Engagement Report for Computing Technology 7–10 Draft Syllabus

Contents

Introduction

The NSW Education Standards Authority (NESA) has redeveloped the current *Information and Software Technology 7–10 Syllabus* guided by our revised [syllabus development process](#) in response to the recommendations of the NSW Curriculum Review (Masters 2020).

The consultation process began with the release of the initial draft syllabus on 25 March 2019 (*Integrated Computing Years 7–10 Draft Syllabus*). Stakeholders were invited to participate in public and targeted consultation activities for the *Computing Technology 7–10 Draft Syllabus* during 2021.

The purpose of this engagement report is to document the feedback received from the *Computing Technology 7–10 Draft Syllabus* consultation process and the actions taken by NESA in response to the feedback.

Consultation methodology

NESA's consultation on the *Computing Technology 7–10 Draft Syllabus* (initially released as the *Integrated Computing Years 7–10 Draft Syllabus*) began on 25 March 2019 and concluded on 19 May 2019. Information about the consultation process and opportunities to provide feedback were made available on the NESA website, in *NESA News*, on NESA social media.

Following the announcement of the Curriculum Reform, NESA implemented the new and current syllabus development process for the *Computing Technology 7–10 Draft Syllabus*, and targeted consultation began on 22 September 2021 and concluded on 2 December 2021.

Specific information regarding consultation activities from both 2019 and 2021 is provided in the appendices.

Technical Advisory Group

The role of the Technical Advisory Group (TAG) is to provide expert advice and to quality assure the outcomes and content of the draft syllabus.

Each TAG member:

- received successive drafts of the syllabus and provided detailed feedback on each revision
- provided advice about *Computing Technology 7–10* outcomes and content in relation to their suitability, relevance and accuracy.

Appendix 1 lists the TAG members for Computing Technology 7–10.

Public consultation

Online survey 2019

An online survey was used to collect feedback from stakeholders about the *Integrated Computing Years 7–10 Draft Syllabus* in 2019. Survey respondents had the opportunity to provide feedback collected as both quantitative and qualitative data. There were 228 responses received in the survey (see Appendix 2 and Appendix 3).

Targeted consultation

Online survey 2021

In 2021, a targeted online survey was used to collect feedback from stakeholders on the *Computing Technology 7–10 Draft Syllabus*. This feedback was collected as both quantitative and qualitative data. Eighteen survey responses were received (see Appendix 4 and Appendix 5).

Focus groups

Targeted focus groups were held with specific groups during both the 2019 and 2021 consultation periods to ensure feedback was inclusive of diverse student learners and to gather additional advice (see Appendix 6)

Targeted consultation meetings took place between 25 March and 19 May 2019 and were held for the following groups:

- Aboriginal Education stakeholders
- Diversity stakeholders
- Education sectors and subject associations
- Industry stakeholders
- Students
- Tertiary education stakeholders

In addition, further targeted consultation took place in 2021 to affirm the alignment of the draft syllabus with the Curriculum Reform priorities. A meeting was held for teachers from the Teacher Expert Networks (TENs) and their associates.

The agendas for the targeted focus group meetings included a briefing from NESA officers involved in leading the syllabus development process. Following the briefing, participants were invited to provide feedback. The design of questions, meeting format and collection of data were tailored for the focus of the targeted meeting.

Board Curriculum Committee (used for former syllabus development process)

The purpose of the Board Curriculum Committee (BCC) was to review syllabuses and recommend syllabus documents to NESA for endorsement. The BCC for Integrated Computing 7–10 advised NESA on the quality of the syllabus in relation to the writing brief and whether:

- agreed processes had been followed
- due attention had been given to the views identified during consultation
- the syllabus development process had been followed.

In 2019, a meeting was held to confirm that processes had been followed and to provide feedback on the draft syllabus (see Appendix 7). The focus of these meetings was to share the initial feedback received during the public phase of consultation and for the BCC members to provide further advice on implementation.

Feedback from sectors

The Sector Reference Group (SeRG) was informed of the progress of syllabus development and consulted on matters relating to syllabus implementation. A number of written submissions were received from the sectors that provided constructive and valuable feedback, which was used to further refine the syllabuses after the consultation period.

Reporting on consultation

The data generated during the consultation period included both quantitative and qualitative data. These were analysed separately. The quantitative data was analysed to identify trends. The qualitative data, including survey feedback and meeting notes, was analysed to identify recurrent themes. The key themes and trends were used to create this Engagement report.

The strengths and key matters presented in this report were determined based on the relevance of the feedback (Appendices 1–7) to the scope of the project, and the salience and frequency of the matters raised. Minor matters raised during consultation, such as edits, errors of fact and terminology, will be amended but may not be represented in the report.

