*, February, 2019).

‘The Art of teaching’ (Kallahan, *The Sydney Morning Herald*, February 2019) highlighted the capacity of visual arts learning to collaboration and problem-solving skills and in ‘We’re forgetting the cross-curricular power of drama’, Professor Robyn Ewing AM commented that, “The Arts allow us to use our imaginations, to take risks and to collaborate with others” (‘Why educators need to be passionate about arts learning’, Vukovic, *Teacher*, October 2018).

Bethwyn Serow highlighted the importance of education-cultural organisation partnerships in ‘It Takes a Village – Education is everyone’s business’ declaring that, “What many may not realise is that arts education not only fosters the development of artistic skills for art making, it also teaches skills in collaboration, innovation, experimentation, resilience, confidence and communication”.

Visual arts educator, Karen Maras, challenged the focus on ‘general’ capabilities positing that, “the focus on capabilities risked reducing the scope of pedagogies” which would, “further reduce teacher agency and identity and white ant teacher professional autonomy” (Ryan, *EducationHQ*, August 2018). Ted Snell commented that, “The visual arts provide a vital cultural component and ... also provide a platform for addressing the important issues of our times” (‘Why an education in visual arts is the key to arming students for the future’, Snell, *The Conversation*, September 2018).

Commentary about the role the arts can play in contemporary addressing of Australia’s ‘big problems’ featured in ‘Political Football: a team game’ (Barstow, *NiTRO¹¹ e-news*, March 2019) and the press release accompanying National Advocates for Arts Education (NAAE) updated edition of *More than words can say* notes that this publication, “will stimulate discussion and raise awareness of the potential for the arts to enhance learning across the curriculum” (Dyson, *NAAE*, May 2019).

The impact that quality arts learning can have on NAPLAN scores was discussed in ‘WASO Crescendo program lifts NAPLAN results as schools see the benefits of music in class’, (Garlett, *ABC News WA*, September 2018) while ‘Forget about NAPLAN obsession and focus on social sciences’ (McKeith, *The Sydney Morning Herald*, October 2018) called for more attention to student performance in the Arts and Humanities, and Katie Russell, Head of Education at National Gallery Australia acknowledged that, “while teachers have a tough

¹¹ Non-Traditional Research Outcomes

time advocating the value of the arts in schools, art museums are a growing support network for art educators to draw upon” (Fairley, *ArtsHub*, March 2019).

Don't Stop the Music, a four-part series about a music intervention at a Perth primary school, garnered extensive coverage focusing on neuro-musical educator Anita Collins’ research findings about the effects of music education on brain development, particularly on language and literacy (Cronin, *South Burnett Times*, Elliott, *Herald Sun*, Kelly, *Radio National*, November/December 2018, Fulloon, *SBS* March 2019, Sutton, *ABC Adelaide*, May 2019).

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for The Arts learning area entry webpage on the AC website was 265,458. Compared with the 2017–18 reporting period, this number represented an increase of 17,728 pageviews.

Of all subjects in The Arts, the Visual Arts webpages registered the most pageviews, followed by Music, Drama, Dance and Media Arts.

There were 6,461 pageviews of The Arts pdf documents over the reporting period. Queensland registered over 3,000 pdf document pageviews, followed by South Australia, New South Wales, and Victoria. Outside Australia, the Makkah Province in Saudi Arabia registered the most pdf document pageviews at 49.

The most popular work samples portfolios were in Visual Arts, with 33,823 pageviews overall. The most visited work samples portfolios webpage in The Arts was Visual Arts: F – Year 2 at ‘satisfactory’ level. The most popular work sample was ‘Visual Arts: Exploring Islamic art’ Years 7–8 at ‘satisfactory’ level with 2,463 pageviews, followed by ‘Leaving home’ F – Year 2 with 2,107 pageviews.

The average time¹² spent on The Arts webpages overall was 1 minute and 16 seconds. The Arts learning area entry webpage registered an average time on the webpage of 22 seconds and the bounce rate was well within the desirable range at 11.7 per cent.

Health and Physical Education

The Australian Curriculum: Health and Physical Education (AC: HPE) for F–10 was endorsed in by Education Council in September 2015. AC: HPE is organised into two interrelated content strands: Personal, Social and Community Health, and Movement and Physical Activity.

Supporting the F–10 curriculum are student work samples that enhance teachers’ understanding of the content and the achievement standards.

Enquiries

Enquiries from a range of stakeholders were received in relation to the AC: HPE. These included questions regarding the inclusion of sexual and gender diversity content in the curriculum, access to sex education for students with an intellectual disability, yoga,

¹² The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

swimming lessons, alcohol and drugs curriculum content for Year 9 and 10 students, compulsory and mandated requirements for the teaching of HPE in Year 10 and curriculum alignment to the draft Sport Australia Physical Literacy Framework. Enquiries were also received in relation to the use of achievement standards and work samples when assessing student learning.

Requests for ACARA representation and participation in various forums were received and provided during this monitoring period including involvement in the National Education Initiative (NEI) review, the National Respectful Relationships Education Expert Group, the Respectful Relationships Resource Review Working Group, the Disaster Resilient Australia-New Zealand School Education Network, the Guideline Development Group for the Australian 24-hour Movement Guidelines for Children and Young People, various Australian Council for Health, Physical Education and Recreation (ACHPER) conferences and workshops, the National Health and Physical Education forum, the South Australian Keeping Safe from Bullying conference, the Consultation workshop on the draft Good Practice Guide – Supporting Healthy Eating and Drinking at School.

Media

During the 2018–19 monitoring period, several issues in relation to AC: HPE received media attention. Themes from the 2017–18 period recurred including: the need for compulsory swimming lessons, the correlation between physical activity and academic achievement, the importance of unstructured and outdoor play, and curriculum being cognisant of social, emotional and sex education. In addition to these, media attention in this period placed an increased emphasis on compulsory sport and quality physical education in schools and the impacts of sedentary behaviour; there were calls for the development of physical literacy, sexual violence education, incorporating understanding the impacts of death in the school curriculum, anxiety and wellbeing, same-sex attracted and gender diverse student discrimination, and cybersafety and cybersecurity.

