LEARNING PROGRESSIONS AND ONLINE FORMATIVE ASSESSMENT
NATIONAL INITIATIVE

FINAL REPORT – ATTACHMENT 10

PROFESSIONAL LEARNING SPECIFICATIONS AND TRIAL

Contents

Learning First conducted the analysis presented in this report. The interpretations of how these systems operate are the authors', and do not necessarily represent the views or official positions of governments or officials in the systems analysed.

1   Introduction

The Learning Progressions and Online Formative Assessment National Initiative (the initiative) is based on the premise that learning progressions and online formative assessment should be a national priority initiative for education. The discovery phase of the initiative has focussed not just on what formative assessment tools should look like, but also on the skills and knowledge educators need to implement these tools with fidelity and continuously improve teaching practice. Experts recognise that even the highest quality assessment tools will not lead to improved student learning unless teachers and school leaders engage in their own deep learning. This means that quality professional learning and support is critical to the initiative. The professional learning must be designed to build the capacity of teachers and school leaders to embed effective assessment practices in schools and use evidence of learning from assessment resources in a way the promotes every students' growth to higher achievement.

The professional learning should support educators to understand:
- the purpose and uses of learning progressions and the principles of effective formative assessment
- how to integrate learning progressions and online formative assessment resources with other teaching practices
- how to use different forms of evidence of learning to inform teaching and school leadership.

This report outlines the results of an investigation into the professional learning required for embedding strong formative assessment practices. The discussion is based on a review of evidence, as well as extensive consultations with system leaders across Australia and with other jurisdictions that have experience with designing and implementing professional learning for formative assessment.

The scope of the work on professional learning includes:
1. an **environmental scan** (found in a separate report): a scan of professional learning and the implementation of formative assessment practice. It involves stakeholder interviews with Australian as well as relevant international jurisdictions.
2. **professional learning specifications**: the development of design specifications to inform future professional learning to be developed and trialled for the initiative, building on what is already known and understood nationally about high-quality professional learning. This includes consideration of the nature of the support that should be provided in subsequent stages of the initiative to support the effective implementation of its products.
3. a **trial design**: the design features of a future trial of professional learning for the Early phase of the initiative. The trial design considers and accounts for relevant needs and priorities for different jurisdictions aligned to the recommended professional learning specifications.

This report has been written to guide the future development and delivery of national professional learning for the initiative. The recommendations are for a national approach, but individual states and sectors should be partners in the delivery and implementation. The professional learning trial in the early phases of the initiative could seek to establish some of these partnerships to ensure that, while there is a national approach, there is decentralised design and implementation.

The following sections address the research, findings, and recommendations for the professional learning specifications and trial design.

2   Methodology

The methodology for the development of design specifications for professional learning and the trial included six stages under three phases: design, data collection and analysis, and reporting (see Figure 1). The design phase ensured agreement on the key research questions and hypotheses for the professional learning and trial design. The data collection and analysis phase reviewed existing research and consulted with stakeholders. The reporting phase included feedback and iteration of findings with Learning First, the Learning Progressions and Online Formative Assessment National Initiative project team and stakeholders from education authorities and schools across Australia.

Design	Data collection and analysis			Reporting	
Research questions and hypotheses	Review existing research and documentation	Consultations	Identify policy implications	Feedback and iteration	Final report
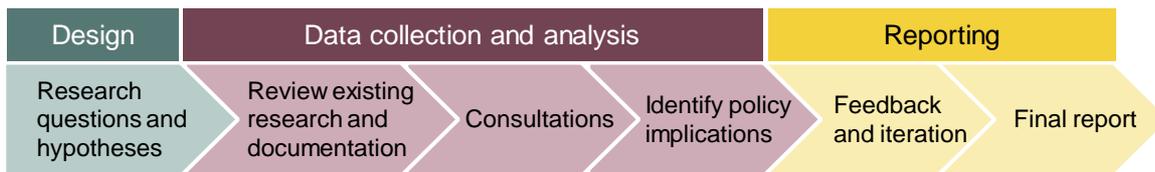
Figure 1: Professional learning specifications and trial design methodology

2.1   Design

2.1.1   Research questions

2.1.1.1   *Professional learning specifications*

Overarching research question: What professional learning for teachers and school leaders will be needed for the Learning Progressions and Online Formative Assessment National Initiative to have a positive impact on learning?

Underneath this overarching question are many additional questions that drive data collection and analysis. Additional research questions include:

Connection to existing research

- What do we know already about high-quality professional learning, and what does this mean for the Learning Progressions and Online Formative Assessment National Initiative?
- How can the professional learning be underpinned by the Australian Professional Standards for Teachers, the Australian Charter for the Professional Learning of Teachers and School Leaders, the Australian Teacher Performance and Development Framework, and the High Quality Professional Learning Cycle of the Australian Institute for Teaching and School Leadership (AITSL)?

Content and purpose

- What areas of teachers' and school leaders' practice will the professional learning need to address?
- How will the professional learning support teachers to understand their impact on student outcomes?

Delivery modes

- What are the required facilitation and delivery modes, including online, face-to-face and blended?
- What collaborative professional learning opportunities should be included, and what guidance for professional learning communities (both within and between schools) is needed?
- How important are whole-school approaches to professional learning for formative assessment?

Customisation

- What areas of teachers' and school leaders' practice will the professional learning need to address?
- How can the professional learning be tailored for educators in schools from a variety of geographical and cultural contexts, and communities in Australia?
- How can the professional learning be tailored for varying roles, responsibilities and career stages in schools (including relevant capacity building for teachers, lead teachers and school leaders)?

Scaling the initiative

- What features and delivery modes would support scaling up the initiative for national implementation?

Alignment

- How will the scope of professional learning content relate to the Australian Professional Standards for Teachers and the Australian Professional Standard for Principals?
- How can the professional learning support the development activities of teachers and school leaders and development processes in schools?
- How can the professional learning be aligned to, and potentially included in, existing and new professional learning approaches by education systems and sectors?

In scope:
- use of related tools and resources
- use of learning progressions and online formative assessment tools
- resources that may be developed in future stages of the initiative
- learning design features
- scope of professional learning content that will be required to meet the needs of Australian teachers and school leaders
- delivery and facilitation modes that will support effective implementation in schools

Out of scope:
- development of professional learning content

2.1.1.2   Trial design

Overarching research question: What are the necessary design features of a trial of professional learning for the Learning Progressions and Online Formative Assessment National Initiative?

Underneath this overarching question are many additional questions that drive data collection and analysis. Additional research questions include:

Potential features of a trial of professional learning

- What features are required for a trial of high-quality professional learning in general?
- What features are required for the different professional learning options for the Learning Progressions and Online Formative Assessment National Initiative?
- What are the short-, medium-, and long-term considerations?
- How can the trial test the range of approaches that are likely to be required for full roll out?

Required implementation supports for schools

- What are the barriers/enablers to an effective trial that need to be considered across different jurisdictions and for different professional learning options?
- What are the supports that need to be in place for the trial to be effective?

How the trial will look different for different jurisdictions and sectors

- How can the trial be tailored for educators in schools from a variety of geographical and cultural contexts, and communities in Australia?
- How can the trial be aligned to school performance and development processes and professional learning frameworks in different jurisdictions?
- How can the trial be aligned to, and potentially included in, existing and new professional learning approaches by education systems and sectors?
- Who would be good partners in the different jurisdictions and sectors for the trial?

2.1.2   Hypotheses

Hypotheses help direct lines of inquiry and ensure interviews and consultations are more efficient at gathering the information necessary for analysis. Below are the hypotheses that helped to narrow the scope of the work and answer all research questions effectively.

2.1.2.1   *Professional learning design specifications*

- A high-quality professional learning culture, as defined in the *Australian Charter for the Professional Learning of Teachers and School Leaders,* will enable professional learning to be most effective.
- The *Australian Charter for the Professional Learning of Teachers and School Leaders* also specifies that effective professional learning is **relevant, collaborative** and **future focussed**, and supports teachers to reflect on, question and consciously improve their practice.
- School leader professional learning, in addition to teacher professional learning, is important because school leaders establish the vision and provide resources for the school professional learning model.
- Professional learning will only be considered effective if it changes educator practice, teaching and, ultimately, student learning.
- To see a change in educator practice, a sustained commitment is needed from school leaders and teachers.
- Professional learning is necessary for the implementation of any formative assessment resource/program.
- Training needs are important and distinct from professional learning needs that are related to pedagogical practice.
- A range of implementation supports, in addition to professional learning, is needed for scaling effective practice.

2.1.2.2   *Trial design*

- The different professional learning options will dictate different trial designs.
- The trial may need to look different in some jurisdictions but there may also be a national approach.
- System/sector supports are necessary for an effective trial of professional learning.

2.2   Data collection and analysis

2.2.1   Review existing research and documentation

Learning First reviewed existing research and documentation to ensure insights from work already completed were included in the analysis and recommendations in the final professional learning report.

The review included the following:
- a draft literature review on effective formative assessment practice
- a draft environmental scan of professional learning and implementation support for effective formative assessment practices
- findings from user-centred design research on the professional learning needs of a representative group of teachers and school leaders from a diverse range of schools across Australia
- an interim report on market research to inform communications for the initiative

- Australian Charter for the Professional Learning of Teachers and School Leaders
- Australian Professional Standards for Teachers
- Australian Professional Standard for Principals.

2.2.2   Consultations

The professional learning specifications prioritise feedback from teachers and school leaders, while the trial design had a heavier focus on system and sector leader consultation, recognising the need for professional learning to align with, and be supported, by jurisdictional priorities. The group consolidation schedule is shown below in Table 1.

Table 1: Group consultation schedule

Stakeholder	Date(s)	Details
ACARA F–12 Curriculum Reference Group	14 June 2019	• Jurisdictional and federal government representatives, nominated by the relevant member of the Australian Education Senior Officials Committee, and one nominee from the National Catholic Education Commission and the Independent Schools Council of Australia • Outlined the purpose of the environmental scan and sought confirmation to consult with members for it
Professional Growth Network	23 July 2019	• About 40–50 members from different jurisdictions • Discussion focussed on details about the professional learning and trial design • Small groups formed, based on like jurisdictions
School Leadership and Teaching Expert Standing Committee	1 August 2019	• 18 members, consisting of teacher regulators, teachers and school leaders. • 90-minute session focussed on eliciting details of a preferred professional learning approach for the Learning Progressions and Online Formative Assessment National Initiative (the initiative), which supported a variety of school contexts as well as expert advice on enablers and barriers to effective implementation
Teacher Practice Reference Group	5 August/ 9–10 September 2019	• This group comprised 27 teachers and school leaders • These sessions focussed on eliciting details of a preferred professional learning approach for the initiative to support a variety of classroom contexts
Association of Independent Schools	9 August 2019	• Discussion focussed on the unique challenges of independent schools
F–12 Curriculum Reference Group	13 September 2019	• Focussed on eliciting details of a preferred professional learning approach for the initiative to support a variety of classroom contexts

2.2.2.1   Consultation method

The goal of collecting information through consultations was to get feedback on proposed professional learning features and possible examples of previous practice that may inform the recommended approach. Questions at the consultations were derived from the key research questions.

2.2.3   Identify policy implications

Information collected from the document review and consultations informed analysis of possible approaches to developing and trialling the professional learning and supporting implementation in schools.

2.3   Reporting

The final stage was reporting on findings that describe the options for professional learning and the process by which they were developed, tested and refined.

2.3.1   Feedback and iteration

There were three drafts of the report before the final draft was completed. For all drafts, the Learning Progressions and Online Formative Assessment National Initiative project team provided feedback and Learning First incorporated that feedback into a revised report.

3   Design specifications for professional learning

This section outlines the findings from the review of evidence and consultations as well as the recommended design specifications that should inform professional learning for the Learning Progressions and Online Formative Assessment National Initiative.

The professional learning specifications address:
- learning design features
- the required scope to meet the needs of Australian teachers and school leaders
- the delivery/facilitation mode that will support teachers and school leaders to develop their practice
- the nature of support that is to be provided in future stages of the initiative to support the implementation of products for it.

The discussion in this section references the research review (Appendix A), the consultation findings (Appendix B), and the environmental scan, which is in a separate report.

3.1   Findings and analysis

This section addresses the research questions, including the overarching research question: *What professional learning for teachers and school leaders will be needed for the Learning Progressions and Online Formative Assessment National Initiative to have a positive impact on learning?*

There are many different types of professional learning for many different purposes, but this report is focussed on professional learning for formative assessment. While research shows that professional learning can be highly effective at changing teacher practice (leading to improved student outcomes), many studies also show that most professional learning is ineffective (Timperley et al. 2007; TNTP 2015). Large investments in professional learning are made each year across Australia, and despite the availability of research on what high-quality professional learning looks like, many teachers still report that their learning experiences were not useful for improving practice (OECD 2014). The objective of this report, therefore, is to outline the recommended design specifications based on research and consultations to ensure that the Learning Progressions and Online Formative Assessment National Initiative professional learning has the best chance of success and acknowledges the diversity and complexity of the settings it lands in, is adaptive, is evaluated and has feedback loops.

There are many decisions that have to be made about what professional learning structures will work best for the initiative. This report provides recommendations on the scope of the professional learning content, as well as the possible modes of learning. The goal is not to identify one mode that is most important, but to clarify how different professional learning modes fit together to create a comprehensive program of professional learning for teachers and school leaders. The professional learning has to be high quality in theory, but also has to work in practice. This means it provides tailored opportunities that work for educators in many different school types.

This section considers the research base as well as evidence from the environmental scan and consultations to outline options for professional learning with different topics for consideration. The discussion below presents evidence that feeds into the recommendations in the next section for the recommended professional learning.