Governance

The NESA Curriculum and Credentials Committee (CACC) exercises a delegated function on behalf of the Board, primarily to endorse syllabuses developed by NESA for the Minister's approval, as part of the program of Curriculum Reform.

The CACC endorses the syllabuses and provides advice to the Minister regarding the syllabus submitted for approval. It also provides advice to the Board on processes for syllabus review and development, endorses Higher School Certificate (HSC) examination specifications, and matters relating to educational measurement for the HSC.

In February and March 2022 the *Computing Technology 7–10 Syllabus* was presented to the CACC for endorsement and this Engagement Report was presented for noting.

Summary of results and actions taken

Syllabus content and relevance

Many respondents indicated the course structure was clear and flexible allowing for a variety of delivery models. Many respondents commented that the syllabus update made it more current and relevant.

There was positive feedback about the inclusion of a glossary, and the way the syllabus catered for learners with a range of abilities and needs, including gifted and talented students.

Some respondents indicated that the topic names could be refined to better reflect related content.

Some respondents felt that the outcomes needed to be strengthened to align with the course content.

There was strong feedback that the syllabus needed to place greater emphasis on project work and reduce the volume of content overall.

Some respondents questioned the order, flow, combination, accessibility and focus of content points and examples.

Some respondents indicated that the Aboriginal and Torres Strait Islander histories and cultural content should be strengthened.

Many respondents indicated that the Life Skills outcomes and content were appropriate for students with disability. However, some respondents indicated that aspects of the Life Skills content may be too challenging and suggested that more practical and functional examples be provided.

Computing Technology 7–10 draft syllabus feedback and NESA responses

Summary of feedback received on the Integrated Computing 7–10 Draft Syllabus and Computing Technology 7–10 Draft Syllabus

Strengths of the draft syllabus

Feedback	Sources
Structure and topics The course structure and number of topics are appropriate. The structure and topics provide schools with the flexibility to cater for the needs and interests of students.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG 2021: TENs 2021: SeRG
Content The content across all topics is adaptable, current, engaging, exciting, future-focused and relevant.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG 2021: TENs 2021: SeRG
Gifted and talented Some respondents commented that gifted and talented students would love the syllabus and be extended by it.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG 2021: TENs

Feedback	Sources
Diversity of learners The syllabus caters for learners with a range of abilities and needs.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG 2021: TENs 2021: SeRG
Life Skills The Life Skills content is appropriate.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG 2021: TENs 2021: SeRG

Key: Sector Reference Group (SeRG), Technical Advisory Group (TAG), Teacher Expert Networks (TENs).

Key matters

Key matters	Sources	NESA responses to key actions
Focus Areas (Topics) The focus area names and content direction may need to be refined.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG	The focus area names were revised and the content direction was refined to respond to feedback and emphasise learning through project work. The following focus area names have been changed: ▪ 'Analysing Data' replaced 'Modelling with Data' ▪ 'Modelling Networks and Social Connections' replaced 'Connecting People with Computers' ▪ 'Creating Games and Simulations' replaced 'Creating Intelligent Systems' ▪ 'Developing Apps and Web Software' replaced 'Developing Software Solutions'.
Outcomes The outcomes are too broad and do not align with the course content.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG	The outcomes have been revised to ensure they align with course content. The Life Skills outcomes have been revised to align with the revised regular course outcomes.

Key matters	Sources	NESA responses to key actions
Project work The syllabus focuses too much on theory and does not emphasise projects.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG	The content has been amended to encourage the development of projects to support learning in all focus areas. Explicit advice about project work and practical experiences will be developed as support material to guide teachers. Targeted teaching advice to support Life Skills will be developed to clarify that project work is optional.
Amount of content Many respondents expressed concerns about the amount of content in the focus areas.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions.	The content was amended to include essential learning associated within each focus area to reduce the amount of content. The total maximum number of content points required for delivery in the 100-hour course to satisfy requirements has been reduced from 300 to 92. This is a reduction of 70% of content points. The total maximum number of content points for the 200-hour course has been reduced from 394 to 175, a reduction of 66% content points.
Content and examples The content and examples in the focus areas need to be reviewed to improve the order, focus, flow, combination, terminology and accessibility.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG	The content has been reviewed, amended and reordered to improve the flow within content groupings. The sequencing of content has been amended to support the reordering of content. Terminology used throughout has been reviewed and refined to improve the consistent use of technical terms.