Significant media coverage highlighted the federal Sports Minister, Senator The Honourable Bridget McKenzie's call for improvement in the quality and delivery of sport and physical education in schools, to increase students' physical activity levels and enhance their physical literacy (*The Courier Mail, The Advocate, Herald Sun, KIDS news, 3AW693 News Talk, Macquarie Sports Radio, RioACT, ABC Radio, July 2018*).

The Minister's concerns focused on swimming education in schools in response to high rates of drownings and swimming injuries across the country. Disparity across schools for students' access to compulsory sport and high quality and mandatory physical education was also noted alongside concerns for the lack of teacher expertise and the challenge generalist classroom teachers face when expected to implement specialised sport and/or physical education programs.

Supplementary media coverage addressed the concerns for the decline in outdoor children's play and general unstructured play in schools and home settings (*Teacher, 26 March 2019, The Sector, Kids Spot, ABC News, May 2019*) and rising levels of child obesity (*The Advocate, ABC Radio, The Sydney Morning Herald, July 2019*). Brain research related to physical activity highlighted the correlation with physical activity and improved cognitive function (*The Conversation, 23 July 2018*).

Significant international and national reports and guidelines relating to AC: HPE were released in the 2018–19 period with media attention mainly through social media forums such as Twitter and Facebook. These included: The Australian Student Wellbeing Framework (the Australian Government Department of Education), The Global Matrix 3.0 On Physical Activity For Children and Youth (Active Healthy Kids Global Alliance, 2018), Active Healthy Kids Australia Report Card on Physical Activity for Children and Young People (Active Healthy Kids Australia, 2018), and The Australian 24-Hour Movement Guidelines for Children and Young People (5–17 years) – an integrated approach to physical activity, sedentary behaviour and sleep (the Australian Government Department of Health, April 2019).

Sexual violence and sexual consent were referenced in a range of media sources, claiming a need to further support students in developing a deeper understanding of sexual consent and provide respectful relationships education in a bid to reduce and/or prevent sexual violence (*The Sydney Morning Herald*, *The Daily Telegraph*, *Neos Kosmos*, July 2019, *The Educator*, October 2018). Other media articles commented on inclusive practices for same-sex attracted and gender-diverse students (*News.com.au*, Institute of Public Affairs, *The Conversation*, *Australian News Daily*, 2019).

The Australian Medical Association Queensland called for the introduction of dealing with death into school curricula including aspects that cover “the legal aspects of what mental and physical capacity means, how to draw up a will and an advanced care plan, and the biological processes of dying and death” (Pickles, *BBC News*, 4 July 2018). It was acknowledged that death and dying can be covered through the AC: HPE through “...resilience, coping skills, help-seeking strategies and community support resources” (McLennan, *The New Daily*, 2018).

There were media articles urging physical skills to be added as a nationally tested priority due to the decreasing levels of physical activity, physical competence and confidence (*The Daily Telegraph*, May 2019).

Cybersecurity and online safety emerged in media articles referencing reports that called for more attempts to tackle cyber bullying, enhance online safety and cyber security education, (*IT News*, *ABC News*, *Education HQ*, *Sky News*, *News.com*, *News Corp Australia*, *Education HQ*, *The Conversation*, 2019).

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the AC: HPE learning area entry webpage on the AC website was 260,986. Compared with the 2017–18 reporting period, this number represented an increase of 39,182.

The greatest number of users was from Queensland, followed by South Australia, Victoria, New South Wales, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory.

Access to pdf documents measured 14,172 pageviews. The most pdf-pageviews were from Queensland, followed by South Australia and New South Wales. Outside Australia, the largest number of pdf-pageviews was from the Chinese Province of Hubei and England, both with 109.

The most visited work samples portfolios were in Years 1–2 at ‘satisfactory’ level and logged over 5,352 pageviews, followed by Years 3–4 at ‘satisfactory’ level with 4,419 pageviews. The most visited work samples portfolios at ‘above satisfactory’ level registered in Years 1–2, with 2,398 pageviews.

The average time¹³ spent on HPE webpages overall was 1 minute and 54 seconds. The HPE learning area entry webpage registered an average time of 31 seconds and the bounce rate was well within the desirable range at 15.64 per cent.

Technologies

The Australian Curriculum: Technologies (AC: T) was endorsed by the Education Council in September 2015 and published on the Australian Curriculum website in October 2015.

The F–10 Australian Curriculum: Technologies is organised into two subjects: Design and Technologies, and Digital Technologies.

Implementation of the Technologies curriculum continues to be supported by government programs such as the National Innovation and Science Agenda initiatives, including the Digital Technologies in focus (DTiF) project, managed by ACARA, and the development of resources such as the Digital Technologies Hub.

Enquiries

During the 2018–19 monitoring period, responses and support in relation to the AC: T were provided to a range of individuals, institutions, government agencies and industry members from Australia and overseas. Australian enquiries were primarily associated with gaining a better understanding of the difference between general purpose programming and visual programming. A small number were concerned with the increasing use of digital technologies in school settings and a few related to implementation matters that were the responsibility of local jurisdictions.

¹³ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

The Digital Technologies in focus (DTiF) project, managed by ACARA and funded through the National Innovation and Science Agenda (NISA), has generated several enquiries from state and territory education authorities for professional learning support.

Australian and overseas educational institutions were provided with support and information in relation to makerspaces, artificial intelligence, cybersecurity and cybersafety in the AC: Digital Technologies. ScotlandIS, a company commissioned to report on cybersafety to the Scottish government, and the Ministry of Education Ontario sought specific advice to understand cybersecurity education in the context of the Australian Curriculum: Digital Technologies.

Local and international researchers enquired about the Technologies curriculum development and structure.

With the release of the Women in STEM Decadal Plan, the Australian Academy of Science enquired if this plan is to be considered in future updates to the national curriculum to afford a multidisciplinary STEM approach. The South Pacific Educators in Vision Impairment (SPEVI Inc.) enquired on the data around ICT Literacy skill levels of students with an identified vision impairment and/or additional disability.

Media

As a result of the Royal Commission into Institutional Responses to Child Sexual Abuse, there was significant media commentary regarding the recommendations, their impact and the issue of online safety for school-aged students. In relation to cyberbullying, Australia's eSafety Commissioner, Julie Inman-Grant, noted that, "the latest data reveals one in five young people are victims of online or cyber-bullying, while one in four complaints involve direct threats of violence or harm" (*Sky News*, October 2018). She was also quoted on other media that, "our experience shows that complaints are becoming much more complex, urgent, and serious" (McCauley, *The Sydney Morning Herald*, October 2018).