The following consideration factors are discussed in this section:
1. Connection to existing research
2. Content and purpose
3. Delivery modes
4. Customisation
5. Scaling the initiative
6. Risk analysis

3.1.1   Connection to existing research

Research question: What do we know already about high-quality professional learning formative assessment, and what does this mean for the Learning Progressions and Online Formative Assessment National Initiative?

There is extensive research on professional learning and formative assessment that has already been synthesised and summarised by AITSL and education jurisdictions across Australia. This report takes into consideration the work that has already been done and ensures research-based findings are incorporated into the recommended professional learning specifications.

Existing research reviewed included the following:
- a draft literature review of effective formative assessment practice
- a draft environmental scan of professional learning and implementation support for effective formative assessment practices
- findings from user-centred design research on the professional learning needs of a representative group of teachers and school leaders from a diverse range of schools across Australia
- interim report on market research to inform communications for the Learning Progressions and Online Formative Assessment National Initiative
- Australian Charter for the Professional Learning of Teachers and School Leaders
- Australian Professional Standards for Teachers
- Australian Professional Standard for Principals.

Two key pieces are summarised below: the formative assessment literature review (Lane et al. 2019) and the Australian Charter for Professional Learning of Teachers and School Leaders (AITSL 2012). The other reports are summarised in Appendix A.

The Australian Charter for the Professional Learning of Teachers and School Leaders explains that high-quality professional learning must be relevant, collaborative and future-focussed, and needs to be situated within a high-quality professional learning culture (AITSL 2012). This charter synthesises the research for all types of professional learning, regardless of topic or goal. However, this research matches what was found in the 2019 Literature Review of Formative Assessment Evidence and Practice (Lane et al. 2019). This review looked specifically at studies on formative assessment and what insights these studiesprovide about the overall impact as well as implications for professional learning design.

The review found the following regarding characteristics of effective professional learning for formative assessment.

Teacher knowledge and skills needed for formative assessment

- pedagogical content knowledge so teachers can break down critical concepts, find appropriate entry points for all students, and redesign instruction to match students' understandings and misconceptions as evidenced in formative assessment.
- both assessment knowledge and data literacy. Teachers require an understanding of assessment theory, research and how to translate these into classroom practices.
- requisite knowledge and skills to use formative assessment hardware and software. This includes how to administer assessments, interpret results and translate information obtained into effective teaching instructions.

Professional learning implications

- Collaboration across schools or networks is important for success.
- Continuous support is necessary for the sustained application of evidence-based practice. Teachers need follow up and support for new ideas and strategies to be effectively implemented.

- Professional development is most effective when teachers engage actively in instructional inquiry in the context of collaborative professional communities that are focused on instructional improvement and student achievement.
- Professional learning that is sustained, collaborative, work-embedded and situated within school needs is preferred over one-day workshops or formally presented interventions.
- Long-term, process-oriented professional development with ample opportunities for collaboration, feedback and discussion appears to be more effective for successfully changing teachers' classroom assessment practices.
- Professional learning for formative assessment should be grounded in specific subject matter and increase teacher pedagogical content knowledge.
- Professional learning should target school leaders in addition to teachers.

System supports/structures necessary

- School leaders who understand formative assessment, create a school-wide vision, set expectations, and foster a supportive environment.
- Regular and protected teacher meeting time for meaningful examination of assessment practices.
- School culture that encourages honest reflection and allows mistakes to be made.
- Decentralised organisational structures and distributed leadership in schools.
- Increased focus on assessment literacy in initial teacher education and in-service teacher professional development at a tertiary education level.

3.1.2   Content and purpose

> **Research question:** What areas of teachers' and school leaders' practice will the professional learning need to address?

It is important to consider the specific content that will be critical for the Learning Progressions and Online Formative Assessment National Initiative, and how this may impact the design of professional learning. To accelerate the improvement of student learning, teachers may need to continuously improve their practice. For many teachers, changing practice requires developing new, sophisticated skills. For formative assessment, these new skills may include designing assessment tasks, collecting and interpreting evidence, providing feedback, and adjusting teaching practice. Teachers also require skills in understanding how to use and interpret assessments, including knowledge about reliability and validity (Heritage 2007).

The initiative may develop an effective tool or resource that can support teacher understanding of assessment information and remove some of the burden of analysis and interpretation. So, there may be less of a need for generic data analysis skills, and more of a need for knowledge and skills that cannot be fully incorporated into an online tool, which might include translating the information into effective teaching practices (Lane et al. 2019).

The 2019 report of market research for communications for the Learning Progressions and Online Formative Assessment National Initiative found that teachers and school leaders may need support in understanding what learning progressions are and the goals of the initiative (Orima Research 2019). The consultations with teachers and system leaders also showed that there are issues with common definitions of formative assessment stemming from schools using different assessment programs. Therefore, there is opportunity for professional learning around the initiative, in order to clarify a common definition of formative assessment and clearly define the purpose and use of the learning progressions.

For formative assessment to be effective, teachers also need to be able to set goals in their subject area and identify student misconceptions about subject-specific skills. This makes demands on both their subject knowledge and pedagogical content knowledge. In particular, teachers need to understand how learning progresses from simple to complex in their learning area. Scholars are increasingly realising that low pedagogical content knowledge is a barrier

to the effective use of formative assessment and teaching more generally, and have called for more research on the connection between formative assessment and pedagogical content knowledge (Herman et al. 2015; Bennett 2011).

Professional learning for formative assessment has to cover different types of content for teachers and school leaders to have the knowledge and skills they need for continuous improvement. Formative assessment is complex, so there is not one learning objective for educators, but many. See Figure 2 below.

General assessment and pedagogy knowledge		Pedagogical content knowledge
Universal		Domain and year-level specific

Common definition and understanding of formative assessment	Methods of formative assessment	Identifying and applying differentiated, evidence-informed teaching interventions
Benefit and purpose of formative assessment	Using and interpreting specific assessments	Selection and development of teaching and learning resources
Interpreting data	Using the literacy and numeracy learning progressions to understand where students are at	Next steps in teaching based on assessment
Understanding what the literacy and numeracy learning progressions are	Use of technology for assessment (assessment-specific)	

Figure 2: Professional learning content for teachers

Source: Lane et al. 2019; AITSL 2011

Some of the professional learning content that teachers need for formative assessment is universal, meaning that any teacher might need the same knowledge and skills. Other content is domain and/or year-level specific, meaning that professional learning should be differentiated to be the most effective. For example, all teachers could collectively learn about common definitions and the benefits of formative assessment, but if teachers are learning about how to decide the next steps of teaching after assessing student learning, they will likely need to be grouped by subject area and year level to acquire the most learning.

The environmental scan showed that some Australian states have experienced a change in the content needs of professional learning over time as they have implemented formative assessment initiatives (Learning First 2019). New South Wales, for example, began implementing the National Literacy and Numeracy Learning Progressions (NLNLP) in 2017 and designed professional learning to support the roll out. The first year of professional learning focused on introducing and building understanding of the learning progressions. The second year was more specifically focused on sub-elements of the learning progressions, such as phonological awareness. The NSW Department of Education used teacher feedback and assessment data to determine the specific needs of schools, and designed the professional learning to address those needs. For example, writing was identified as a priority area across the state, and workshops were designed to build pedagogical content knowledge in writing.

School leaders, from principals to teacher leaders, have different professional learning needs for effectively supporting formative assessment in their schools. Figure 3 shows the three categories of content: understanding

formative assessment, goal setting and monitoring, and supporting professional learning. Much of the content that school leaders need to learn overlaps with the teacher content. However, the main difference is that leaders who are working more at the whole-school level need more content on vision setting and high-level formative assessment knowledge, whereas leaders working more closely with teams of teachers need essentially the same knowledge about detailed formative assessment practice as teachers.
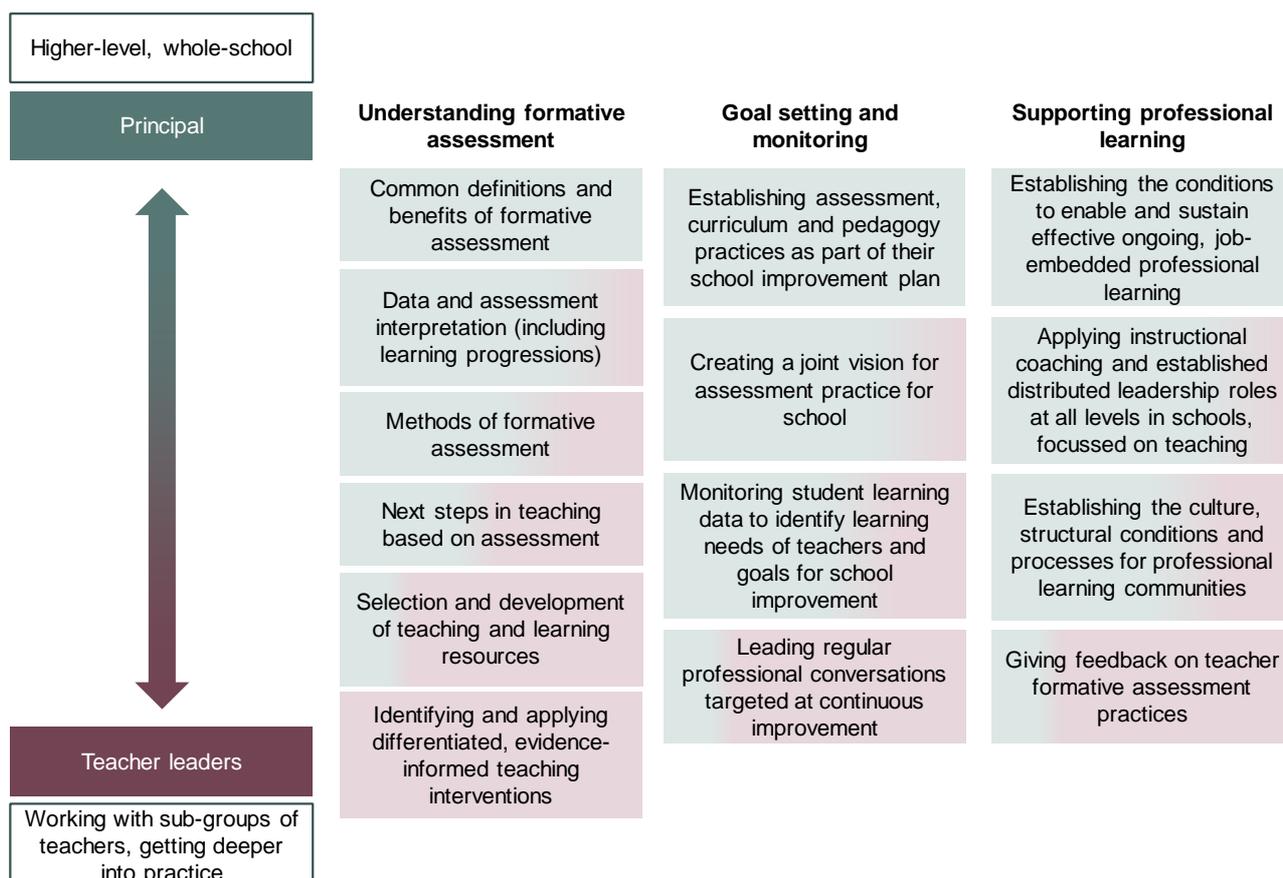
Figure 3: Professional learning content for school leaders

Source: Lane et al. 2019; AITSL 2015

> **Research question:** How will the professional learning support teachers to understand their impact on student outcomes?

The *Literature Review of Formative Assessment Evidence and Practice* (Lane et al. 2019) showed that formative assessment definitions vary, but that most describe formative assessment as 'ongoing' and happening during 'teaching and learning'. A vital step in the formative assessment process is teachers using the evidence to adjust their practice. Adjustments might include providing specific feedback to a student about his or her work, which includes information about next steps, or re-teaching a concept in a different way. Wiliam (2006) distinguishes between adjustments that occur over different time periods: a short cycle (adjustments made between and even within lessons); a medium cycle (within and between instructional units) and a long cycle (across marking periods, quarters and semesters. He points out that the evidence suggests that short- and medium-cycle adjustments have more impact on student learning.

This adjustment to teaching essentially requires constant self-reflection and evaluation of impact by teachers. Therefore, the role of teacher self-reflection is critical to formative assessment. Research suggests that making

appropriate adjustments is often the most challenging part of the formative assessment process (Heritage 2007). One of the reasons for this is that to decide on appropriate next steps teachers need a certain level of knowledge of the subject and subject-specific teaching strategies. Secondly, the decisions a teacher makes are based on inferences, so they can be incorrect or subject to bias based on gender, race, or the teacher's feelings towards the student. Scholars have recommended ways to address these challenges including by building teacher subject knowledge and recognising uncertainty by collecting multiple forms of evidence to test inferences (Bennett 2011).

Therefore, teacher understanding of the impact on student outcomes is critical for formative assessment. In fact, this is the essence of formative assessment – knowing one's impact on student learning by utilising continuous assessment so that adjustments to teaching can be made to improve outcomes (Wiliam 2011; Lane et al. 2019). It is important that the development of this skill for teachers is a goal of the initiative's professional learning.

3.1.3   Delivery modes

Research question: What are the required facilitation and delivery modes, including online, face-to-face and blended modes for formative assessment professional learning?

The environmental scan showed that there are many state and sector professional learning initiatives that have been designed to be research based. Many of these professional learning programs are developed to be collaborative, expert-led and based within the school, for example. The environmental scan also showed that there are some challenges to what currently exists. These challenges include difficulty with catering to the needs of all school types and issues of evaluation, meaning that there is no strong evidence that these professional learning offerings are having the desired impact yet. The initiative's professional learning, therefore, can be designed to build on the research-based practices that already exist and attempt to fill some of the gaps to improve support for teachers and school leaders.