Key matters	Sources	NESA responses to key actions
Aboriginal and Torres Strait Islander histories and cultures Content related to Aboriginal and Torres Strait Islander histories and cultures requires amendment to improve the quality of the representations.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions.	The content has been amended to improve the representations of Aboriginal and Torres Strait Islander histories and cultures. Where appropriate, the development of support material will highlight teaching and learning opportunities.
Life Skills Some Life Skills content could be more accessible and practical.	Previous rounds of consultation including face-to-face, targeted, online surveys, student voice and written submissions. 2021: TAG	The Life Skills content and examples have been reviewed, refined and amended.

Key: Sector Reference Group (SeRG), Technical Advisory Group (TAG), Teacher Expert Networks (TENs).

Appendices – Engagement participation

Appendix 1: Computing Technology 7–10 Technical Advisory Group Engagement

The Technical Advisory Group (TAG) acquired ongoing feedback over a 3-month period from experienced teacher practitioners and other experts in the computing technologies area.

TAG members

Expert	Organisation
Prof. Matthew Bower	Macquarie University
Mr Timothy Milkins	Barker College
Ms Lisa Beacher	Lambton High School

Appendix 2: Demographic data for the Integrated Computing 7–10 online survey (2019)

NESA received **228 responses** to the Integrated Computing Years 7–10 survey

Each of the **3 education sectors** were represented

Education sector

Sector	Number of respondents
Government	138
Independent	52
Catholic	33
Not applicable	5

Number of respondents
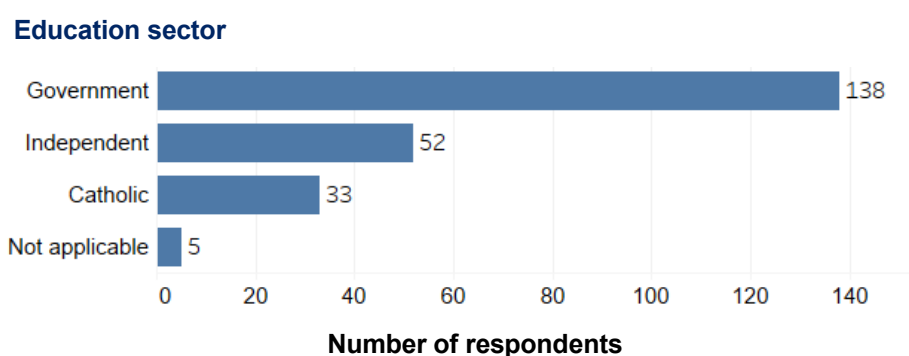
Figure 1: Educational sector of respondents to the Integrated Computing Years 7–10 survey (2019)

Respondents came from a range of education contexts, with **76% being secondary school teachers.**

Respondents' background

Background	Number of respondents
Secondary teacher	174
Student	28
School executive	7
Other	5
Community member	3
School faculty/department	3
Special education teacher (specialist class in a mainstream setting)	3
Primary teacher	2
Academic	1
Pre-service teacher	1
Special education teacher (specialist setting)	1

Number of respondents
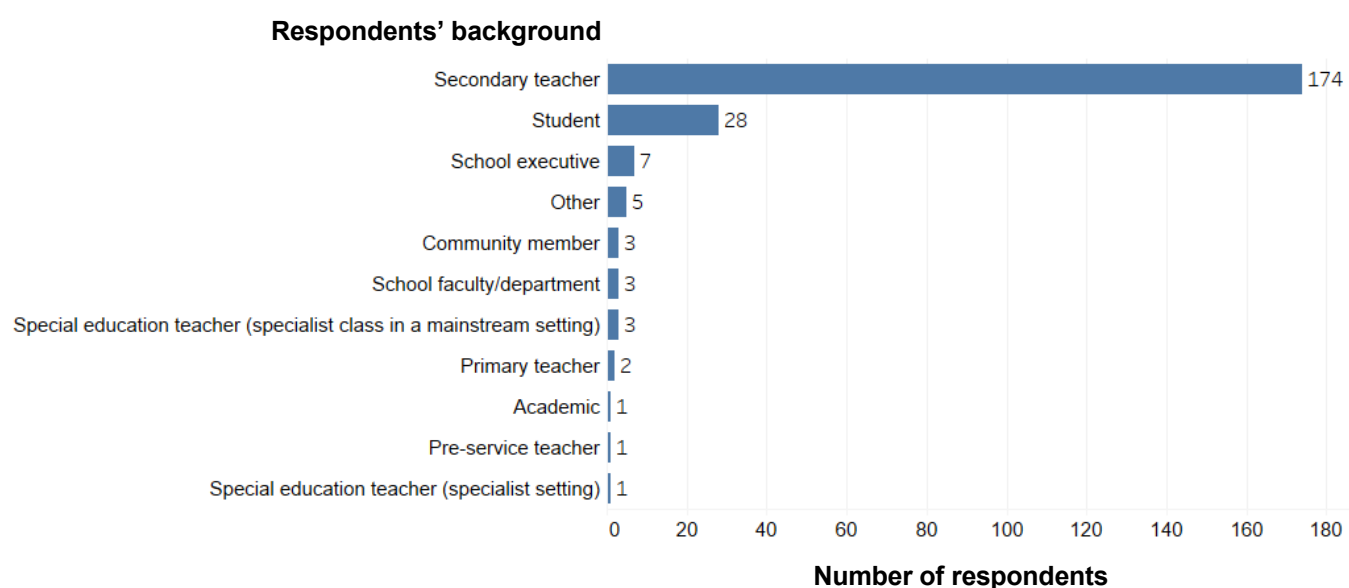
Figure 2: Background of respondents to the Integrated Computing Years 7–10 survey (2019)