Some discussion focused on the role that digital devices have within a collaborative, problem-solving environment, "teaching technological literacy is not just about encouraging students to consider careers in STEM, it's also about preparing young people for future workplaces where everyone will be required to work productively alongside artificial intelligence. Workers who understand how computers work and think aren't just prepared to drive technological development – they're ready to find new and innovative ways to implement technology" (Loble, *Education HQ*, May 2019).

There was media coverage of the banning of mobile phones in Victorian state primary and secondary schools, "...phones will be banned under strict new rules aimed at tackling cyber bullying and distractions in the classroom" (Cook, *The Sydney Morning Herald*, June 2019). There was balance in the debate with comment about how young people can be helped to manage their digital world, with paediatrician Dr Anthea Rhodes, Director of the National Child Health Poll at the Royal Children's Hospital in Melbourne quoted, "the concept of digital abstinence, the idea that you pack it away and get rid of it, is in fact no longer really relevant or useful for families" (Riddle, *The Sydney Morning Herald*, March 2019).

Media attention in relation to STEM education called for more training and support for educators in the area of STEM, 'Engineers and scientists are being encouraged to make the switch to a career in STEM education to get high school students fired up about pursuing

careers in these professions' (Brown, *Create Digital*, July 2018). See also media section in Mathematics.

Continued attention on the role of women in STEM came with the Minister for Education, the Hon Dan Tehan's announcement that, "the Morrison Government will provide \$1.65 million to continue to expand Curious Minds, as part of its \$109 million Women's Economic Security Package" (*Mirage News*, December 2018), and the release of the Women in STEM Decadal Plan outlined the "attract-retain-progress framework constructing an understanding of the issues and challenges faced by women and girls in STEM in 2019" (*Women in STEM Decadal Plan*, April 2019).

Across Australia, despite the strong focus on STEM education, the *Engineering Vacancies Report* (*Engineers Australia*, June 2018) indicated student engagement with engineering remains low. It was stated that, "with increasing globalisation and advances in digital technologies across multiple industries, engineering will play a leading role in the jobs of the future" (Henebery, *The Educator online*, January 2019).

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the Technologies learning area entry webpage on the AC website was 227,752. Compared with the 2017–18 reporting period, this number represented an increase of 20,371 pageviews.

Of the two Technologies subjects, the Design and Technologies entry webpage, ranked first in this reporting period with 158,296 pageviews, followed by the Digital Technologies entry webpage with 139,558 pageviews. Queensland was the most frequent user of the Technologies entry webpage, followed by South Australia, Victoria and New South Wales.

Over the reporting period, overall there were 7,470 Design and Technologies pdf document pageviews and 6,649 Digital Technologies pdf document pageviews. Most Design and Technologies pdf document pageviews were from Queensland, with over 3,000 pdf-pageviews and outside Australia, Ontario, Canada, registered 20. Most Digital Technologies pdf-pageviews were from Queensland with over 2,300, and outside Australia, Quebec, Canada, registered 89 and Tokyo, Japan, registered 59.

In the Technologies learning area, the most popular work samples portfolios overall were in Design and Technologies with over 43,000 pageviews followed by Digital Technologies with over 37,000 pageviews.

The most visited category for work samples portfolios in Technologies was in Digital Technologies, Foundation – Year 2 at satisfactory level with 6,484 pageviews.

Design and Technologies echoed the same result in work samples portfolios, with Foundation – Year 2 at satisfactory level the most visited category with 5,611 pageviews.

Pageviews for the top 10 digital and design project samples are listed in the following tables.

Table 17. *The top ten digital project samples, 2018–19*

Page	Pageviews
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Digital Project-Bee Bot-At Satisfactory	3350
Digital Project-The Beach-At Satisfactory	2653
Digital Project-Organising Ideas-At Satisfactory	2405
Digital Project-Bee Bot-Below Satisfactory	2069
Digital Project-Bee Bot-Above Satisfactory	2041
Digital Project-Learning Tool-At Satisfactory	1899
Digital Project-Scratch Game-At Satisfactory	1808
Digital Project-Rapunzel-At Satisfactory	1784
Digital Project-Scratch Game-Above Satisfactory	1323
Digital Project-The Beach-Above Satisfactory	1312

Table 18. *The top 10 design project samples, 2018–19*

Page	Pageviews
Design Project-Push-Pull Toy-At Satisfactory	3119
Design Project-Seed to Sandwich-At Satisfactory	1945
Design Project-Automata-At Satisfactory	1680
Design Project-Muffins-Above Satisfactory	1630
Design Project-Push-Pull Toy-Above Satisfactory	1559
Design Project-Desktop-Lamp-Above Satisfactory	1532
Design Project-Automata-Above Satisfactory	1467
Design Project-Food-At Satisfactory	1462
Design Project-All Systems Go-At Satisfactory	1445
Design Project-Kitchen Garden-Above Satisfactory	1285

The average time¹⁴ spent on Technologies webpages overall was 1 minute and 20 seconds. The Technologies learning area entry webpage registered an average time of 18 seconds and the bounce rate was well within the desirable range at 10.82 per cent.

¹⁴ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Languages

The Australian Curriculum: Languages (AC: L) includes language specific curricula for 14 languages and two frameworks, with the final components endorsed by the Education Council in December 2016. The languages are Arabic, Auslan, Chinese, French, German, Hindi, Indonesian, Italian, Japanese, Korean, Modern Greek, Spanish, Turkish and Vietnamese. The frameworks are for Aboriginal and Torres Strait Islander Languages, and Classical Languages.

Supporting the curriculum are student work samples that enhance teachers' understanding of the content and the achievement standards. During the 2018–19 monitoring period, work sample portfolios exemplifying the standard were published for Chinese, French, German, Italian, Japanese, Modern Greek and Spanish. Work commenced on the collection and annotation of work samples in Arabic, Korean and Vietnamese.

Enquiries

During the 2018–19 monitoring period, enquires in relation to the AC: L were received from various state and territory jurisdictional stakeholders as well as educators in schools and overseas universities. There were a number of common themes: curriculum implementation; minimum hours of language instruction and compulsory language study; the structure, content, resources and sequences of learning in particular languages including Auslan; and the development of further languages curricula. A number of enquires related to compulsory language study nationally and minimum hours of instruction. Advice was sought by international university researchers regarding Languages curricula and development.