The environmental scan, consultations, and research review uniformly point to the fact that there is not one ideal professional learning mode, but that it is the offering of multiple modes that are aligned as part of a systemic approach that works best. This means that teachers have the ability to customise some parts of their professional learning to suit their contextual needs, but everyone will understand clearly how the different options fit together and align. The professional learning could be seen more as one program with different options and sequencing, rather than many different professional learning offerings with unaligned content.

The research and feedback from consultations is clear: sustained, collaborative, and focussed professional learning is more effective than one-off, individualised development. However, this does not mean that workshops and courses, for example, have no place in an effective professional development program. They can play an important role in delivering specific knowledge and skills to educators through access to experts and research, provided that these workshops/courses are embedded within a more comprehensive and aligned professional learning experience.

The AITSL High-Quality Professional Learning Cycle (see Figure 4) provides an example of when and where standalone professional learning might fit in. The entire cycle ideally would be situated within a collaborative structure such as a professional learning community or coaching relationship. That means that educators are not completing the steps on their own but considering collectively, first, what students need and, then, what their own educator learning needs are. This will lead educators to Stage 2 of the cycle, which is to 'select and undertake learning'. This is where a standalone workshop or course might be valuable. If professional learning needs have been carefully analysed (connected to student learning needs), then the selection of a workshop or course will be purposeful, and it will only be one stage of the cycle. The rest of the cycle will continue after the course or workshop in collaboration with other educators – they will apply their learning, adapt their teaching, and evaluate the overall impact.

Whole cycle ideally embedded within a community (in-person, virtual, within school, cross-school)

Involves analysing student need first with assessment

Where standalone professional learning on specific practices related to the identified need will be useful

Going back to assessment data to make sure students achieved learning progress

Stage 1: Identify your professional learning need(s)

Teachers reflect on:
- How can I improve my teaching practice and learner outcomes? What data sources inform this?
- What support do I need?

Stage 4: Evaluate overall impact

At appropriate points in the learning process, reflect on the following:
- Did the professional learning meet my learning need/s?
- How has my teaching practice changed and how has this impacted learner outcomes? What evidence informs this?

Stage 2: Select and undertake learning

Based on learning need(s), consider the following:
- Have I considered different types of professional learning to select the most suitable?
- Does the professional learning challenge my thinking and enhance my practice?

Stage 3: Apply and refine learning

Throughout the learning process, consider the following:
- What outcomes do I hope to achieve as a result of applying my learning?
- How am I assessing, reflecting and refining my learning throughout the process?

Important to have collaborative learning, such as co-observation or coaching here to discuss how student learning is progressing (using formative assessment)

Figure 4: AITSL's High-Quality Professional Learning Cycle and where different modes apply for formative assessment practice

Source: https://www.aitsl.edu.au/docs/default-source/hqpl/high-quality-professional-learning-cycle---for-teachers.pdf

The Professional Learning Cycle shows that multiple types of professional learning are needed at different stages. Research supports this multiple mode method, showing that it enhances the effectiveness of professional learning (Yoon et al. 2007). It is therefore true that the ideal professional learning program would include multiple modes of professional learning, not just one. However, it is still important to look at each mode and determine its benefits and when it is appropriately used within a comprehensive program.

Professional learning is most effective when it occurs over multiple periods of time and involves multiple modes of learning (Yoon et al. 2007). There are different considerations for choosing the best mode of learning including the type of learning goals as well as the needs of participants. For example, a discreet learning goal like learning how to administer an assessment will require a different delivery mode than a more complex learning goal such as how to create formative assessment tasks. Additionally, many teachers do not have the flexibility for delivery modes such as face-to-face learning, so the needs of different teachers (e. g. teachers in rural areas) have to be considered.

Table 2 shows the different types of professional learning, which broadly fall into three categories: workshop or course, collaborative structures, and self-paced and flexible learning.

Table 2: Effectiveness of different types of professional learning for formative assessment

Modes	Variations	Relative cost	Scalability	Relative impact
Workshop	In-school delivery	Medium	Medium	High
	External delivery	High	Medium	Medium
	One-off	Low	Easy	Low
	Multiple	High	Medium	High
	Short time period	Medium	Medium	Low
	Ongoing	Low	Medium	High
Course	In-person delivery	High	Medium	Medium
	Online delivery	Low	Medium	Low
	Formal qualification	High	Difficult	Medium
	Standalone course	Medium	Medium	Low
In-school professional learning community	Informal	Low	Difficult	Low
	Formal	Low	Medium	High
	Unstructured	Low	Difficult	Low
	Structured	Low	Medium	High
	Peer-led	Low	Medium	Medium
	Expert-led	Low	Medium	High
Observation of teaching in your school	Informal	Low	Difficult	Medium
	Formal	Low	Medium	Medium
Others observing your teaching and providing feedback	Peer led	Low	Difficult	Medium
	Expert led	Medium	Medium	High
	Informal	Low	Difficult	Medium
	Formal	Medium	Medium	Medium
Visits to another school	Observation and feedback	Medium	Difficult	Medium
	Practice sharing	Medium	Difficult	Low
Cross-school network	Informal	Low	Difficult	Low
	Formal	Low	Medium	Medium
	Peer led	Low	Medium	Medium
	Expert led	Low	Difficult	High
Mentoring or coaching	Informal	Medium	Difficult	Low
	Formal	High	Medium	Medium
	Peer led	Medium	Difficult	Medium
	Expert led	High	Medium	High
Virtual community of practice	Informal	Low	Medium	Low
	Formal	Low	Easy	Medium
	Peer led	Low	Medium	Medium
	Expert led	Low	Easy	High
Curated resources/tools/ guides/videos	Online or paper form	Medium	Easy	Medium
Online modules	Different than online courses which are not self-paced	Medium	Easy	Medium
Reading professional literature	Individual	Low	Easy	Low
	Collaborative	Low	Medium	Medium

3.1.3.1   Workshop or course

This type of professional learning works best to target very specific knowledge or skills as part of a broader, comprehensive professional learning program. The benefit of this mode is that it is expert-led (internal or external expert) and therefore can be designed to explicitly teach a concept. Explicit teaching is important for both children and adults to improve their learning (Rosenshine 2012). This mode might work best for introducing a new concept or formative assessment practice, and collaboration can be tied into trial implementation of the new practice.

The environmental scan showed that many states and systems in Australia are using some version of workshops or courses (both within-school and external) to organise professional learning for formative assessment (Learning First 2019). One of the more formal examples was from Catholic Education Melbourne (CEM), which designed a university course around their Literacy Assessment Project with the Assessment Research Centre at the University of Melbourne. At the start of the project, the professional learning focused on building literacy leaders' understanding of a newly designed reading learning progression during workshops, and participants worked collaboratively with their peers and received support from the CEM literacy team and University of Melbourne academics. In year three of the project, the CEM collaborated with the University of Melbourne to create a Masters degree in literacy education. Project participants received accredited points towards their Masters degree to recognise the learning undertaken in the project.

A more informal example is from the Northern Territory. The Department of Education developed professional learning for schools to learn how to use the curriculum assessment and reporting tool called Abilities Based Learning and Education Support (ABLES). The tool is used throughout Northern Territory schools to support learners with a disability. The Department's Inclusive Curriculum team provides differentiated and targeted professional learning to support teachers to use ABLES. The professional learning is tailored to the needs of each school and is often co-developed with the principal and ABLES coordinator of the school. In one special education setting, the Inclusive Curriculum leader worked in the school for five days, co-delivering ABLES training to teachers in staff meetings and working alongside teachers in their professional learning communities.

In both the CEM and Northern Territory examples, a series of workshops or courses were integrated with collaborative structures in schools. CEM asked leaders participating in the offered course to take the learning back to the school with specific tasks that required teacher collaboration. In the Northern Territory, the Department has experts who hold workshops in schools about ABLES, but these experts also work alongside professional learning communities. This type of use of workshops or courses makes for the greatest learning: when they are targeting specific skills with expert advice, but the content is aligned to the content of collaborative structures in schools like professional learning communities.

3.1.3.2   Collaborative structures

Research question: What collaborative professional learning opportunities should be included, and what guidance for professional learning communities (both within and between schools) is needed?

Collaboration in professional learning for formative assessment is important so educators can challenge pre-existing ideas, share practices, and give and receive feedback (Timperley et al. 2007). While explicit teaching occurs in workshops or courses, often to introduce learning, deeper learning about the nuances of implementing new formative assessment strategies can only occur with collaboration.

Feedback from stakeholder consultations indicated that collaboration is important for learning, but it can be challenging in practice. Getting multiple schools together in a network appears to be more difficult than having experts come to individual schools and lead collaborative activities. However, stakeholders agree that there needs to be a shared vision across schools and sharing ideas and resources is important.

Collaboration is critical for effective professional learning, as noted in the Australian Charter for the Professional Learning of Teachers and School Leaders and other professional learning frameworks reflected across Australia. The research is clear that collaboration is effective because it challenges educators' existing beliefs and pushes them to explore new practices (Timperley et al. 2007). The evidence shows that collaborative, in-school professional development has more influence on effective classroom practice than does isolated, individual professional development (Elmore 2002). When teachers undertake collaborative professional development, they improve both their own knowledge and that of their peers, the whole school, and the system. Quality professional development is embedded in daily practice so that it is deeply connected to student learning needs in each classroom.

Collaboration supports formative assessment practice improvement by:
1. **Challenging existing beliefs about current assessment practices**: When educators come together, they bring different experiences and knowledge. Hearing different perspectives allows teachers and school leaders to consider contested beliefs and test the effectiveness of their competing ideas about practice (Timperley et al. 2007).
2. **Giving feedback on formative assessment practice**: Teachers can analyse their impact on student learning by gathering student feedback and reviewing assessment information. However, a peer, school leader, or external expert observing their practice and providing feedback can add a lot of useful information to analysis of current practice. Getting feedback from other educators is an important aspect of continuous improvement (Timperley 2015).
3. **Reducing variation of formative assessment practice between classrooms and schools:** In most education systems, wide variation in teaching and assessment practice, both within and between schools, creates inequities for students and a lot of 'reinventing the wheel' across the system. Collaboration reduces these variations because teachers and school leaders align on the most effective practices (Vangrieken et al. 2015; Mitchell, Reilly, and Logue 2009).

Of course, simply putting teachers or school leaders in a room and telling them to work together will not improve student learning outcomes (Troen and Boles 2012). Educators may be used to working alone (Lortie 2002), and they can feel anxious sharing their practice with one another, even worried that they will be ashamed of their teaching. Conversely, collaborative work will fail if it is merely mutual reinforcement and back-slapping. Teacher team meetings can be completely unproductive, even counterproductive, if they lack trust, shared purpose, structure, and a willingness to both support and respectfully challenge each other.

One way to make collaboration more effective is to structure collaborative activities around an improvement cycle. The approach of improvement cycles resembles that of scientific inquiry. Teachers and school leaders start from a hypothesis or a research question, investigate available research and collect new data on student performance. They then trial new approaches and collect data on the trial in order to answer the initial research question or confirm the hypothesis. The exact stages of improvement cycles change from system to system, but they share three key elements: assess current student learning, develop new knowledge and practices, and evaluate whether new approaches have improved student learning (Jensen et al. 2016; Timperley, Kaser & Halbert 2014; The Health Foundation 2011).

An improvement cycle is designed to ensure that teachers and school leaders enact effective professional development in the classroom and staff room, and that all professional development is tied to student learning. In other words, the improvement cycle puts good professional development into practice. Because the improvement cycle forces schools and teachers to start and end with an assessment of student learning, any professional development activities will be selected based on a student learning need.

Improvement cycles, also called 'inquiry cycles', were cited in the environmental scan and in the consultations as being used to provide structure and focus for teacher and school leader collaborative work. Teachers and school leaders follow them to collectively investigate student learning issues, and to consider and implement new practices.

There are three major types of collaborative structures:
1. Professional learning communities
2. Mentoring and coaching
3. Observation and feedback.

Professional learning communities for formative assessment

An effective way to change teacher beliefs about assessment and assessment practice is through ongoing professional learning embedded in a school environment in which teachers work collaboratively in teams. This type of professional learning can create a culture of continuous improvement that both supports teachers to make and reflect on changes to assessment practice and holds them accountable for doing so. School leaders need to carve out dedicated time for teachers to work on formative assessment, and to create clear goals, expectations and protocols to ensure that collaboration is productive. Formative assessment experts propose different models for schools with which to improve their practice using this kind of professional development. See Box 1.

Box 1: Professional learning communities and formative assessment

Based on his extensive work on implementing formative assessment practices, Wiliam proposes 'Teacher Learning Communities' (TLCs). These teams involve eight to ten teachers who meet for approximately 75 minutes every month. Teachers drive the process while administrators, if they participate, are peripheral and/or sources of support. In TLCs, teachers engage in professional learning around formative assessment and make or revise action plans in which they commit to making one change in their classroom to improve their formative assessment practice. The core principles of TLCs are choice, flexibility, small steps, accountability, and support (Leahy & Wiliam 2013).