Of participants who are teachers, teaching experience varied, with **40% of respondents having taught for more than 20 years.**

Teaching experience (years)

Teaching experience (years)	Number of respondents
0–5	29
6–10	30
11–15	44
16–20	32
21–25	20
26–30	13
31–35	14
36–40	10
40+	2
Not applicable	31
Other	3

Number of respondents
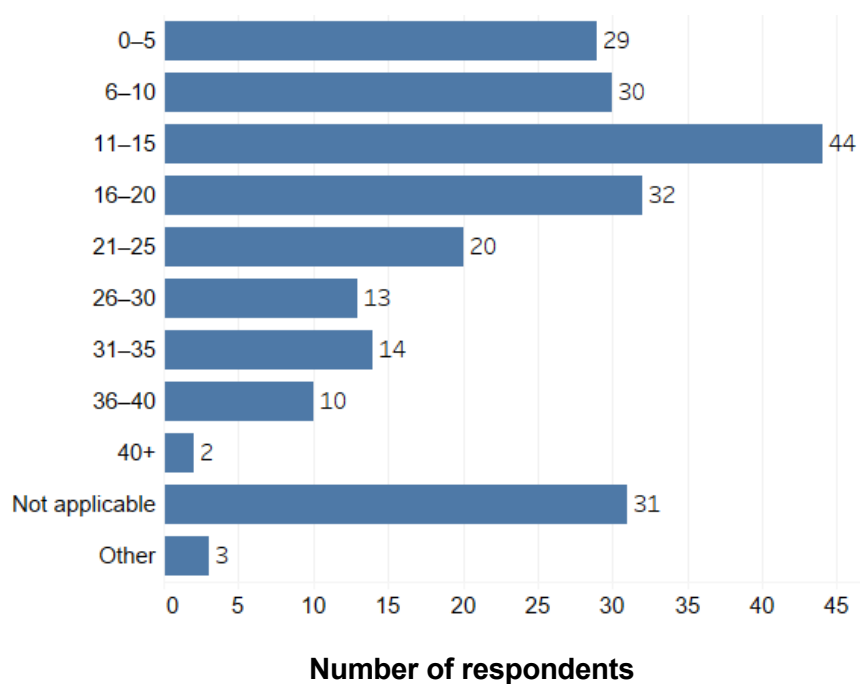
Figure 3: Number of years as a practising teacher for respondents to the Integrated Computing Years 7–10 survey (2019)

Stakeholders across **New South Wales** participated, with 66% of respondents coming from Metropolitan areas.

Area of NSW

Area of NSW	Number of respondents
Metropolitan	151
Regional	77

Number of respondents
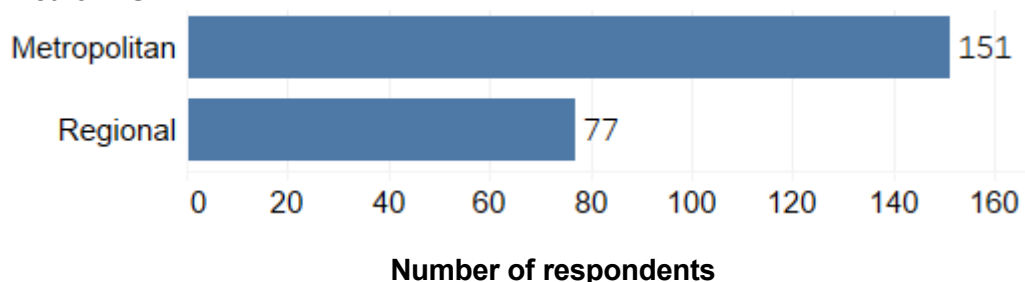
Figure 4: Location of respondents to the Integrated Computing Years 7–10 survey (2019)