During the monitoring period, a range of schools and teachers were provided with guidance and advice regarding the AC: L. Workshops were conducted for teachers in Victoria and Western Australia to support the AC: L work samples project and quality Languages task design.

Media

During the 2018–19 monitoring period, several recurring themes relating to Languages and languages learning were evident in the media. These included Aboriginal and Torres Strait Islander languages and their preservation and revival, promoting and boosting languages study including the study of Chinese and Auslan, access to language learning through digital platforms, the benefits and challenges of multilingualism, language and literacy practices and various government initiatives relating to language study.

As was the case for the 2017–18 monitoring period, the most prominent media coverage related to Aboriginal and Torres Strait Islander languages and the need, as well as the existing programs in place, to support their preservation and revival. In light of the 2019 designation as the International Year of Indigenous Languages, raising awareness of, and taking further actions to improve, preservation and promotion of Australia's Aboriginal and Torres Strait Islander languages received significant media attention. Reports highlighted the fact that of the 250 Indigenous languages in Australia today, all but 20 are highly endangered or in a 'deep sleep' with communities looking to preserve and revive language and culture for generations to come. Preservation, revival and the teaching of Aboriginal languages were raised in articles such as: 'Preserving Wiradjuri language at school'

(Bentvelzen, *The Herald*, 4 July 2018); 'The Aboriginal language taught more than Spanish in NSW schools' (Singhal, *The Sydney Morning Herald*, 8 October 2018); 'Why do so few Aussies speak an Australian language?' (Rademaker, *The Conversation*, 18 January 2019); 'The genius of Indigenous languages' (*ABC News*, 4 February 2019); Indigenous students work to keep traditional languages alive in the classroom (Rimmer, *Meltwater*, 15 April 2019); 'MP: Not learning indigenous language is a 'school failure"' (Ransley, *Meltwater*, 1 May 2019); 'Indigenous students learn traditional languages, but one future leader says it'd be too hard to teach nationwide' (Butterworth, *ABC News*, 9 June 2019) and "'Red dirt" schools need more local language Aboriginal teachers' (MCERA, *EducationHQ*, 30 October 2018).

Initiatives working to preserve and revive Indigenous languages were showcased, such as the First Languages Australia (FLA) and ABC Education song competition that invited schools to work with their local Indigenous communities to translate a simple song into their language. Other initiatives involved the work of 'word detectives' who aim to rebuild languages from historical word lists and sources, and the creation of dictionaries and language apps. Through the Tech4Good Challenge, non-profit organisations such as BIG hART, SYN, ALNF, and Settlement Services International have undertaken digital projects to revive and protect languages and encourage children to learn Aboriginal languages, cultures and histories. Articles outlining such initiatives included: 'Kids are keeping Aboriginal languages alive – and learning just how different they are' (*ABC News*, 6 July 2018); 'Aboriginal language programs available for more schools and kinders' (*Education news*, Victoria State Government, Education and Training, October 2018); 'Indigenous voices on old-school language cards preserved in Miriwoong digitisation project' (Maher, *ABC News*, 2 November 2018); 'Digital platform saving Indigenous languages' (Coggan, *Meltwater*, 25 March 2019).

Including and promoting Mandarin in second language offerings were raised in articles such as: 'Labor plan to boost Asian language studies' (9News, 2 October 2018); 'Australia 'missing out' as students continue to shun learning Chinese' (Baker, *SBS News*, 13 March 2019); 'Are there only 130 Australians of non-Chinese heritage who can speak Mandarin proficiently?' (Das, *ABC News*, 25 June 2019); 'Primary school students achieve Global Goals' (Henebery, *The Educator Australia*, 26 July 2019); 'Chinese language teachers upskill students for the future' (Education HQ News Team, 3 October 2019).

A number of media articles promoted wider options and greater flexibility for language learners in schools, such as Auslan, recognising community language school programs and coding: 'Auslan is for everybody': Should signing be taught as an inclusive second language for children in schools? (Moss, *ABC News*, 26 July 2018); 'Coding to be mandatory in primary, early high school' (Baker, *The Sydney Morning Herald*, 21 August 2018); 'Opinion: Urgent need to shift second language options in schools' (Branigan, *The Courier Mail*, 19 September 2018).

Articles featuring immersive models of language study as effective ways of learning foreign languages highlighted how schools are integrating languages into other learning areas, teaching or integrating mainstream subjects through a second language medium: 'Bilingual schools teaching maths, science in a foreign language' (Singhal, *The Sydney Morning Herald*, 18 November 2018); 'The school combining Auslan and music to make sure everyone's singing along' (Warhurst, *ABC News*, 2 November 2018).

Several reports cited how technology-based language learning programs and virtual language classes are used in schools to connect with countries and schools in Asia to boost student engagement, 'Lakelands Primary School use technology to embrace Chinese culture and language' (*Mandurah Mail*, 16 May 2019); 'Online classes help Macarthur Street pupils learn Japanese' (Smith, *The Courier Mail*, 16 May 2019); 'Tapping students into Chinese culture via video conferencing' (Jarvis, *Wanneroo Times*, 22 May 2019).

The benefits of second language learning, including cognitive, social and professional benefits and the importance of being multilingual in our globally connected world recurred in articles such as 'Should business leaders be multilingual?' (Featherstone, *CEO Magazine*, 9 October 2018); 'Labor plan to prioritise Hindi in schools will 'significantly benefit' Australia' (Theodosiou, *SBS News*, 25 October 2018); 'Learning languages early is key to making Australia more multilingual' (Moloney, *The Conversation*, 3 July 2018); 'Language education: Executives of tomorrow encouraged to learn second language at school today' (Lindsay and Rubbo, *ABC News*, 5 June 2019).

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the Languages learning area entry webpage was 54,293. This result represented an increase of 3,060 pageviews compared with the 2017–18 reporting period.

The most popular Languages webpage was Japanese followed by Chinese, French, Auslan, Italian, Aboriginal and Torres Strait Islander languages, Indonesian, Spanish, German, Arabic, Modern Greek, Hindi, Korean, Vietnamese and Turkish. Queensland accessed the language webpages most frequently, with South Australia, Victoria, New South Wales and the Australian Capital Territory following.