Australian jurisdictions also have a strong existing emphasis on professional learning communities. In most systems, the professional learning communities use formative assessment to structure their collaborative work. For example:
- in the Australian Capital Territory, teachers are supported to examine evidence of student learning within their professional learning communities and make well-informed judgements as they move through a cycle of inquiry
- in the Northern Territory, teachers in government schools also work in professional learning communities to improve student learning, and formative assessment is an integral component of this work
- within Independent Schools Queensland, small teams of teachers study and address a problem of practice at their school. Formative assessment is a crucial component of collaborative inquiry as it monitors the impact of teacher practice on student learning. Coaches provide one-on-one support to use effective formative assessment practices as part of their collaborative inquiry
- in Victoria, the Professional Learning Communities initiative supports teachers to work collaboratively to improve student outcomes in their school. During the initiative, more than 800 government schools will receive implementation support including professional learning and expert advice in data interpretation and analysis, curriculum and assessment.

Across high-performing systems, learning communities have emerged as a cornerstone program for effective professional learning, and in all of these systems. The first stage of work for these communities is assessing student learning (Jensen et al. 2016). Teachers work together to deeply understand where students are at in their learning and where they need to go next. These learning communities are not, therefore, simply platforms for shallow behaviours, such as preparing termly teaching plans or exchanging teaching materials. They are inquiring about student learning, starting with formative assessment, and developing new teaching practices from there.

When well-organised, learning communities help to initiate a cultural shift towards creating expectations for improvement within schools and teachers. This involves broadening the conception of what it means to be a teacher

to include continuous assessment of student learning, and improving teacher formative assessment practice through exposure to peers and mentors.

Mentoring and coaching for formative assessment practice development

Effective mentoring or coaching is more than just administrative or emotional support. Many systems use mentors and coaches to enrich the teaching profession and improve student performance (Jensen et al. 2016). In these systems, coaches encourage teachers to measure the impact of their teaching practices on student learning through formative assessment. Through regular classroom observation and feedback, coaches help teachers to identify and address key areas for improvement. Coaches can also provide a source of content and pedagogical content knowledge, cultivating a safe environment for developing and evaluating new teaching practices so that the next steps have an evidence base behind them.

Outside the classroom, coaching can serve as a mechanism for collaboration between schools and between new and experienced teachers. Coaches can be positioned within a single school or work across many schools. High-performing schools and systems integrate coaching into their operations in order both to recognise and encourage excellent practices, and to further ensure that such practices are embedded in the very definition of what it means to be a teacher.

Observation and feedback on formative assessment practice

Peer observation, or teachers visiting one another's classroom to watch teaching practice, helps to build coherence and high-quality formative assessment practice in a school (City et al. 2009). Yet teachers accustomed to working alone can find it a challenge to open their classrooms to their colleagues (Lortie 2002). There are options for structuring peer observations in a way that will make teachers feel safe and supported, rather than threatened.

Peer observation can take many forms, but when it is effective it focuses on students as much as on teachers. In high-performing systems such as Hong Kong and Japan, teachers observe one another closely as part of their collaborative lesson planning, to see how students are responding to the lessons they have designed together (Jensen et al. 2016). These observations are integrated into professional learning communities, so the community starts by looking at student learning data together and identifying next steps for teaching practice before teachers observe each other to see how students are responding and provide feedback.

Peer observation must happen in an atmosphere of trust. To create that atmosphere, it is helpful for teams to set formal norms for conducting and discussing peer observations. These norms may be the same as those that a team has set for all of their collaborative work, but a team engaging in observations may choose to focus on certain norms. For example, teachers may agree to focus on 'grounding statements in evidence' by only making points that they can back up with data from the observation.

Teachers observing each other's practice should hold a pre-observation meeting to agree on a focus for the observation. For example, it might be 'students' ability to vary sentence structure in narrative writing', which was identified by discussing student work and assessments. During the pre-observation meeting, participants should also confirm the date, time, and where to sit in the classroom, and discuss any relevant background and context for the lesson. Agreeing on structures, protocols, and norms for observations helps to build the trust needed for peer observations (Boudett, City & Murnane 2013).

3.1.3.3   Self-paced and flexible learning

This type of professional learning for formative assessment is necessary to ensure accessibility of professional learning to educators who may be in unique school environments, which prevent engagement in other types of learning. Self-paced learning is also inherently customised – educators can choose what to focus on and what to skip past, ensuring they get what they need about the most relevant formative assessment information. This type of professional learning is most effective when paired with other types, but it can be made to be standalone as well.

The stakeholders in consultations recognised the benefits of online teaching modules but were cautious about ensuring teachers do not just 'sit and click without actually learning'. They suggested that online modules should be part of a professional learning package and should be designed to allow teachers to customise their learning, so they do not have to waste time on irrelevant content.

The consultations also gathered feedback on resources like video case studies and guides. Stakeholders suggested that videos are helpful so teachers can see what the practices look like. Many expressed that school leaders could use the videos or guides as a foundation for in-school professional learning sessions. Stakeholders also suggested that guidance for school leaders and leading teachers would be useful if they had clear strategies and resources attached.

3.1.3.4   Whole school approaches

> **Research question:** How important are whole-school approaches to professional learning for formative assessment?

All of the above modes of professional learning can generally occur in school or externally, but there is likely a benefit to focussing on whole-school approaches as the primary vehicle for formative professional learning. This is because whole-school approaches can ensure there is alignment of vision from the school plans down to each classroom. The initiative's professional learning should therefore prioritise supporting whole-school approaches.

School cultures are also important factors. If school leadership places too much pressure on teachers to use summative assessment, their formative assessment practice will suffer. Furthermore, a school's level of commitment and approach to introducing formative assessment can influence how much progress is made. In the United Kingdom, teachers were more effective in schools where senior staff with high expectations developed a vision for formative assessment and incorporated it into their school strategy (Ofsted 2008). In Norway, teachers were more likely to adopt deeper practices if they learnt about the theory and pedagogy of formative assessment, rather than just particular formative assessment techniques (Hopfenbeck & Stobart 2015).

A school's approach to curriculum can help or hinder formative assessment implementation. When teachers feel pressure to cover all aspects of a curriculum, or to move quickly through it, they are less likely to want to spend time on formative assessment (Box, Skoog & Dabbs 2015). Pressures to cover all aspects of the curriculum can come from governments, schools or teachers themselves. A lack of curriculum and curriculum materials can also hinder teachers' ability to improve their formative assessment practice, usually because they are worried about what to teach rather than thinking about how best to teach it in response to evidence of student learning (Hirsch 2016). But school leaders have a role in ensuring that teachers have access to effective instructional materials aligned to the curriculum.

There will be situations where teachers are in schools with transitioning school leaders, or other situations where a school leader is not supportive of the development of new formative assessment practices. In these cases, the initiative should have options for individual teachers or teacher teams to access professional learning, even when a whole-school approach is not possible. But a lack of a whole-school approach will hinder teachers in their effort to improve, because they will not have the full support needed day to day. Therefore, a primary focus on whole-school models of professional learning is the best option for ensuring impact for the initiative.

3.1.4   Customisation

> **Research question:** How can the professional learning be tailored for educators in schools from a variety of geographical and cultural contexts, and communities in Australia?

The initiative is national, so the professional learning should be accessible to teachers and school leaders in a large variety of contexts and roles. There are a few different categories of customisation that should be incorporated into the professional learning design specifications.

3.1.4.1   Educator career pathway and roles

Research question: How can the professional learning be tailored for varying roles, responsibilities and career stages in schools (including relevant capacity building for teachers, lead teachers and school leaders)?

Educators have different career pathways, which they will progress through as their expertise increases as outlined by the *Australian Professional Standards for Teachers* (AITSL 2011), and as shown in Figure 5. It is useful to target professional learning for the different stages of teaching, as well as for school principals and even other system roles such as regional managers.

Figure 5: Teacher career stages in the Australian Professional Standards for Teachers

Source: https://www.aitsl.edu.au/teach/standards

Below are the different stages and roles and how the initiative's professional learning might be tailored differently for each one. See Table 3.

Table 3: Educator roles and tailored professional learning

Role or stage	Professional learning consideration
Graduate teacher	Ideally, graduate teachers will participate in a formal induction program, which includes specific formative assessment training that will prepare them for in-school practice. These teachers have learned theory in initial teacher education, which would include some information about assessment and pedagogical content knowledge. However, their first few years of teaching will involve deepening that knowledge and learning how to continuously assess student learning to inform practice. Initial teacher education (ITE) providers could also be included as partners in the professional learning to support the development of formative assessment skills in prospective teachers before they enter schools full-time.
Proficient teacher	While graduate teachers need more support with *understanding* assessment strategies, proficient teachers need more support with *applying* the strategies. These teachers will have background knowledge on many aspects of formative assessment, but they will still be in the process of perfecting implementation in the classroom.[1] Teachers will therefore need support in diving deeper on specific formative assessment practices that are new or that they want to develop further. They might be more interested in customised professional learning options, and they will be particularly interested in formative assessment practices for their specific teaching areas.
Highly accomplished teacher	Highly accomplished and lead teachers might be the most important teachers to get on board with the purpose and rationale of the Learning Progressions and Online Formative Assessment National Initiative (the initiative) in the early stages. These will be senior teachers who have seen a lot of previous initiatives, so they will want to clearly see the value of this work. The initiative may use these teachers as potential case studies to highlight as part of the professional learning because it will help increase their buy-in and they can be great examples of practice for other teachers.

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[1] Based on the challenges reported by the Teacher Practice Reference Group members that they felt should be prioritised for the focus of professional learning

Role or stage	Professional learning consideration
Leading teacher	Leading teachers will be the potential expert leaders for the initiative. It will be important for the professional learning to not just train these teachers as experts, but to also offer them a community of practice so that they continue their own learning as they help other teachers.
School principal	School principals will need tailored professional learning content just for them to explain how the initiative fits into a school-wide approach. It may be that this professional learning content is a workshop or part of a cross-school network. Principals will also need self-directed resources available that are suited specifically to their role.
Principal manager or regional leader	This is an often-neglected role in initiative roll outs, but system leaders in the regions and principal managers are critical actors that need tailored professional learning. They need to understand and buy in to the initiative, but they may also be in a role where they act as a coach to school leaders, so can potentially be used as an expert coach to leaders.

3.1.4.2   Location

The professional learning needs to be accessible to teachers and school leaders in metro, regional and remote locations. In general, it is more difficult for regional and remote educators to access professional learning. However, this does not mean that any in-person professional learning is impossible. By using expert leaders in a train-the-trainer approach, the professional learning can occur in person at the school site. For example, New South Wales trains and continuously supports Literacy and Numeracy Strategic Advisors who are responsible for designing and delivering professional learning in line with their area of expertise. As the strategic advisors have direct contact with schools, they also play a role in identifying the challenges faced by schools and identifying those schools that need more support. The strategic advisors work with individual schools and networks of schools to provide targeted support and to build understanding of the effective use of the learning progressions.

The ideal model would allow for experts (these might be coaches developed by the initiative) to visit different key locations and possibly individual schools as well. This would ensure that the professional learning is not only available in metropolitan areas.

Additionally, a virtual community of practice along with online self-directed resources can help support those educators even in the most isolated regions (as long as internet access is available). A virtual community of practice could take different forms, but usually involves some type of discussion board with the ability to share and store key documents. For example, Catholic Education Melbourne uses a Google Group to share information and facilitate online collaboration to complement face-to-face professional learning programs (Learning First 2019).

3.1.4.3   School size

Small schools tend to have the most difficulty accessing and engaging in effective professional learning because of resource constraints. Small schools do not have a lot of resources (both financial and human capital) to free up teachers to either attend external workshops or engage in in-school professional learning. Small schools also do not have a leadership structure with experts in every subject area, and most school leaders have a teaching load. This means there is less capacity to plan professional learning, ensure it is being implemented well, and support other teachers' development. School size tends to be correlated with school location – metro areas have larger schools and remote areas have smaller schools, on average. This means that small schools are likely to have other location-based accessibility problems with professional learning as well.

Very large schools also have issues with effective professional development because it is difficult to achieve consistency of practice in a whole-school model. Many very large schools have multiple campuses, which means that

school leaders are not always available for quick access for support. However, large schools tend to have many more resources for hiring experts and releasing staff for professional learning.

The different needs of schools based on size means that professional learning needs to be accessible even when schools have few resources to release teachers. This means the professional learning should – as much as possible – be embedded into already existing collaborative structures instead of requiring additional release time. Online resources and virtual communities can also help because teachers can access this professional learning on demand and when they have time available.

Professional learning also needs to include content which caters to different school sizes. Large schools do not like hearing examples from small schools and vice versa, because they cannot immediately translate the learning to their context. It might, therefore, make sense to establish cross-school or virtual communities by school size, or have expert leaders available who have specialised knowledge and experience with multiple sizes of schools.

3.1.4.4   Socioeconomic status

Similar to small schools, schools with lower socioeconomic status may have fewer resources available to use for professional learning. Low school socioeconomic status is generally correlated with smaller schools and more isolated schools (though not always). This is because, in Australia, regional and rural areas have, on average, lower socioeconomic status than metro areas (ABS 2018). This means that there are multiple factors that might compound to make the accessibility and implementation of effective professional learning difficult. This lends support to the role that self-directed and virtual professional learning can play to ensure that there are options for schools to customise their professional learning engagement in terms of when and how they devote time and resources.

Schools in lower socioeconomic areas also generally have higher school leader turnover. This means that the initiative should not rely on school leaders alone to lead effective professional learning in the school. School leaders and teachers at all levels should be targeted in different ways to ensure that teachers in all schools can progress their learning even though the school leader is changing.

3.1.4.5   School type

In general, primary school teachers and secondary school teachers differ in their previous professional learning experiences. Primary school teachers are more likely to have co-taught, worked in a learning community, and observed other teachers (OECD 2014). This means that they may be more familiar with and have pre-established structures for collaboration, which will support the initiative.