Appendix 3: Quantitative data for the Integrated Computing 7–10 online survey (2019)

Figures 5, 6 and 7 provide an overview of survey quantitative data gathered on the *Integrated Computing 7–10 Draft Syllabus* in 2019.
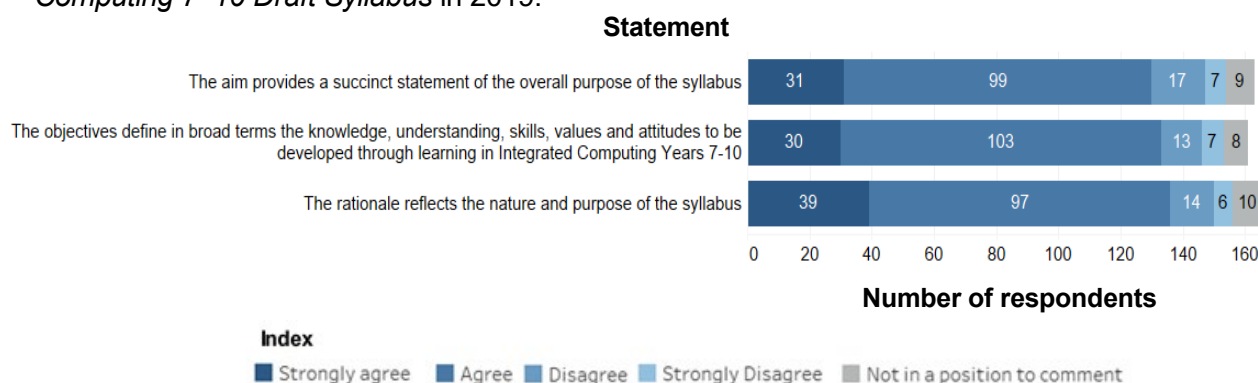
Statement

Figure 5: Rationale, aim and objectives: number of responses to the question 'To what extent do you agree with the following statements?'
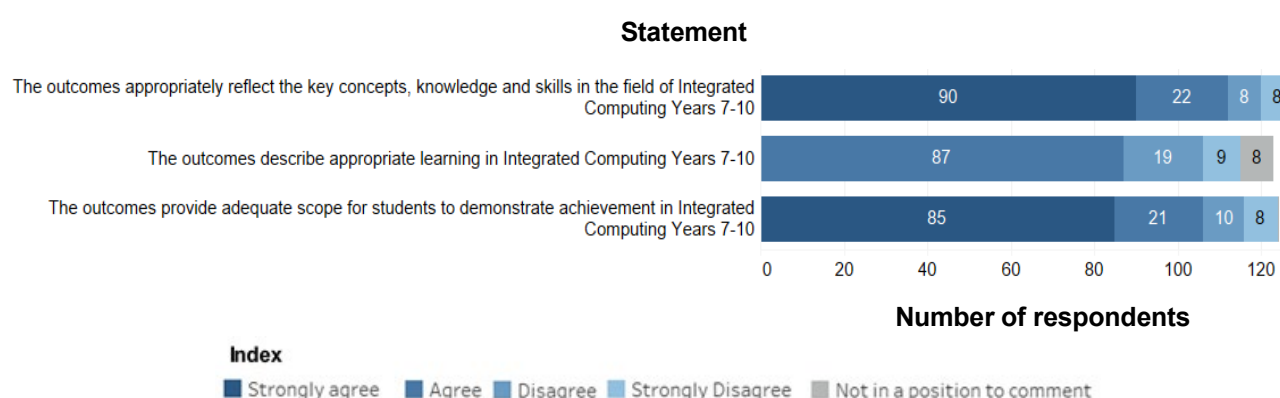
Statement

Figure 6: The outcomes: number of responses to the question 'To what extent do you agree with the following statements?'
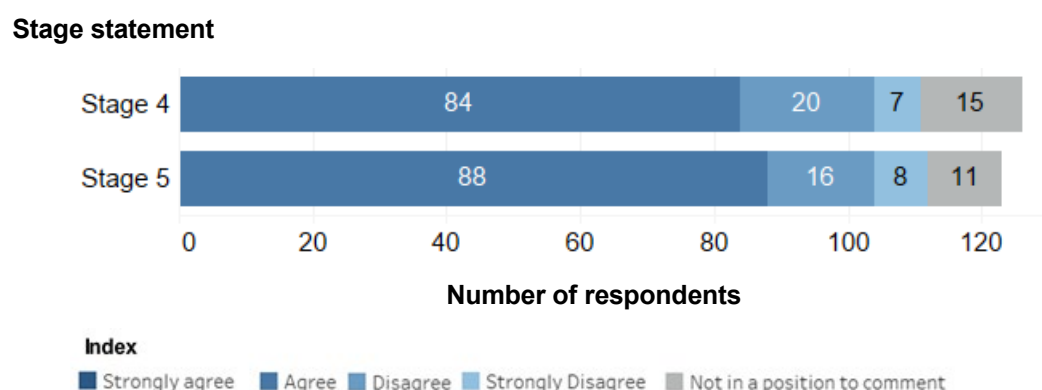
Stage statement