Over the reporting period, the top three most accessed pdf documents were Japanese with 1,497, Chinese with 1,076 and Auslan with 818 pdf-pageviews. Queensland viewed the Japanese pdf documents most frequently; and outside Australia, Tokyo and the Aichi Prefecture in Japan each registered 20 pdf-pageviews.

In the Languages learning area, work samples are provided at 'satisfactory' level. To date, there are no plans to provide Languages work samples at 'above satisfactory' level. Over the reporting period, seven Languages work samples were published for Foundation – Year 10 Chinese, Japanese, Italian, French, German, Spanish and Modern Greek.

In the top 10 work samples pageviews results, Japanese ranked first, second, fourth, fifth, sixth and ninth. French ranked third and tenth, and Indonesian ranked seventh and eighth.

The average time¹⁵ spent on the Languages webpages overall was 1 minute and 18 seconds. The average time spent on the Languages learning area entry webpage was 31.2 seconds and the bounce rate was within the desirable range at 21.11 per cent.

¹⁵ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

b. General capabilities

The general capabilities (GCs) were first published in 2010. They encompass knowledge, skills, behaviours and dispositions that students develop as they learn to apply and understand content taught within each of the learning areas. The GC continua were initially developed to inform the writing of each learning area curriculum and later published as support material. There are seven GCs identified in the AC: Literacy, Numeracy, Information and Communication Technology capability, Personal and Social capability, Critical and Creative Thinking, Ethical Understanding, and Intercultural Understanding. Embedding the GCs, as appropriate, in learning area content supports the development of 21st century skills and dispositions in learners.

Resources available on the AC website describe the nature and scope of each capability, the organising elements that underpin each learning continuum, learning continua that describe the knowledge, skills and behaviours that students can be expected to develop at particular stages of schooling, and high-level advice material on the place of the capabilities within the learning areas. Resources also support educators to use the GCs to adjust the focus of age-equivalent learning area content to differentiate instruction for students with diverse learning needs.

Enquiries

During the 2018–19 monitoring period, support and advice relating to the GCs concerned: the research base for the development of the capabilities, advice on the inclusion of general capabilities in the AC, and the development of the Critical and Creative Thinking capability in particular. Responses were supported with such resources as the GCs overview documentation and the *Shape of the Australian Curriculum v. 4.0*.

Other enquires included requests for information and support from state and territory jurisdictions as part of their curriculum implementation approaches and initiatives. Support in the form of workshops and presentations was provided to Catholic Education Northern Territory, Catholic Education Canberra and Goulburn, Association of Independent Schools ACT, ACT Education Directorate, Association of Independent Schools Western Australia and Catholic Education South Australia. Support was provided to other institutions such as the University of Wollongong as part of the Global Education project focused on the use of the three-dimensional nature of the AC.

Media

During the 2018–19 monitoring period two main issues relating to the GCs received recurring media attention. The importance of the GC, or equivalent, in preparing students for life beyond school, and their perceived impact on student outcomes in teaching and learning programs.

Several articles presented the benefits of GCs in providing opportunities to support students to successfully transition from school into further study or work. Articles such as ‘Lack of workers with ‘soft skills’ demands a shift in teaching’ (Hrivnak, *The Conversation*, 30 July 2018) and ‘Are schools teaching enough life skills to students?’ (*The Educator*, 6 September 2018), highlighted the need for schools to develop the skills described in the GCs when

preparing students for the future. Other articles, including ‘Why school kids need more exposure to the world of work’ (Torii, *The Conversation*, July 2018), emphasised changes in the workplace and the role of school and industry partnerships in supporting the development of the general capabilities in authentic ways.

A number of media articles raised concerns that a focus on ‘soft skills’ over disciplinary knowledge and understanding in the curriculum could result in poor outcomes for students. Articles such as ‘Dumbing down’ (Donnelly, *Spectator*, 29 October 2018); ‘Fake news and myths about teaching and learning are busted ahead of the 2019 school year’ (Donnelly, *The Daily Telegraph*, 29 January 2018); ‘Political agendas ‘ruining’ learning, says report’ (Baxendale, *The Australian*, 30 January 2019) called for greater emphasis on learning area content and a reduced focus on the development of skills such as Critical and Creative Thinking and Intercultural Understanding.

Several articles focused on the need to effectively embed the GCs into discipline-based knowledge and understandings within teaching and learning programs. This ‘yes, and’ rather than ‘either-or’ approach to the teaching of the disciplines and general capabilities was presented in articles such as ‘The government has a big homework list on education’ (Goss, *The Australian Financial Review*, 11 June 2019). A report into ways of integrating the GCs into teacher programming and classroom practice was published by the Mitchell Institute in October 2018 (Lucas, *The Capable Country*, October 2018). Additionally, in ‘Let’s get real on schools: new education boss’ (Urban, *The Australian*, 27 May 2019), the ACARA CEO, David de Carvalho, was quoted highlighting the interconnectedness of disciplines and general capabilities in the AC, “They are not in opposition. They are complementary. It is difficult to teach a discipline and cover content knowledge without imparting skills and it’s impossible to teach skills without teaching children content knowledge”.

Data analysis: Google analytics

During the 2017–18 monitoring period, the total pageviews for the general capabilities ‘Overview’ webpage on the AC website registered 273,428. Compared with the 2017–18 reporting period, this number represented an increase of 34,488 pageviews. Queensland was the most frequent user, followed by South Australia and New South Wales.

Apart from the ‘Overview’ webpage, the ‘Literacy’ webpage has maintained its position as the most popular general capabilities webpage since 2015. Replicating the results from the 2017–18 reporting period, ‘Critical and Creative Thinking’ webpage was the next most popular area, followed by ‘Personal and Social capability’. The ‘General capabilities: Numeracy’ webpage was the fifth most popular.

General capabilities learning continuum pageviews were monitored over the 2018–19 reporting period. The top seven results for the 2017–18 and 2018–19 reporting period can be compared in table 19 below. In all results, the number of pageviews increased in the 2018–19 reporting period. However, ‘Critical and Creative Thinking’ and the ‘Personal and Social capability’ swapped their second and third rank placements.