It will also be important to consider unique school types like special schools and language schools. The professional learning should consider how these schools will differ in their professional learning experience, and this will largely depend on who the initiative's tools/progressions are primarily targeted at.

3.1.5   Scaling the Learning Progressions and Online Formative Assessment National Initiative

Research question: What features and delivery modes would support scaling up the initiative for national implementation?

There will likely be different professional learning needs for different phases of the initiative. In the early stages, the focus may be on trialling and testing prototypes, whereas in the mature stages the focus might be on scaling. Three phases (early, developing and mature) and their respective professional learning considerations are outlined in Table 4.

Table 4: Professional learning needs across the initiative's stages

Phase	Professional learning considerations	Content	Modes	Monitoring
Early Design, prototype, test	In the early phase of the Learning Progressions and Online Formative Assessment National initiative (the initiative), the design and testing of professional learning prototypes can begin. At this stage, it will not yet be clear which direction the initiative will take in regard to the type of new technologies that may be developed. Therefore, the professional learning trial will need to be tool-agnostic and should focus on more general and highly effective formative assessment practices.	Content that is more universal rather than domain- or tool-specific Focus on clarifying the definition and purpose of formative assessment	• Online modules • Tailored training for middle leaders who will become expert coaches • Guidance for school leaders	Emphasis on user testing with a focus on usability and acceptability testing
Developing Trial, iterate, refine	The developing phase should focus on trialling, iteration and refinement, which means going deeper on the key issues related to formative assessment teachers need support with. This will require more domain-specific professional learning that helps teachers thinking about next steps in teaching.	Content that is more domain specific Primary focus on developing and deploying domain experts in formative assessment to support teachers and schools across the system	• Online modules • Continuous networked support for expert leaders • Domain-specific online resources • Coaching for teachers and PLCs in schools • Virtual community of practice	Emphasis on monitoring impact through trials, observations of practice, discussions with educators, and collections of surveys
Mature Scale (up, out, deep)	In the mature stage, the final tool/resource from the initiative should be available, and there should be professional learning required to introduce educators to the tool. This will also be a time to consider what is needed to maintain momentum even as teachers and leaders change schools and roles over time.	Content that is tool-specific Linking new tool to established formative assessment practices Sustaining professional learning through change	• All of the above continues • Online and tech-embedded support for deep understanding of the new tool • Special professional learning guidance and webinars for new teachers, leaders changing schools, and other 'change' situations	Emphasis on evaluation of impact on teacher learning and student outcomes

The above phases will not necessarily occur linearly from a school's perspective, since there may be some schools coming on board as early adopters before other schools. However, the professional learning should initially be provided to meet the needs of the first cohorts of schools and, as new schools join, that existing professional learning infrastructure from the first cohort should exist to serve the next cohort of schools. Even though the initiative will have moved on from the initial stage, schools can still join at different points and begin with the introductory professional learning.

The below section explains how the professional learning should be targeted to schools at different maturity stages with formative assessment.

3.1.5.1   Stages of maturity for school practice

Each school will be starting from a different background with formative assessment. Some schools will have extensive experiences and others will be just starting out. It will be important for schools to self-evaluate where they are starting from in their formative assessment practices before they begin their professional learning journey with the initiative. Table 5 explains the different professional learning that might be available for schools, depending on their experience with formative assessment.

Table 5: Professional learning needs by school maturity stage

Stage	Professional learning content	Modes
1. Understand current state and needs	• Understanding the rationale for formative assessment • Getting buy-in from all staff • Clarifying connections to existing initiatives/policies • Clear definitions and consistent messages • Gaining familiarity with the assessment tools/practice • Clear first steps for leaders (school leaders and middle leaders) • Finding formative assessment 'experts' – might be in-school or cross-school coaches	• Introductory webinars • Self-directed video content with explanations • In-person workshops for in-school or cross-school initiative leaders (e.g. coaches) to develop expertise
2. Select resources to support	• Troubleshooting problems that come up • Understanding nuances of domain-specific formative assessment • Ability to see how formative assessment is starting to support student learning (increases buy-in) • Experts (in school or external) giving feedback to educators to ensure fidelity and consistency of practice	• Developing educator communities for supporting implementation • Expert coaching in schools • Targeted workshops on specific topics • Video case studies of effective practice • Development of short, targeted resources (e.g. explainers) that are available online
3. Implement with fidelity	• Consistency of practice across classrooms and schools (e.g. 'moderation' of implementation) • Developing greater domain-specific expertise (i.e. pedagogical content knowledge) • Ensuring differentiated content for many different roles • Consistency of key messages sustained	• Expanding educator communities with consistent frameworks for operating • Expanding coaching to all teachers • Cross-school collaboration
4. Sustain and monitor effective practice	Target 'changes' in the system that jeopardise sustained practice; for example: • Target content to new teachers, teachers changing roles, new leaders, etc. • Revisit messaging around alignment to other initiatives (assuming these other policies are constantly changing) • Refresh rationale for initiative and highlight progress so far • Use monitoring/evaluation information to refresh and improve work	• Embed initiative in new teacher induction • Leaders participate in short workshops about initiative and progress

3.1.6   Risk analysis

There are five main risks with the professional learning overall. These are:
1.   Planning the roll out of professional learning is delayed and/or rushed.
2.   Professional learning does not align to existing policies and frameworks in schools.
3.   States and sectors do not participate as partners in professional learning.
4.   Professional learning is not accessed or utilised by schools.
5.   Professional learning does not lead to improved practice (and therefore student learning).

Each of the above is assessed in Figure 6 below.
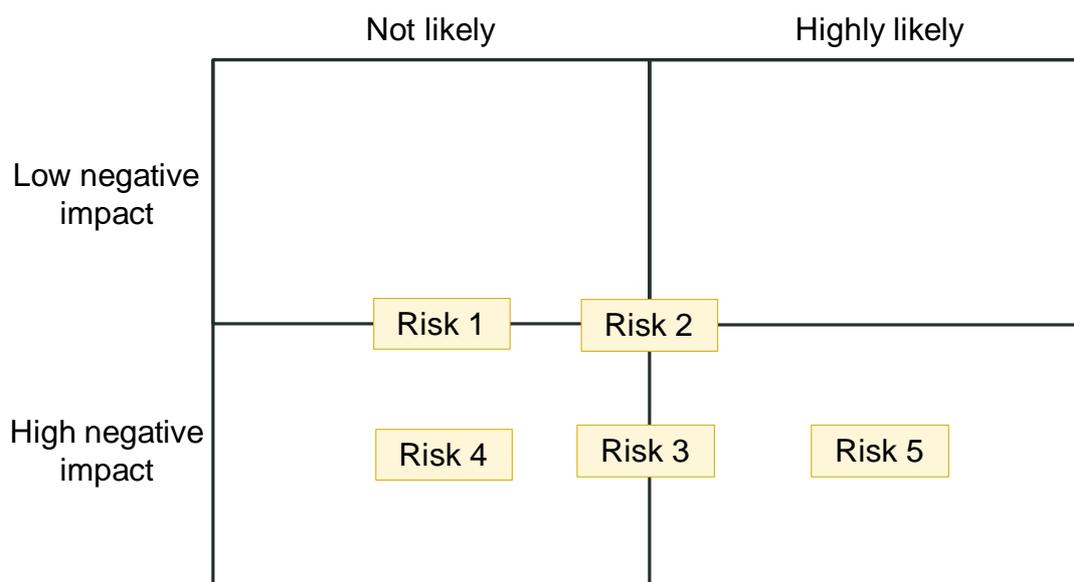
Figure 6: Risk analysis

Risk 1: Planning the roll out of professional learning is delayed and/or rushed

The environmental scan identified cases of formative assessment professional learning that were delayed because of funding or political constraints. This meant that professional learning was not available when needed, and teachers and school leaders became frustrated.

For example, in New South Wales, the NLNLP were not available until the start of the school year and this meant both schools and sector leaders were learning them at the same time. This meant that there were inconsistent messages, which led to misconceptions and misinterpretations within the education community, and some schools felt overwhelmed or disengaged in the initiative (Learning First 2019). However, New South Wales revised communication within the professional learning to provide consistent and ongoing communication and explain the implications of a new initiative for teacher practice.

This is a potential risk of the initiative. However, it is low risk, as long as project planning for the professional learning aligns to the planned roll out of the future tool/practice.

Risk 2: Schools are unable to take up professional learning due to poor alignment with existing frameworks and processes

There are national, state, and sector policies and frameworks that link to formative assessment and professional learning in schools. It is important for the initiative's professional learning to communicate how it is aligned to or

building on these existing frameworks as much as possible to reduce the risk that schools see the initiative as an add-on or something that is just extra work.

Risk 3: States and sectors do not participate as partners in professional learning

Since states and sectors have pre-existing professional learning infrastructure, it will be valuable to have them as partners in the initiative's professional learning. However, there is a risk that certain states may not be interested in being involved. This may make the initiative's professional learning more difficult for participating schools in those states.

Risk 4: Professional learning is not accessed or utilised by schools

The professional learning has to be designed to fit in with school needs or it will not be accessed. In addition, the professional learning has to be clearly high quality and connected to educator practice so that school leaders and teachers can see the relevance to their daily work.

Risk 5: Professional learning does not lead to improved practice (and therefore student learning)

This is the most likely risk because professional learning historically has not been able to demonstrate impact, which could be partially because some models have been ineffective or there has not been strong measurement of effective professional learning. However, the initiative's professional learning should be built on the research-based principles of effective professional learning, which will increase its likelihood of success.

3.1.6.1   Mitigation strategies

Table 6 outlines the mitigation strategies that can be deployed for the above risks.

Table 6: Risk mitigation strategies

Risk	Mitigation strategy
Risk 1: Planning the roll out of professional learning is delayed and/or rushed	**Project planning**: The approach of the Learning Progressions and Online Formative Assessment National Initiative (The initiative) to robust project planning should ensure that the professional learning is well planned and stays on track.
Risk 2: Schools are unable to take up professional learning due to poor alignment with existing frameworks and processes	**Communications plan embedded in the professional learning strategy:** The professional learning should not only support formative assessment practice development, but it should also seek to align, where possible, to existing state or sector initiatives as well as national frameworks. It will be important to communicate this well to all educators as well as policymakers to ensure the initiative is not seen as an 'add on' but a complementary approach.
Risk 3: States and sectors do not participate as partners in professional learning	**Deep involvement from states and sectors in the planning stages:** Stakeholders from all states and sectors are already being consulted as part of the discovery phase of the initiative and it will be important to maintain close relationships as the initiative progresses.

Risk	Mitigation strategy
Risk 4: Professional learning is not accessed or utilised by schools	**High-quality flexible and self-directed professional learning opportunities:** Not all teachers will be able to leave school to attend external professional learning, so it is important to have professional learning opportunities which can be accessed flexibility. This will also allow for more customisation, which means teachers will see more value in the professional learning available. The professional learning can align to the Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership 2011) and the Australian Professional Standards for Principals (Australian Institute for Teaching and School 2015) to support current practice and development goals.
Risk 5: Professional learning does not lead to improved practice (and therefore student learning)	**High-impact modes of professional learning and continuous monitoring:** The professional learning developed by the Learning Progressions and Online Formative Assessment National Initiative should be designed to be high-impact, meaning that it should utilise the research base on best-practice professional learning. There should also be continuous monitoring of the impact of the professional learning so that adjustments to what is offered can be made when needed.

3.2   Recommendations

There are many existing formative assessment professional learning initiatives in Australia that have research-based design and positive feedback from participants. The initiative's professional learning can build on the effective practice that already exists while enhancing what is offered to improve the impact on learning.

There are two gaps in the current professional learning that the initiative can fill: there is not yet a coherent approach to formative assessment professional learning that brings different content and modes together; there is little evidence of impact from monitoring and evaluating formative assessment professional learning. The initiative's professional learning might therefore mirror the other streams of work in the initiative, addressing the challenge of bringing clarity and coherence to a national landscape of varied models, practices and assessments.

For formative assessment professional learning to be most effective, it is important to show teachers and school leaders how their learning can progress along a continuum (not dissimilar to a learning progression), and what development activities and support they can engage in and utilise at different stages. The initiative's professional learning can bring together the necessary content and research-based delivery modes to create a clear and aligned system of professional learning across the country to impact learning outcomes.

The recommended professional learning:
- prioritises whole-school models (but provides options for when a whole-school model is not possible)
- is centred around collaboration (within school and cross-school) and the collaboration is structured with an improvement or inquiry cycle that starts and ends with assessment of student learning
- designs specific workshops/courses/online learning that complement the ongoing collaborative work and are expert-led to ensure connection to best practice and research
- develops experts across states and sectors to lead professional learning and ensure connection to the research base
- is flexible, adaptable, and allows for customisation based on school context and prior knowledge
- ensures continuous monitoring, improvement and evaluation to ensure impact.

3.1.6.2 Recommendations for the scope of content for professional learning

Tables 7 and 8 indicate the scope for the professional learning against the Australian Professional Standards for Teachers and the Australian Professional Standard for Principals.