Figure 7: The number of responses to the question 'The stage statements are an appropriate summary of the knowledge, understanding, skills, and values and attitudes students develop as a result of achieving the outcomes.'

Appendix 4: Demographic data for the Computing Technology 7–10 targeted survey (2021)

NESA received **18 responses** to the Computing Technology 7–10 targeted survey

Each of the **3 education sectors** were represented
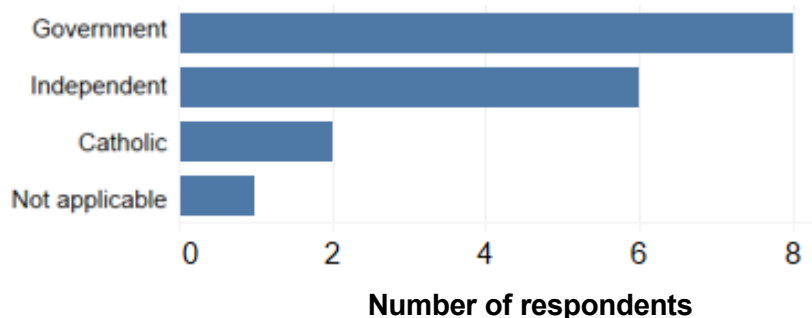
Education sector

Figure 8: Education sector of respondents to the Computing Technology 7–10 targeted survey (2021)

Respondents came from a range of education contexts, **78% were secondary school teachers.**

Respondents' background
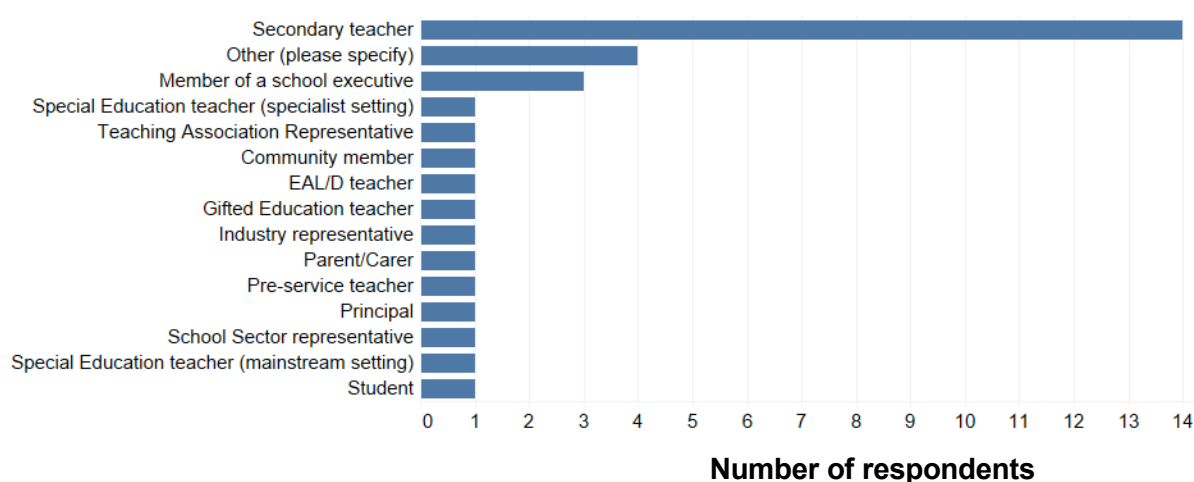
Figure 9: Background of respondents to the Computing Technology 7–10 targeted survey (2021)

Respondents could pick more than one option, and 'Other' backgrounds included teacher educator, previous Technological and Applied Studies consultant, representative of a Professional Teaching Association, technology coordinator and department head.

Of participants who are teachers, teaching experience varied, with **38% of respondents having taught for more than 20 years.**

Number of years as a practising teacher

Figure 10: Number of years as a practising teacher for respondents to the Computing Technology 7–10 targeted survey (2021)

Stakeholders across **New South Wales** participated, with 55% of respondents coming from the Greater Sydney area.