Table 19. *Comparison of general capability learning continua, 2017–19*

General capability learning continuum	2017–18	2018–19
Literacy	14,189	16,866
Critical and Creative Thinking	6,734	8,167
Personal and Social capability	6,566	8,652
Numeracy	5,586	7,695
ICT capability	4,560	5,817
Ethical Understanding	2,494	3,176
Intercultural Understanding	2,474	2,942

The average time¹⁶ spent on general capabilities webpages overall was 1 minute and 56 seconds. The average time spent on the general capabilities entry webpage was 1 minute and 24 seconds and the bounce rate was within the optimum range at 39.01 per cent.

c. Cross-curriculum priorities

The inclusion of the cross-curriculum priorities (CCP) in the AC was endorsed by the Education Council in December 2010. ACARA's subsequent involvement with international organisations and curriculum development surveys, including the OECD and UNESCO studies, has indicated that the inclusion of this dimension is appropriate and useful for students in Australian education settings. Aboriginal and Torres Strait Islander Histories and Cultures, Asia and Australia's Engagement with Asia, and Sustainability are the three priorities.

During the 2018–19 monitoring period AC: S content elaborations in Years F–10 to support the Aboriginal and Torres Strait Islander Histories and Cultures CCP were published along with related background information for teachers for Years 5–10.

There was no specific work commissioned to provide further support for the Asia and Australia's Engagement with Asia cross-curriculum priority or the Sustainability cross-curriculum priority.

Enquiries

The enquiries during the 2018–19 monitoring period related to general interest in the Aboriginal and Torres Strait Islander Histories and Cultures CCP or ways of implementing it; for example, in Mathematics and Science. There was only one negative enquiry about the new Science content.

There were limited direct enquiries in relation to the Asia and Australia's Engagement with Asia CCP. Some learning area-specific enquiries in AC: L and AC: HASS involved advice about incorporating one or more of the CCP's organising ideas, particularly in the areas of historical connections and cultural influences.

¹⁶ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

Responses and support in relation to the Sustainability CCP were provided to individuals and institutions from across Australia. The enquiries were primarily associated with the history of the CCP, and approaches to curriculum mapping and resource development within and across learning areas.

Media

As in previous years, the references to the Aboriginal and Torres Strait Islander Histories and Cultures CCP featured particularly during significant events such as Australia Day, and NAIDOC and Reconciliation weeks. Similar discussions and debates were foregrounded as in previous years, especially in relation to the AC: HASS and ‘telling the truth’ (Heiss, *The Sydney Morning Herald*, 11 July 2018) about Australia’s history. See also AC: HASS – Media section for further detail.

Other themes were: Aboriginal languages and Torres Strait Islander languages; the educational achievements of Aboriginal and Torres Strait Islander students; the new Science content and the CCP; and challenges of implementing the CCP.

There remains a growing interest in the development and implementation of Aboriginal and Torres Strait Islander languages curriculum and associated resources. Communities and the wider public continue to lament the loss of languages, “There is a vital role for schools in renewing and reawakening our languages in Australia” (Troy, *SBS News*, 16 April 2019). Further, Melbourne University linguist Professor Rachel Nordlinger believes that, “Understanding and recording Indigenous languages is important for all Australians, to enable our intellectual extension. These languages, with their sometimes unique terms and structures, offer a different way of seeing the world” (Adams, *ABC Late Night Live*, 4 February 2019). See also AC: L media section for further detail.

There were several articles relating to ‘closing the gap’ in the education achievements of Aboriginal and Torres Strait Islander students. Commentary included a “narrow and boring” curriculum (Smallwood, *First Nation Telegraph*, 25 July 2018) and the 2018 NAPLAN *National Report* highlighting that the NT’s Aboriginal and Torres Strait Islander students fall well below minimum national standards for reading, writing, spelling, grammar and numeracy (Vivian, *The Daily Telegraph*, 10 April 2019), to ACARA’s CEO stating that, “Indigenous students’ literacy and numeracy skills have improved at twice the rate of their peers’ over the past 10 years, but not fast enough to close the education gap before next century” (De Carvalho, *The Sydney Morning Herald*, 7 April 2019). See also AC: E Media section for further detail.

Some articles raised the ongoing issue of inexperienced teachers, particularly in remote schools, and how to build their capacity to engage Aboriginal and Torres Strait Islander students responsively in the curriculum. For example, Godwell, from the *Stronger Smarter Institute*, stated that, “Research tells us the number one and number two factors to improve educational outcomes are actually the capability of the teacher and student engagement” (Godwell, *NITV*, 30 August 2018).

With the publication of a further 95 AC: S content elaborations and accompanying teacher background information in October 2018, media coverage was supportive of this work, including the Prime Minister response, “If that involves using stories from Indigenous culture to help them [teachers] engage kids with science and help them understand science – I am

for whatever tool they need to help kids better understand science” (Morrison, *The Daily Telegraph*, 2 November 2018)

Criticism came from a small number of sources, including reference to the “politically correct nature of what is now being taught” (Donnelly, *The Daily Telegraph*, 16 April 2019). See also AC: S Media section for further detail.

Media also referenced publication of resource materials by the National Aboriginal and Torres Strait Islander Curricula Project in April 2019, attracting supportive commentary such as that from the Australian Education Union, “These materials build teachers' confidence to integrate Aboriginal and Torres Strait Islander knowledge and cultures” (Langton, *Australian Education Union*, 6 March 2019).

Challenges with implementing the CCPs focused on “things that need to be addressed – professional development of teachers is so important so that schools become more culturally responsive” (Buckskin, *Indaily Adelaide's independent news*, 29 October 2018); connecting teachers to local culture (Volkofsky, *ABC News*, 4 April 2019); and the development of curriculum at a local level as place-based decision-making is crucial for effective learning (*Australian Education Union*, 22 March 2019).

One particular issue in relation to the Asia and Australia's Engagement with Asia CCP received periodic media attention. The notion of global interconnectedness and the associated role played by language learning in fostering economic and cultural ties between Australia and Asia were raised in articles such as: ‘Labor plan to boost Asian language studies’ (*9 News*, 2 October 2018); ‘Australia “missing out” as students continue to shun learning Chinese’ (Baker, *SBS News*, 13 March 2019); ‘Are there only 130 Australians of non-Chinese heritage who can speak Mandarin proficiently?’ (Das, *ABC News*, 25 June 2019); and ‘Primary school students achieve global goals’ (Henebery, *The Educator Australia*, 26 July 2019).