Table 7: Commonly reported teaching challenges related to the Learning Progressions and Online Formative Assessment National Initiative, and a summary of their connection to the Australian Professional Standards for Teachers

	Graduate	Proficient	Highly accomplished	Lead
Differentiate teaching to meet the specific learning needs of students across the full range of abilities	Understand differentiated teaching strategies	Develop activities using differentiated teaching strategies	Evaluate differentiated programs using student assessment data	Lead colleagues to evaluate effectiveness of differentiated programs
Content and teaching strategies of the teaching area	Know and understand concepts, substance and teaching strategies	Apply knowledge of strategies to develop teaching activities	Support colleagues to implement learning and teaching programs	Evaluate and improve knowledge of strategies and demonstrate exemplary teaching that uses effective programs
Evaluate and improve teaching programs	Know the strategies that can be used to evaluate teaching programs to improve student learning	Evaluate programs using evidence, including student assessment data	Work with colleagues to review programs using student assessment data and knowledge of curriculum	Conduct reviews of teaching programs using multiple sources of evidence including student assessment data, curriculum, teaching practices and feedback
Assess student learning	Understand assessment strategies, including informal and formal, diagnostic, formative and summative approaches	Develop, select and use assessment strategies	Apply strategies to diagnose learning needs, comply with curriculum and support colleagues to evaluate effectiveness	Evaluate school assessment policies and strategies to support colleagues
Provide feedback to students on their learning	Understand the purpose of timely feedback	Provide feedback relative to learning goals	Provide feedback based on informed and timely judgements of each student's current needs	Model exemplary practice and initiate programs to support colleagues
Make consistent and comparable judgements	Understand assessment moderation and its application	Participate in assessment moderation activities	Organise assessment moderation activities that support consistent and comparable judgements of student learning	Lead and evaluate moderation activities to meet curriculum and school or system requirement

	Graduate	Proficient	Highly accomplished	Lead
Interpret student data	Interpret student assessment data, evaluate learning and modify teaching practice	Analyse student assessment data, evaluate understanding of content, identify interventions and modify teaching practice	Work with colleagues to use data from multiple assessments to evaluate learning and teaching, identify interventions and modify teaching practice	Coordinate student performance and program evaluation using internal and external student assessment data to improve teaching practice
Engage with colleagues and improve practice	Apply constructive feedback to improve teaching practices	Contribute to discussions and apply constructive feedback	Initiate and engage in professional discussions to evaluate and improve practice, and educational outcomes	Implement professional dialogue within and beyond the school informed by feedback, analysis of research and current practice
Apply professional learning and improve student learning	Understand rationale for continued professional learning and implications for student learning	Undertake programs designed to address identified student learning needs	Evaluate effectiveness of professional learning to address student learning needs	Lead strategies to support high-quality professional learning that focusses on improved student learning

Table 8: Commonly reported school leadership challenges, and summary of their connection to Australian Professional Standard for Principals

	Professional Practice	School leaders	Principals and network leaders
Ensuring consistent and effective curriculum and pedagogical approaches.	Leading teaching and learning	• Develop a robust approach to reviewing the curriculum and pedagogy to ensure a consistently high-quality environment for learning.	• Model collaborative leadership and engage with other schools and organisations to share and improve practice and encourage innovation in the education system.
Maintaining a feedback culture based on evidence of learning impact	Leading teaching and learning	• Ensure reflective practices, structured feedback, peer review and use of the Australian Professional Standards for Teachers lead to personal improvement of both students and staff. • They systematically monitor and report on student progress and have interventions in place to reduce gaps in attainment.	• Establish systematic methods for collecting and interpreting evidence to identify excellent teaching and learning and share successful strategies with the school community.

	Professional Practice	School leaders	Principals and network leaders
Implementing effective performance and development processes	Developing self and others	• Consistently apply effective performance and development processes so that success is celebrated, underperformance addressed, and complacency challenged. • Provide staff regular and effective feedback on performance, determining together how they can improve and remove any obstacles to learning. • Build and sustain a coaching and mentoring culture at all levels in the school and have a system of peer review and feedback in place.	• Mentor other principals to support their growth and development and help them to address issues.
Identification of professional learning needs that will address student learning needs	Developing self and others	• Evaluate whether professional learning undertaken by self and staff has had the desired impact on students and has been shared with others. • Work with staff to identify and prioritise their professional learning needs based on any gaps between the requirements of their roles and their current knowledge, understanding and skills.	• Seek opportunities for professional growth through engaging in state, national and global educational developments.
Effective change management and supporting innovative practice	Leading improvement, innovation and change	• Engage and inspire staff to commit to evidence-based improvement, change and innovation that has a positive impact on student learning. • Build a culture of trust and collaboration where change and innovation based on research and evidence can flourish.	• They lead educational networks by trialling and exploring new ideas for the system, acting as a guide, coach and mentor to staff and colleagues.
Meeting compliance requirements	Leading the management of the school	• Analyse what data is important and plan how it should be used in the support of student learning outcomes. • They make best use of technology to record, analyse and share information, to monitor progress against goals, and support new ways of working.	• Review the effectiveness of processes and use of data to improve school performance. • Embed a culture of review, responsibility and shared accountability to achieve high standards for all.

	Professional Practice	School leaders	Principals and network leaders
Identifying culturally appropriate resources and teaching strategies	Engaging and working with the community	• Promote parental engagement as a key aspect of raising the achievement of all students. • Draw on expertise from other organisations to enhance and enrich the learning experience for students and their families. • Create specific strategies for hard-to-reach parents. • Explore the use of technology to deepen the engagement of parents in student learning. • Establish innovative processes to gather regular feedback from families and the local community that is systematically used to review school practices and inform decision-making.	• Link with and provide support to other schools in effective community and family engagement. • Collaborate effectively with other schools and agencies to promote an excellent education system in which all young people can thrive.

3.1.6.3   Recommendations for the modes of delivery

The research and consultation from the discovery phase show that the professional learning for the initiative must be multi-modal, flexible, adaptable and evidence-based to be effective at supporting educator formative assessment practices at scale across the country. Although there is no one best mode, an approach to professional learning would design multiple different learning structures, which align as part of a cohesive approach. The professional learning would have the goal of system-wide consistency but local adaptation and implementation, so state and sector delivery partners would be critical.

3.1.6.4   Iterating the professional learning

The initiative should have a cohesive model of professional learning when the initiative is in the mature stage. However, in the early stage, it is not possible to know exactly what assessment tools might be launched at this later phase. The professional learning has to be initially trialled as the initiative is also trialling new tools and formative assessment approaches. This means that the professional learning design may change as the initiative changes throughout the early, developing and mature stages. Figure 7 shows the recommended priorities of the professional learning including the primary content, structure and supports that are needed for each stage.

The early stage should focus on developing a shared vision of formative assessment and the use of learning progressions, and should begin to develop expert leaders in formative assessment who can set a vision for school practice and/or be deployed as coaches for teachers in the medium to long term.

The developing stage should go deeper into professional learning and the use of learning progressions for formative assessment for specific curriculum areas, ensuring targeted professional learning for different subject areas and year levels. The expert leaders should develop into networks and formalise their work in supporting teachers and schools.

The mature stage should focus on the specific tool/resource that comes out of the initiative, ensuring educators have a deep understanding of how to use the tool and connect it with domain-specific professional learning that had begun to be established in the developing stage. The mature stage should scale the existing professional learning infrastructure and add other design features to ensure sustainability of learning as teachers and school leaders transition into new schools and roles over time.

		Early	Developing	Mature
		Design, prototype, test	Trial, iterate, refine	Scale (up, out, deep)
Teacher content	Universal content	▓	▓	▓
	Subject-specific content		▓	▓
	Tool-specific content			▓
School leader content	Understanding formative assessment	▓	▓	▓
	Goal setting and monitoring	▓	▓	▓
	Supporting professional learning		▓	▓
Modes	Online modules/resources	▓	▓	▓
	Developing expert leaders	▓	▓	▓
	Deploying expert leaders as coaches or hub leaders		▓	▓
	Teacher professional learning communities		▓	▓
	Virtual community of practice		▓	▓
Supports	Integration with school improvement plans	▓	▓	▓
	Alignment to existing professional learning initiatives	▓	▓	▓
	Time available		▓	▓
	Instructional resources available			▓
	Alignment to performance and development structures			▓

Figure 7: Professional learning content, modes, and supports in the different Learning Progressions and Online Formative Assessment National Initiative stages

4   Trial design for the Learning Progressions and Online Formative Assessment National Initiative

This section of the report describes the design specifications of a future trial of professional learning in Australian schools for the initiative. The trial design considers and accounts for relevant needs and priorities for different jurisdictions and will be appropriate to the recommended professional learning specifications.

This section outlines:
- the potential features of a trial of professional learning
- the nature of required implementation supports for schools
- how the trial can be contextualised for different jurisdictions and sectors.

4.1   Potential features of a trial of professional learning

The potential features of a trial of professional learning for the initiative have been identified through the environmental scan and design specifications for professional learning informed by the research base, formative assessment literature review and consultations with various stakeholder groups during the discovery phase of the initiative. In the early phase of the initiative there should be design and testing of different professional learning prototypes and, subsequently in the developing phase, trials should occur (see Table 4 for more information on the different phases).

The professional learning trial should ultimately pilot professional learning options based on the evidence on effective formative assessment professional learning as outlined in the design specifications. It is recommended that the professional learning options shown in Table 9 be prototyped and tested with users during the early phase, and then refined for trial during the developing phase.

Table 9: Professional learning options recommended for trial

Professional learning option	Description	Rationale
1. Readiness self-assessment rubrics for schools	Allows schools to customise professional learning journey by building on the work they have already done on formative assessment and professional learning.	The recommended professional learning specifications would centre formative assessment professional learning around collaborative structures in schools where teachers use an inquiry cycle to identify specific learning needs.
		Schools will be at different stages of the maturity of these types of collaborative structures, and therefore will have different starting points for the professional learning for the Learning Progressions and Online Formative Assessment National Initiative (the initiative). Schools may also have different levels of expertise on formative assessment already onsite, so this will also influence their first steps.
		A readiness self-assessment should help schools know what their first steps are and should also allow for more customisation of the professional learning
2. Universally accessible, online professional learning modules for teachers	Modules which can be accessed at any time and are self-paced.	The professional learning design specifications outline the need for flexible learning options that provide teachers access to expertise and the research base on formative assessment. There are many different school settings with various resource constraints, so providing flexible access to self-paced learning is important.

Professional learning option	Description	Rationale
3. Guides for school leaders and leading teachers	This should support the development of expert leaders on formative assessment and give advice for school-wide professional learning models.	The design specifications show that developing expert leaders of formative assessment professional learning is important in the early stages of the initiative so that these leaders can be deployed to support the scale up of the professional learning over time. School leaders also need to be supported in developing a school-wide model of professional learning.
4. Video case studies and practice translation guides	These should clarify what formative assessment looks like in practice and in real school settings.	Video examples and guides represent additional flexible learning options that can be part of the professional learning trial. These could show formative assessment in practice and leaders could use them to structure professional learning workshops in schools. In schools without a school-wide professional learning model, individual teachers or teacher teams could still access these resources to help improve their learning and practice.
5. Networking hubs supporting instructional coaches to monitor practice and share evidence	This should be a form of train-the-trainer professional learning to use expert leaders to spread good practice	Collaboration supported by experts and research is at the heart of the recommended professional learning specifications. This trial scenario should allow for instructional coaches (which already exist in most states and sectors) to develop further expertise and have a platform to lead others in their professional learning.

Each of the professional learning options is described in more detail below.

4.1.1   Readiness self-assessment

Two readiness self-assessment rubrics should be available – one for school leaders and one for teachers – to support identification of current professional learning needs. The rubric for teachers should enable them to plot their level of knowledge and application of formative assessment practice, including the use of learning progressions and online assessment resources. The school leader rubric should focus on consistency and quality of formative assessment practice and current school culture and conditions that may be enablers or barriers, enabling them to plot their school's starting point and immediate next goals. The result of the readiness assessment should determine the initial steps for professional learning and school improvement that a teacher or school leader should take to implement, embed or maintain formative assessment practice, and longer terms goals to support ongoing monitoring and improvement.

4.1.1.1   Scope of content

Two prototypes should be developed:
1.   Assessment professional learning needs rubric for teachers and school leaders
2.   Assessment school improvement rubric

Rubrics should be developed with expert input, based on evidence from the research literature on the most impactful teaching and school leadership practices. The rubric should address practices in the areas of assessment, curriculum and differentiation, as well as the attitudinal, cultural and structural factors that can support such high-impact practices to be implemented with fidelity.

In addition to drawing on the best available evidence from the research literature, the developmental pathway underlying the rubric should be defined through a consideration of discovery phase findings on diversity of practice and stages of development for schools, school leaders and teachers.

The rubrics should be further informed by the Australian Professional Standards for Teachers, the Australian Professional Standard for Principals and the curriculum and assessment policies and processes in the jurisdictions where they will be tested.

4.1.1.2   Development of prototype

During the early phase, prototypes should be developed as offline working models with the intention to iterate them as interactive, online tools.

The option to connect to the existing AITSL School Leader and Teacher Self-Assessment Tools should be investigated, such as through rubrics being systematically recommended as part of self-assessment tool reports for those with related needs at each career stage.

In future phases of the initiative, the rubrics could be further developed to connect to and recommend specific professional learning products and approaches developed during the early phase. Recommendations during the early phase could connect to existing products, strategies and initiatives.

4.1.1.3   Implementation of user testing and trialling

The readiness self-assessment rubrics should be trialled in multiple contexts across Australia on a small scale. As such, support and feedback from multiple jurisdictions will be required to identify appropriate individuals for user testing and sites for trials, as well as to support implementation and feedback.

The most ideal trial sites for readiness rubrics should be schools in the process of revisiting their school improvement plan, either because it needs refreshing and renewing or because they are evaluating against current progress and considering the next goals to prioritise.

Once the schools in each jurisdiction to be involved are identified, both rubrics should be used by the school leadership team and, in turn, by the teachers from the same school. While user testing can feasibly take place at any time, trial and evaluation would ideally be timed to align with a time when school leaders and teachers are authentically considering their development goals.