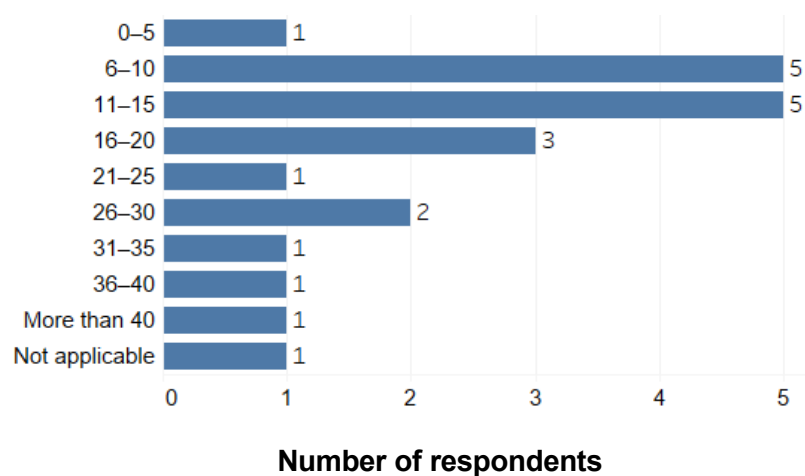*Figure 11: Map of New South Wales with the location and number of respondents to the Computing Technology 7–10 targeted survey (2021)*

Appendix 5: Quantitative data for the Computing Technology 7–10 targeted survey (2021)

Figures 12 and 13 provide an overview of survey quantitative data gathered on the *Computing Technology 7–10 Draft Syllabus* in 2021.

Statement

Statement	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
The content is clear and appropriate for this area of learning.	7	5	2	4	
The outcomes and content provide for the diversity of learners.	3	11	2	2	
The stage 4-5 outcomes are explicit and clear statements of the essential knowledge and skills.	6	10	2		
The syllabus clearly represents the intent of the learning expected.	7	9	2		
The syllabus provides clear direction regarding a project-based approach to teaching and learning.	4	7	3	3	1

Number of respondents

Index: Strongly Agree, Agree, Neither Agree or Disagree, Disagree, Strongly Disagree, Not in a position to comment

Figure 12: Number of responses to the question 'Having considered the Computing Technology 7–10 Draft Syllabus, to what extent do you agree with the following statements?'

Statement

Statement	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Not in a position to comment
The content is clear and appropriate for this area of learning.	3	7	5	2		1
The content provides relevant and meaningful project-based learning opportunities.	4	9	4			1
The Life Skills outcomes are explicit and clear statements of the essential knowledge and skills.	4	10	3			1
The outcomes and content cater for the range of students for whom this is an appropriate option.	4	8	4	1		1

Number of respondents

Index: Strongly Agree, Agree, Neither Agree or Disagree, Disagree, Strongly Disagree, Not in a position to comment
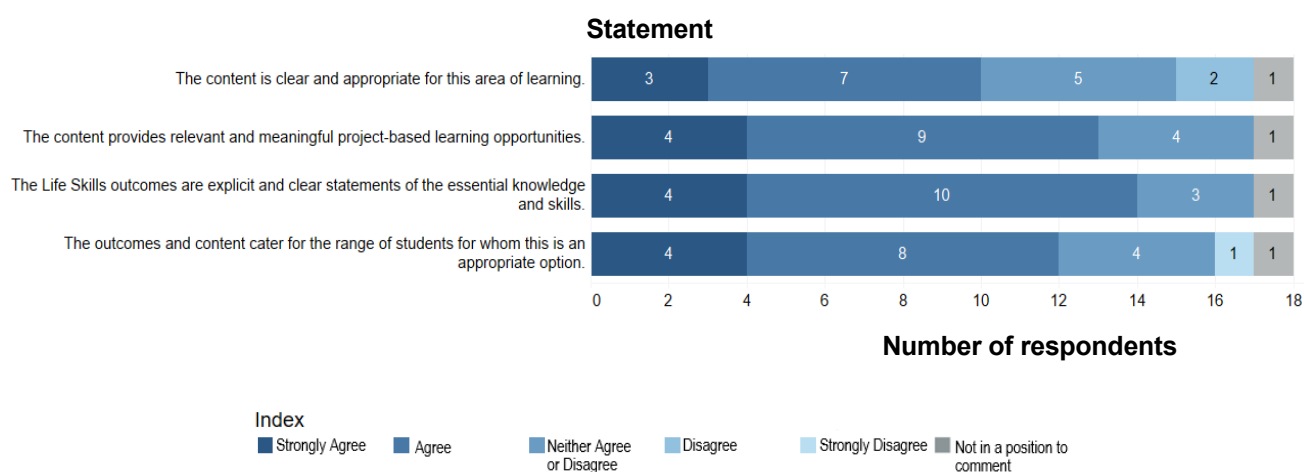
Figure 13: Number of responses to the question 'Having considered the Computing Technology 7–10 Draft Life Skills outcomes and content, to what extent do you agree with the following statements?'