Some issues in relation to the Sustainability CCP received recurring media attention. One issue concerned the connection between the CCP and organised student action against climate change. The different opinions in this discourse included the following articles: ‘We pay the price for climate policy lunacy’ (Credlin, *The Courier Mail*, 25 November 2018); ‘It's no surprise that students are indoctrinated by teachers’ (Donnelly, *The Daily Telegraph*, 30 November 2018); ‘Politicians are making it hard: Student's voice for action on climate’ (McDonald, *Bega District News*, 3 December 2018); ‘Student protests show Australian education does get some things right’ (Bousfield and Tinkler, *The Conversation*, 7 December 2018).

A number of articles also showcased the practices and achievements of schools and teaching programs. Examples included: ‘Student recycling program teaching good habits right from the start’ (Diss, *ABC News*, 26 July 2018); ‘Victorian schools lead the way in water savings’ (*Sustainability Matters*, 10 August 2018); ‘Schools go green: pushing sustainability across curriculum’ (Damen, *Education HQ Australia*, 14 August 2018); ‘More work needed to help teachers tackle sustainability’ (Trevino, *Education HQ Australia*, 14 August 2018); ‘Aussie schools leading the way on sustainability’ (*Schoolnews*, 19 June 2019); and ‘Primary school students achieve Global Goals’ (Henebery, *The Educator Australia*, 26 June 2019).

Data analysis: Google analytics

Following a trend since 2015, 'Aboriginal and Torres Strait Islander Histories and Cultures' remained the most popular cross-curriculum priorities webpage with 104,271 pageviews. During the 2018–19 reporting period, the total pageviews for the cross-curriculum priorities 'Overview' webpage registered almost 81,000. Compared with the 2017–18 reporting period, this number represented an increase of over 14,000 pageviews. 'Sustainability' registered 57,775 pageviews and 'Asia and Australia's engagement with Asia' registered 30,720 pageviews.

Queensland accessed the cross-curriculum priorities webpage most frequently, with New South Wales, Victoria and South Australia following.

Of all illustrations of practice pageviews in 2018–19, 'Aboriginal and Torres Strait Islander Histories and Cultures' was the most viewed webpage, with over 15,300 pageviews.

The average time¹⁰ spent on the cross-curriculum priorities webpages overall was 2 minutes and 36 seconds. The average time on the on the cross-curriculum priorities entry webpage was 1 minute and 19 seconds and the bounce rate was within the optimum range at 34.34 per cent.

d. Student diversity

The AC sets the expectations for what all young Australians should be taught, regardless of their location in Australia or their background. Resources and advice materials are available on the AC website to support teachers in using the three dimensions of the AC to cater for the learning of all students including students for whom English is an additional language or dialect (EAL/D), gifted and talented students and students with disability.

During the 2018–19 monitoring period, work commenced to revise and enhance resources and advice on the AC website pages.

Enquiries

During the 2018–19 monitoring period, most enquiries related to addressing the needs of students for whom English is an additional language. In most cases, these enquiries came from classroom teachers seeking advice on the application of the EAL/D learning progressions and how to support students in the classroom. There were also some references made to the changing demographics of EAL/D students and the difficulty accessing specialist support. Some of the enquiries around addressing the specific needs of EAL/D students focused specifically on the use of the resources provided by ACARA through the student diversity pages of the AC website.

During this period, ACARA also received several queries around personalising learning for students with a range of learning needs. In some cases, these queries were about a specific learning area, although in most cases queries were focused on how to use the three dimensions of the AC to personalise learning for different student cohorts. Within the scope of these queries, how to draw context from age-appropriate content was also a focus.

The work being undertaken on student diversity pages of the AC website also received some queries in the reporting period, with requests for the date of its release being the most

frequent. Other queries were related to stakeholders providing feedback and suggestions on directions ACARA could undertake in the update of advice currently on the site.

While few in number, there were inquiries related to the application of the Personal and Social capability in relation to catering to the diverse needs of students. Advice sought in this area centred on how to use this capability to deliver curriculum content rather than using it as a substitute curriculum.

Media

During the 2018–19 monitoring period, several themes relating to student diversity surfaced in the media. The most prominent of these addressed the relevance of the AC for students with diverse needs, including the need to personalise learning, and addressing the needs of gifted and talented, and EAL/D students.

An article in *The Conversation* (January 2019) highlighted the need for curriculum to be relevant to all students in Australia including those from rural areas. The article explored a perceived contradiction between antidiscrimination legislation introduced between the 1970s and 1990s, and the centralised curriculum and assessment introduced from 2008. The article argued that local problems cannot be solved through a curriculum potentially centred on ‘learning for leaving’. The need for a ‘flexible’ curriculum that personalised learning based on the skills and interests of a diverse student population was also addressed in *CathNews* (December 2018), which highlighted teachers’ capacity to be skilled in differentiating the curriculum. Similarly (*ABC News*, February 2019), an item raised the concerns of parents around the apparent lack of secondary school teachers in the Hunter Valley with the skills required to teach students with autism. Increased numbers of students with EAL/D and their varied circumstances received some media coverage. In late 2018 (*SBS Life*, November 2018) media reported on the potential difficulties of refugee children in navigating not only the language, but cultural differences. This article explored concerns of curriculum access and the notion of ‘belonging’ and loss of identity due to the loss of their personal stories. *The Daily Telegraph* (February 2019) explored another aspect of meeting the needs of EAL/D students in the lack of training provided to teachers to support the delivery of the curriculum to these students. Laura Sullivan quoted the Association of Teachers of English to Speakers of Other Languages (ATESOL) and the University of NSW, “English and literacy support has increased by more than 30 per cent in the last decade, but the number of specialist English language teachers has remained unchanged”.

Addressing the needs of gifted and talented students was also reflected in articles on personalising learning. *The Conversation* (January 2019) reported on the findings of Professor John Munro that gifted and talented students are being “overlooked or even ignored”. The article also raised concerns about the needs of twice exceptional students and called for educators to gain a greater knowledge about how gifted and talented students respond to new knowledge.

There was a significant reduction in the number of media articles reporting on parents of students with disabilities being asked to opt their children out of NAPLAN testing.

Data analysis: Google analytics

During the 2018–19 monitoring period, the total number of pageviews for the student diversity webpages overall was over 273,000. The ‘Overview’ webpage registered 64,558 pageviews. Compared with the 2017–18 reporting period, this number represented an increase of 5,816 pageviews. Pageviews results for the 2017–18 and 2018–19 reporting period can be compared in table 20.