4.1.2   Online teaching modules

Instructional online modules should be universally available for teachers and school leaders. Each module would be sharply focussed on specific elements of formative assessment practice or implementation, with teachers and school leaders selecting the module most relevant to their current role, development needs and school improvement goals.

4.1.2.1   Scope of content

The content for these modules would focus on:
- the purpose, benefits and processes for formative assessment
- differentiated modules of assessment skills and data analysis
- use of observations and data from learning progressions to inform next steps and monitoring of student learning progress
- identification, use and application of assessment and learning technology
- selection and development of teaching and learning resources
- identification and application of differentiated, evidence-informed teaching interventions
- instructional coaching and supporting collaboration.

4.1.2.2   Development of prototype

Online modules could begin with content that already exists in state and sector professional learning offerings. There may be existing formative assessment modules or other content that is offline that could be made into a module. The partnering jurisdictions would then be able to build on what already exists, but also revise and improve on content to ensure it is research based and user friendly.

Many jurisdictions have experience using online modules, so the technology used for the prototype could be the same or similar to what is already used with success. This would help schools to be able to access modules effectively since they may already be familiar with the technology.

4.1.2.3   Implementation of user testing and trialling

The modules could be trialled in multiple contexts across Australia on a small scale, likely the same jurisdictions as the readiness self-assessment. The assessment would support schools to decide which modules to access and when. It might be possible to test different types of content and technology in the user testing and prototyping (the early phase) to evaluate which is more effective for the trial (the developing phase).

4.1.3   Networking hubs

Working with jurisdictions and adopting a 'train the trainer' model, existing middle leaders (such as literacy and numeracy coaches and regional leaders) would take part in face-to-face learning and networking events on effective formative assessment practice, behaviour change theory, implementation science and principles of feedback practices. This would focus on developing a consistency of vision, purpose and language among the leaders and help to establish a network – both online and offline – for continuous improvement and sharing of evidenced-based interventions. These leaders would then be deployed through existing networks, such as hubs, to provide support and monitor implementation in a cluster of schools.

4.1.3.1   Scope of content

The networking hubs can focus initially on developing a shared definition of formative assessment practice, which could include the purpose of formative assessment and the learning progressions. The work could progress to being clear about effective formative assessment practice generally and then, specifically, for using common assessment tools like the learning progressions within different domains and subject areas.

4.1.3.2   Development of prototype

Experts that are developed to be leaders in this model would probably include existing literacy or numeracy coaches, meaning that there is an opportunity to have experts specialise early on in a specific domain area. The early stage might focus on literacy first, then numeracy (or vice versa) depending on the human resources that are already available.

4.1.3.3   Implementation of user testing and trialling

One of the biggest pieces of feedback from consultations about network hubs is to be careful that they are accessible to school leaders and teachers who have limited time to leave their own schools. The user testing therefore might involve one or two models of hubs to test what is most likely to work for different school types. Metropolitan schools might be the most available to participate, but it would be worth testing for different types of schools to gain insights into what works.

4.1.4 Video case studies and guides

Video case studies and relevant accompanying guides and resources should be made available. The videos should capture examples of effective formative assessment practice, including the use of learning progressions and online assessment resources in schools, and detail the process that was undertaken to embed the practice, highlighting the changes that the school made and the existing enabling factors. Guides would support schools to identify relevant learning that could inform practices and processes in other contexts.

4.1.4.1 Scope of content

In the early phase of the initiative, the focus for guides and resources can be on creating consistent definitions and a clear purpose statement for formative assessment and the learning progressions. Once there are participating schools on board for the testing and/or trial, video case studies will be possible, and these can show examples of different types of formative assessment practice to add more clarity to the question of what formative assessment looks like in practice.

4.1.4.2 Development of prototype

Content for guides might be taken from existing professional learning in states and sectors. This can be refined to create coherent and evidence-based guidance.

Schools can be identified by state/sectors for participation as potential video case studies. This would mean their involvement and participation in the initiative's professional learning would be as early adopters and some, ideally, would have exemplar formative assessment practice.

4.1.4.3 Implementation of user testing and trialling

For the guides and video resources, it will be important to understand how teachers and school leaders use them. They might be embedded in in-school professional learning, utilised by school leaders to support teacher development. The way schools decide to use these resources will have implications for how they should be framed and what they should look like.

4.1.5 Guidance for school leaders and leading teachers

Interactive online guides would be available to school leaders to support the implementation and embedding of formative assessment practice in their school.

4.1.5.1 Scope of content

There would be several guides available to build the capacity of leaders and provide practical advice and processes including:
- creating a joint vision for assessment practice for their school, including embedding formative assessment and the use of learning progressions
- establishing assessment, curriculum and pedagogical practices as part of their school improvement plan
- establishing the culture, structural conditions and processes for professional learning communities
- leading regular professional conversations targeted at resolving problems of practice and meeting learning needs revealed by patterns in assessment data
- interpreting aggregated student learning data to identify the professional learning needs of teachers and goals for school improvement
- establishing the conditions to enable and sustain effective ongoing, job-embedded professional learning
- applying instructional coaching and established distributed leadership roles at all levels in schools, focused on teaching

4.1.5.2   Development of prototype

There may be existing content on guidance for school leaders already in states and sectors. It might be possible to build on what already exists and ensure the new guidance is evidence based and user friendly.

4.1.5.3   Implementation of user testing and trialling

Specific school leaders can be selected by jurisdictions to test the guidance, and their feedback can help with understanding whether it is the right content and whether the format is useful for practice.

4.1.6   Trial monitoring and evaluation

The environmental scan and the consultations highlighted that monitoring and evaluation of professional learning is very important but rarely done well. It is possible that existing formative assessment professional learning in Australia is highly effective, but there is little data or evidence available to show whether this is true or not. Monitoring and evaluation was one of the biggest gaps identified in the environmental scan with current professional learning options.

It is important for the initiative's professional learning to have monitoring and evaluation embedded in plans from the beginning, starting with the trial. Different evaluation questions can be asked at different phases of the initiative, which are described below.

Evaluation questions and process

The evaluation questions are adapted from the research of Thomas R. Guskey (2002; 2001; 2016; 2014), an international expert in evaluation design, analysis, and educational reform.

Level 1: What were the participant reactions? – Early phase

- Can be a simple survey or verbal response immediately after a professional learning experience.
- Should include questions such as: Did they feel their time was well spent? Did the content and material make sense to them? Were the activities well-planned and meaningful?

Level 2: How great was the participant learning? – Early phase

- Measuring the new knowledge, skills, and perhaps attitudes or dispositions that participants gain
- This can involve anything from a pencil and paper assessment to a simulation or full-scale skill demonstration

Level 3: Was there organisational support for change? – Developing phase

- Goal is to analyse whether the impact (or lack thereof) reflects the quality of the professional learning versus organisational policies that are supporting (or hindering) implementation efforts
- Questions may include: Did the professional learning promote changes that were aligned with the school goals? Were changes at the individual level encouraged and supported at the school and region/sector levels? Were sufficient resources made available, including time for sharing and reflection?

Level 4: To what extent did participants use new knowledge and skills? – Mature phase

- Key analysis: Did the new knowledge and skills that participants learned make a difference in their professional practice?
- Enough time must pass to allow participants to adapt the new ideas and practices to their settings. Because implementation is often a gradual and uneven process, evaluators may need to gather measures of progress at several time intervals.

- Evidence may include questionnaires or structured interviews with participants and their school leaders, analysis of personal reflections, or examinations of participants' portfolios. The most accurate data typically comes from direct observations, either by trained observers or using digital recordings.

Level 5: Student learning outcomes

- Key analysis: What was the impact on students? Did the professional learning benefit them in any way?
- It is unlikely that any single indicator of success will prove adequate or sufficient, so evaluators should always include multiple sources of evidence.
- Probably best to include evidence from national assessments (e.g. NAPLAN) as well as classroom assessments, common formative assessments, and portfolios of student work.

4.2   The nature of required implementation supports for schools

Implementation supports are required to ensure the successful implementation of new practice stemming from the professional learning. The environmental scan shows that without ongoing implementation support, formative assessment professional learning will not be effective. Whether formative assessment practices become embedded in a school or not depends largely on how much the school prioritises it and provides the conditions to support its widespread use across the school. The nature of the required implementation supports is dependent on a variety of factors including school and system context and existing supports within a school or system (discussed in section 4.3); the specific formative assessment needs of schools, leaders and teachers; and the stage of implementation. This section outlines the nature of the required implementation supports that should scaffold the trial of professional learning.

4.2.1   Communication and engagement processes

The purpose of the initiative needs to be clearly communicated so that teachers and school leaders are more likely to invest resources in participating in the professional learning. The environmental scan shows that clear and consistent communication to all stakeholders is crucial for successful implementation. Consultations with the Teacher Practice Reference Group (TPRG) show that teachers juggle many competing priorities and that professional learning and adopting new initiatives can add to their workload.

To succeed, the trial of professional learning needs to be relevant to the day-to-day work of teachers and leaders and there needs to be consistent communication to stakeholders about how the professional learning scenarios will benefit their practice. If teachers and leaders can see how the professional learning will benefit their practice, they will be more likely to engage in it. This means connecting each of the professional learning scenarios with current teaching practices and school improvement processes.

Sector leaders reported that teachers prefer professional learning that is aligned to their everyday work, and this was reinforced during consultations with the TPRG. Adults need to understand the value of learning. It must meet their needs, be relevant and help them achieve their goals, which include impact on learning. Clearly communicating the purpose of the trial will ensure this connection is apparent to participants.

Further, it should be clearly communicated to schools how the professional learning will support the use of current formative assessment tools and practices, rather than replace them. The professional learning should be embedded in existing school practices such as professional learning communities and school improvement planning, where possible. Clear communication about the purpose of the trial and how it fits in with teaching and learning will allay concerns about the trial and its impact on the teacher workforce, teaching and learning, and school planning.

4.2.2   Implementation coaches

In-school implementation coaches or advisors are one way to support schools to implement the professional learning during the trial. Implementation coaches could be universally trained to ensure consistent messaging within and across schools, and provide one-on-one, tailored support to schools. In doing so, implementation coaches improve consistency of practice within and across schools, and act as a conduit between schools and the centre so that the successes and challenges of the trial can be readily fed back and an ongoing practice of sharing evidence of practice that works is established. The environmental scan and consultations showed that in-school support is crucial for the effective implementation and for schools to stay the course with formative assessment professional learning. For example, New South Wales and Catholic Education Melbourne both use a model of coaching with centrally supported coaches who have a caseload of schools they support (Learning First 2019).

The implementation coaches would play a similar role as existing support roles identified in the environmental scan, and they might be the same people. It would make sense for the initiative to develop existing literacy or numeracy coaches in these systems for specific formative assessment supports to schools. They would be responsible for a portfolio of schools and conduct check-ins with each school throughout the term to ensure implementation is on track and has provided targeted support where required. Implementation coaches would ensure consistent messaging and communication to schools involved in the trial.

This would ensure schools understand the purpose of the professional learning, how it can be used to improve formative assessment practices, and how it fits into the broader strategies and structures within each jurisdiction. In this way, implementation coaches would promote consistent practice within and across schools, enhancing the success of the trial. Implementation coaches can also provide technical expertise and training to ensure teachers and school leaders understand how to use existing formative assessment practices. The coaches' work should be integrated and aligned to each professional learning scenario in the trial. For example, coaches could help schools with the readiness self-assessment or support teachers to implement learning from online modules. Readily available and immediate feedback and support from coaches is also vital to sort out issues as they occur and to ensure technical issues do not disrupt the teaching and learning program.

4.2.3   Resourcing

For the trial to be successful, a significant investment of time and resources is required. As described above, teachers juggle many competing priorities, and engaging in new professional learning will add to their workload unless allocated time and adequate support resources are provided. At the school level, principals can provide timetabled professional learning time for teachers to undertake online teaching modules. This might mean the school timetable is adjusted to accommodate more teacher release time, or it might mean utilising existing meetings and professional learning time to engage in the trial.

At the system level, funding could be provided to schools to enable extra teacher release time and travel allowances for leaders to participate in network training days. The environmental scan showed that some schools are better set up for online learning than others and that funding is required to upgrade technology infrastructure to improve access to online professional learning.

4.3   Contextualising the trial for different jurisdictions and sectors

The trial of professional learning must be contextualised for different jurisdictions and sectors. It should be aligned to current initiatives and processes within each jurisdiction and take into consideration the needs of different schools, sectors and systems. This section of the report describes how this might be achieved.

4.3.1   Align with existing system initiatives and strategies

As identified in the environmental scan, there are various initiatives that support formative assessment practices around the country. All jurisdictions have agreed that this is a National Priority Initiative from the National School Reform Agreement. It is important that the trial builds on initiatives within each jurisdiction. By the time the initiative is the mature stage, it will be useful for the professional learning to be aligned to jurisdiction priorities. However, this alignment may occur both ways: it may be that the initiative's professional learning is customised for jurisdictions and that jurisdictions replace or change existing approaches to align to the initiative. This will help ensure schools view the initiative as an integral component of the work that is already happening in their jurisdiction, rather than as an add-on. Below is a list of some of the strategies that could support the trial of professional learning scenarios for the initiative:

- school planning processes such as the Improvement Cycle in South Australia
- system strategies such as the Literacy and Numeracy Strategy in New South Wales and The Future of Education Strategy in the Australian Capital Territory
- frameworks and guidelines such as the Framework for Improved Student Outcomes (FISO) in Victoria, the Literacy and Numeracy Framework in Tasmania, and the P–12 Curriculum, Assessment and Reporting Framework in Queensland
- professional learning structures such as the Professional Learning Communities (PLC) initiative in Victorian government schools.