Appendix 6: Targeted focus group meetings

Aboriginal Education

The Aboriginal Education targeted focus group meeting acquired feedback from Aboriginal and Torres Strait Islander stakeholders on the *Integrated Computing 7–10 Draft Syllabus* in 2019.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	Sydney	11 April	4

Special Education

The special education targeted focus group meetings acquired feedback from stakeholders on the Life Skills outcomes and content.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	Bankstown	1 April	6
Integrated Computing 7–10 Draft Syllabus	Video conference	10 April	7

Education sectors and subject association

The education sectors and subject association targeted focus group acquired feedback from stakeholders in relation to the *Integrated Computing 7–10 Draft Syllabus* in 2019.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	Sydney	6 December	7

Industry

The industry stakeholders targeted focus group acquired feedback from stakeholders in relation to the *Integrated Computing 7–10 Draft Syllabus* in 2019.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	Sydney	6 May	11

Student voice

The student targeted focus groups acquired feedback from stakeholders on the *Integrated Computing 7–10 Draft Syllabus* in 2019. These meetings focused on:

- student learning experiences in Information and Software Technology
- student assessment experiences in Information and Software Technology
- student intentions for Stage 6 patterns of study related to computer-based electives: Information Processes and Technology; Software Design and Development; Industrial Technology – Multimedia
- student post-school intentions: vocational, tertiary or other
- student opinion on the proposed course and focus area names
- student interest in the proposed topics and content.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	Epping	16 May	5
Integrated Computing 7–10 Draft Syllabus	Nambucca Heads	16 May	10

Tertiary education

The tertiary education targeted focus group acquired feedback from stakeholders in relation to the *Integrated Computing 7–10 Draft Syllabus* in 2019.

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	31 May	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	13 June	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	1 July	2

Subject	Location	Date (2019)	Number of attendees
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	23 September	2
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	2 October	2
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	10 October	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	14 October	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	4 November	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	11 November	1
Integrated Computing 7–10 Draft Syllabus	Sydney University	14 November	2
Integrated Computing 7–10 Draft Syllabus	Sydney University	22 November	1
Integrated Computing 7–10 Draft Syllabus	NESA Sydney	25 November	2

Teacher Expert Networks

The Teacher Expert Networks (TENs) and associates targeted focus group acquired feedback from stakeholders in relation to the *Computing Technology 7–10 Draft Syllabus* in 2021.

Subject	Location	Date (2021)	Number of attendees
Computing Technology 7–10 Draft Syllabus	Online	6 October	24

Technical Advisory Group

The Technical Advisory Group (TAG) and associates targeted focus group acquired feedback from stakeholders in relation to the *Computing Technology 7–10 Draft Syllabus* in 2021.

Subject	Location	Date (2021)	Number of attendees
Computing Technology 7–10 Draft Syllabus	Online	22 September	3
Computing Technology 7–10 Draft Syllabus	Online	2 December	2

Sector Reference Group

The Sector Reference Group (SeRG) and associates targeted focus group acquired feedback from stakeholders in relation to the *Computing Technology 7–10 Draft Syllabus* in 2021.

Subject	Location	Date (2021)	Number of attendees
Computing Technology 7–10 Draft Syllabus	Online	29 September	9

Appendix 7: Technologies 7–10 Board Curriculum Committee consultation meeting (code: BCC)

This meeting was held on 14 May 2019 and involved 13 members (including the Chair).

Name	Organisation
Mr Gary Johnson	Chair
Mr Joe Allen	Australian Association of Special Education NSW Chapter
Mr Daniel Bailey	Association of Independent Schools of NSW
Mr Warren Bridges	NSW Aboriginal Education Consultative Group Inc
Mr Peter Davis	NSW Department of Education
Mr Philip Hogg	Catholic Schools NSW
Assoc. Professor Sarah Howard	NSW/Territories Committee of Chairs of Academic Boards/Senates
Ms Sharyn Hooper	TAFE NSW
Ms Melissa Johnston	NSW Secondary Principals' Council
Mrs Lynn McKinnon	Council of Catholic School Parents NSW
Mr Justin O'Neill	Independent Education Union NSW/ACT
Mr Dan Rytmeister	NSW Department of Education
Mr Timothy Spencer	Federation of Parents and Citizens Associations of NSW