Table 20. *Student diversity webpage pageviews, 2017–19*

Student diversity webpage	2017–18	2018–19
Overview	58,742	64,558
Students with disability	48,222	51,276
Students for whom EAL/D	45,730	54,753
Gifted and talented students	33,194	38,215

Of all ‘Student diversity: Students with disability: Illustrations of practice’ webpages, the most viewed was ‘Procedural writing’ followed by ‘An integrated approach’ and ‘Overview of personalised learning’.

‘Student diversity: Students for whom EAL/D’ webpages reported ‘Students for whom EAL/D: Illustrations of practice’ the most popular, followed by ‘Creating stories’, ‘Analysing language in narrative texts’ and ‘Writing a persuasive letter’.

Of all ‘Student diversity: Gifted and talented students’ webpages, ‘Early colonists: Builders or destroyers’ received the most pageviews, followed by ‘Meeting future energy needs’.

The average time¹⁷ spent on the student diversity webpages overall was 2 minutes and 35 seconds. This result matched the ‘Student diversity: Overview’ webpage.

The average time spent on the ‘Students with a disability’ entry webpage was 2 minutes and 42 seconds and the bounce rate was above the optimum range at 66.04 per cent. Revisions to the structure and content of all student diversity webpages are in progress.

¹⁷ The average amount of time users spent viewing a specified page or screen, or set of pages or screens (Google Analytics, 2018).

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11. LIST OF ABBREVIATIONS

ACARA	Australian Curriculum, Assessment and Reporting Authority
AC	Australian Curriculum
AC: CCP	Australian Curriculum: cross-curriculum priority
AC: D&T	Australian Curriculum: Design and Technology
AC: DT	Australian Curriculum: Digital Technologies
AC: E	Australian Curriculum: English
AC: GC	Australian Curriculum: general capabilities
AC: HASS	Australian Curriculum: Humanities and Social Sciences
AC: HPE	Australian Curriculum: Health and Physical Education
AC: L	Australian Curriculum: Languages
AC: M	Australian Curriculum: Mathematics
AC: S	Australian Curriculum: Science
AC: SD	Australian Curriculum: student diversity
AC: T	Australian Curriculum: Technologies
AC: TA	Australian Curriculum: The Arts
ACDET	ACT Education Directorate
ACER	Australian Council for Educational Research
ACHPER	Australian Council for Health, Physical Education and Recreation
ACT	ACT Education Directorate, Archdiocese of Canberra and Goulburn Catholics Education and the Association of Independent Schools
AGDoE	Australian Government Department of Education
AI	artificial intelligence
AISACT	Association of Independent Schools ACT
AITSL	Australian Institute for Teaching and School Leadership
ALNF	Australian Literacy and Numeracy Foundation
AMSI	Australian Mathematical Sciences Institute
ATAR	Australian Tertiary Admission Rank
ATESOL	Association of Teachers of English to Speakers of Other Languages
AISNSW	Association of Independent Schools of New South Wales
AISSA	Association of Independent Schools of South Australia

CCR	Center for Curriculum Redesign
CECG	Archdiocese of Canberra Goulburn Catholic Education
CECV	Catholic Education Commission of Victoria
CENT	Catholic Education Northern Territory
CESA	Catholic Education Office South Australia
CET	Catholic Education Tasmania
DoETAS	Department of Education Tasmania
DTiF	Digital Technologies in focus
EAL/D	English is an additional language or dialect
ESA	Education Services Australia
EYLF	Early Years Learning Framework
FLA	First Languages Australia
HSIE	Human Society and its Environment
ICT	Information and communications technologies
ISQ	Independent Schools Queensland
IST	Independent Schools Tasmania
ISV	Independent Schools Victoria
MCERA	Media Centre for Education Research Australia
MLTA	Modern Language Teachers Association
NAIDOC	National Aborigines and Islanders Day Observance Committee
NAPLAN	National Assessment Program – Literacy and Numeracy
NEI	National Education Initiative
NESA	NSW Education Standards Authority
NLLP	National Literacy Learning Progression
NNLP	National Numeracy Learning Progression
NLNLP	National literacy and numeracy learning progressions
NSRA	National School Reform Agreement
NTDoE	Northern Territory Department of Education
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
QCAA	Queensland Curriculum and Assessment Authority

QCEC	Queensland Catholic Education Commission
QDoE	Queensland Department of Education
SADfE	South Australia Department for Education
SCSA	School Curriculum and Standards Authority
STEM	Science, Technology, Engineering and Mathematics
TBI	teacher background information
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VCAA	Victorian Curriculum and Assessment Authority

12. APPENDIX A: LIST OF RESPONSES

Organisation	Abbreviation
ACT cross-sectoral response ¹⁸	ACT
Association of Independent Schools South Australia	AISSA
Australian Government Department of Education	AGDoE
Catholic Education Northern Territory	CENT
Catholic Education Tasmania	CET
Department of Education Tasmania	DoETAS
Independent Schools Queensland	ISQ
Independent Schools Tasmania	IST
Northern Territory Department of Education	NTDoE
NSW Education Standards Authority ¹⁹	NESA
Queensland Catholic Education Commission	QCEC
Queensland Curriculum and Assessment Authority ²⁰	QCAA
Queensland Department of Education	QDoE
SA Department for Education	SADfE
Victorian Curriculum and Assessment Authority ²¹	VCAA
WA School Curriculum and Standards Authority	SCSA

¹⁸ This report is the collaborative work of the ACT Education Directorate (ACTED), Archdiocese of Canberra Goulburn Catholic Education (CECG) and the Association of Independent Schools ACT (AISACT).

¹⁹ In the course of preparing this response, NESA has worked collaboratively and consulted with curriculum leaders from each of the NSW schooling sectors – the NSW Department of Education, Catholic Schools NSW, and the Association of Independent Schools in NSW.

²⁰ This response has been developed in consultation with the Department of Education, Queensland Catholic Education Commission and Independent Schools Queensland.

²¹ Submitted by the Victorian Curriculum and Assessment Authority (VCAA) in partnership with and on behalf of: Department of Education and Training (DET), Catholic Education Commission Victoria (CECV) and Independent Schools Victoria.