The trial of professional learning scenarios can be incorporated into existing system structures and strategies such as those above. For example, online teaching modules and video case studies could be used to support collaborative inquiry cycles as part of the PLC initiative in Victoria. They could also be used to support teachers and school leaders as they work towards addressing the challenges of practice identified in their school improvement plan in South Australia. Interactive online guides can complement the advice provided to schools in existing assessment resources such as the P–12 Curriculum, Assessment and Reporting Framework in Queensland.

4.3.2   Align with current approaches to formative assessment professional learning

Formative assessment professional learning already exists in most jurisdictions. Professional learning is offered at the teacher, school, sector and system level. Engaging the support of curriculum authorities, education jurisdictions and professional learning institutes, such as the Professional Learning Institute in Tasmania and the Leadership Institute in Western Australia, will ensure the trial is aligned to existing formative assessment professional learning approaches within the jurisdiction. Each sector has a different approach to formative assessment professional learning and the trial of professional learning scenarios could be aligned accordingly. For example, online teaching modules could be included in existing professional learning programs on formative assessment, and video case studies and online guides could be incorporated into network and leadership professional learning days. In some cases, the professional learning scenarios should complement existing professional learning within a school or jurisdiction, in other cases they should supersede what currently exists. The trial needs to take into consideration existing approaches to professional learning and ensure that each scenario is tailored to fit what is currently available, As described above, the connections need to be clearly communicated to participating schools.

4.3.3   Connect to current formative assessment practices in schools

Schools across Australia use a variety of formative assessment practices. Many schools are currently using various online assessment tools to support student learning and inform teacher practice. Some of these assessment tools are used system- and nation-wide. Other tools, including commercially available ones, are used by schools at the discretion of school leaders. As shown in the environmental scan, existing online formative assessment tools include:

- Brightpath, a writing assessment tool that allows teachers to compare their students' work to calibrated exemplars
- ABLES, a curriculum assessment and reporting tool that allows teachers to assess students with disabilities
- eWrite, an online writing assessment for students in Years 4–10

- Progressive Achievement Tests (PAT), designed to provide information to teachers about their students' skills and understandings in a range of key areas such as reading and mathematics.

Schools that are using particular online formative assessment tools could be identified, and professional learning could be trialled with these schools to support the school's particular improvement goals. This would be particularly relevant for tools that are not accompanied by professional learning, or where the scope of the professional learning does not go beyond training to use the tools. These schools could undertake online teaching modules to improve the way they use online formative assessment tools, including making more informed judgements about student learning and understanding the steps they need to take in their teaching to improve student progress. Professional learning could support schools to understand how to interpret data from multiple sources. Schools are likely to be using multiple assessment approaches.

4.3.4   Utilise existing system support structures

The trial should utilise the existing support structures within each jurisdiction to ensure the professional learning is targeted to the school needs, and teachers have access to proper implementation supports. As identified in the environmental scan, each sector has existing roles and resources that support formative assessment practices within schools. Various roles within each sector support schools to implement initiatives and professional learning and these could be utilised to support schools to implement a trial of the professional learning. Existing support roles within jurisdictions can facilitate the formation of school leader networks or support the training of school leaders in existing school networks. (See Table 2 for information on the impact and cost trade-offs of the different professional learning options). Below are examples of some roles that can be utilised to support the trial of professional learning scenarios in the early phase of the initiative:

- **Australian Capital Territory:** School Improvement Instructional Mentors support school leadership teams to undertake school improvement in Australian Capital Territory government schools.
- **New South Wales:** Literacy and Numeracy Strategic Advisors support the implementation of the learning progressions in New South Wales government schools.
- **Northern Territory:** Inclusive Curriculum Managers work with schools to implement the ABLES online assessment tool.
- **Queensland:** Assistant Regional Directors in Queensland are the key connection between schools and the Queensland Department of Education and work closely with schools in their region. Early years coaches in each region in Queensland provide coaching support and facilitate professional learning in early years education.
- **South Australia:** Local Education Teams consist of an Education Director, Principal Consultant and Early Years Consultant, and support the work of partnerships of government schools around the state. Brightpath project officers support the implementation of the Brightpath Writing Improvement Program in government schools.
- **Tasmania:** Education consultants work with school leadership teams in independent schools around the state. Professional Learning Leaders from the Professional Learning Institute support government schools through inquiry cycles.
- **Victoria:** Senior Education Improvement Leaders and Education Improvement Leaders provide coaching and advisory support to government schools in each region of the state. Literacy and Numeracy Learning Consultants support literacy and numeracy work in Victorian Catholic schools.
- **Western Australia:** Principal Advisors support principals across regions, and link principal needs to professional development opportunities offered by the system.

4.3.5   Select the right trial sites

The needs of each school will vary depending on their context (size, type, socioeconomic status and geographic location) and current formative assessment practices. Schools will have different levels of expertise and experience in formative assessment practice. The trial can determine and select schools with the right contexts to test and then trial professional learning so trial learning objectives can be met. In some cases, schools have an embedded culture of formative assessment and professional learning to support this but, in others, schools are only just starting to use formative assessment to identify and target student learning needs. Schools that are starting out will need different support from those who have been prioritising formative assessment practices for a long time. The interactive online

guides should ensure school leaders have the tools to implement and embed formative assessment practices regardless of their starting point.

The trial should test what professional learning is needed and what will work so that learnings can be applied in later phases to cater for diverse needs. For the trial, this can be addressed through the smart selection of schools to answer the key research questions without too many conflicting variables.

School type, sector, location and size change the professional learning needs of schools. For example, it may not be possible for a geographically remote school to readily access coaching or attend metropolitan-based workshops on a regular basis. In those cases, online modules may be more applicable. However, consultations with stakeholders show that there are limitations to technology and online learning and, so, it is important for geographically isolated schools to have access to face-to-face coaching support too. Regional and remotely based coaches would provide in-school support that complements the online learning available. Teachers and school leaders also require different levels of support depending on their needs at a point in time and at the school they are currently working in. The trial can target particular roles.

Consultations with the TPRG show that many teachers find it challenging to use assessment data and create quality assessment. Additionally, the user research conducted by Education Services Australia identified a range of challenges that teachers face in terms of formative assessment practices:

- Teachers lack confidence in the way they understand and interpret the curriculum and make judgements about student learning and progressions.
- Teachers lack a consistent understanding of the curriculum and achievement standards.
- There is a need for improved support in literacy regarding the interpretation of curriculum and assessing student consistency. Numeracy is easier to interpret and has more resources and tools to assist with interpretation.
- An awareness of learning progressions is needed, and how they can be used to support student learning is low.
- Teachers' ability to report student learning progression to the student and parents is a challenge.
- Once student learning gaps have been identified, professional learning is needed to help identify the next steps in the students' learning.
- Both content and pedagogical knowledge are needed, particularly for new teachers.
- School leaders expressed difficulty in characterising the long-term value of change to teachers.
- Teachers' ability to differentiate and provide teaching that is relevant to all learners' needs are challenges.
- Teachers' ability to use learning progressions and data to understand the outcomes students need to achieve, where students are starting from and the need for differentiation are challenges.

This demonstrates the need for ongoing, in-school support provided to teachers to ensure they better understand how to design quality assessment tasks, analyse assessment data and make informed judgements. The level to which teachers experience these challenges is dependent on their individual circumstances. The readiness assessment would support teachers to decide on their professional learning needs and could be tied to existing professional development plans within jurisdictions. Video case studies and targeted online modules would demonstrate best practice and practical ways that teachers can use effective formative assessment practices in their school context. Online modules also allow school leaders and teachers to personalise their learning, completing it at times when they feel ready, and selecting modules that they deem more important to their own learning and development. Interactive online guides would support school leaders to implement and embed formative assessment practice in their school.

Coaches can also support the individual needs of teachers and school leaders and contextualise professional learning based on those needs. For example, coaches can support teachers to undertake the readiness assessment test and pinpoint their specific professional learning needs.

5   Appendix A: Findings from research review

Learning First reviewed existing research and documentation to ensure insights from work already completed were included in the analysis and recommendations in this report.

The review included the following:
- a draft literature review on effective formative assessment practice
- a draft environmental scan of professional learning and implementation support for effective formative assessment practices
- findings from user-centred design research on the professional learning needs of a representative group of teachers and school leaders from a diverse range of schools across Australia
- interim report on market research to inform communications for the initiative
- Australian Charter for the Professional Learning of Teachers and School Leaders
- Australian Professional Standards for Teachers
- Australian Professional Standard for Principals

5.1   Literature review: Formative assessment evidence and practice

The literature review of formative assessment evidence (Lane et al. 2019) specified ten key elements of formative assessment:
1. Focuses on goals that represent valuable educational outcomes with applicability beyond the learning context
2. Communicates clear, specific learning goals
3. Provides examples of learning goals including, when relevant, the specific grading criteria or rubrics that will be used to evaluate the students' work
4. Identifies students' current knowledge/skills and necessary prerequisites for the desired goals
5. Requires development of plans for attaining the desired goals
6. Includes frequent assessment, including student self-assessment, peer assessment, and assessment embedded within learning activities
7. Includes feedback that is non-evaluative, specific, timely, related to the learning goals, and provides recommendations for how to improve
8. Encourages students to self-monitor progress toward the learning goals
9. Promotes metacognition and reflection by students on their work
10. Encourages students to take responsibility for their own learning

The review also synthesised key findings for five different curriculum areas, which are reported in Table 10.

Table 10: Literature review by curriculum area: Key insights for professional learning

Curriculum area	Evidence quality	Key insights for professional learning
Mathematics	20 studies included; results of impact were mixed	Teacher professional learning appears to be crucial to foster teachers' pedagogical content knowledge and hence their use of impactful formative assessment practices. Even with sustained teacher professional learning, there is not necessarily any increase in general teaching quality.
Reading	5 studies included; disappointing results for reading achievement	High levels of intensive and sustained professional development for teachers addressing all aspects of formative assessment (from selecting assessment tools to translating results and evidence-based differentiated instruction), are required before formative assessment practices in reading instruction show robust positive effects on student performance. A related issue is teacher workload: the more time required to administer, score and interpret assessments, the less time left for modifying instruction.
Writing	5 studies included; strong impact on student writing quality found	Evidence specifically points to cognitive strategies and self-regulation around writing choices supported by assessment tools.
Science	10 studies included; most effective with regular, targeted and embedded feedback linked to learning progressions	Teachers need to understand how to elicit student pre-conceptions in formative assessment. Teachers may also need to understand how to use scripts and rubrics with students, and to provide both teacher-to-student and student-to-student feedback.
The Arts	2 studies included; mixed results	Teachers need the skills to provide accurate, valuable and timely feedback. This includes criteria-based rubrics. Teachers need well-developed pedagogical content knowledge to analyse assessment data, deliver appropriate feedback and implement evidence-based interventions. Teachers need ongoing professional development to learn how best to target the students' individual needs and subsequently improve student outcomes in Arts learning.

5.1.1.1   *The optimal conditions for the effective implementation of formative assessment practices*

The review concluded with the optimal conditions for the effective implementation of formative assessment practices. Both professional learning implications and system supports/structures are key to ensuring effectiveness.

Teacher knowledge and skills needed

- deep, flexible pedagogical content knowledge so teachers can break down critical concepts, find appropriate entry points for all students, and redesign instruction to match students' understandings and misconceptions as evidenced in formative assessment
- both assessment knowledge and data literacy. Teachers require an understanding of assessment theory, research, and how to translate these into concrete classroom practices

- requisite knowledge and skills to use formative assessment hardware and software. This includes how to administer assessments, interpret results and translate information obtained into effective teaching instructions

Professional learning implications

- Professional learning should be grounded in specific subject matter and increase teacher pedagogical content knowledge.
- Brief interventions, such as short-term, product-oriented workshops, are less likely to effectively change practice.
- Long-term, process-oriented professional development with ample opportunities for collaboration, feedback and discussion appears to be more effective for successfully changing teachers' classroom assessment practices.
- Professional learning should target school leaders as well as to teachers.
- Professional learning that is sustained, collaborative, work-embedded and situated within school needs is preferred over one-day workshops or formally presented interventions.
- Professional development is most effective when teachers engage actively in instructional inquiry in the context of collaborative professional communities that are focused on instructional improvement and student achievement.
- Continuous support is necessary for the sustained application of evidence-based practice. Teachers need follow-up and support for new ideas and strategies to be effectively implemented.
- Collaboration across schools or networks is important for success.

System supports/structures necessary

- School leaders who understand formative assessment, create a school-wide vision, set expectations, and foster a supportive environment
- Regular and protected teacher meeting time for meaningful examination of assessment practices
- School culture that encourages honest reflection and allows mistakes to be made
- Decentralised organisational structures and distributed leadership in schools
- Increased focus on assessment literacy in initial teacher education and in-service teacher professional development at a tertiary education level

5.2   Environmental scan

An environmental scan of professional learning practices for formative assessment was conducted in the same timeframe as this report (Learning First 2019). While the environmental scan is to be found in a separate report, it has significantly influenced the findings and recommendations of this one.

The key findings from the environmental scan are described below.

Effective professional learning approaches to support formative assessment practices

The environmental scan shows that jurisdictions are using are a variety of effective professional learning approaches to support formative assessment practices in schools. The professional learning approaches include collaborative, online and blended, job-embedded and differentiated. Most jurisdictions say they have moved away from the one-off professional learning traditionally used in the past.

- Collaborative professional learning facilitates shared learning to improve formative assessment practices within and across schools.
- Online and blended learning improves access to formative assessment professional learning and meets the specific formative assessment needs of teachers.
- Job-embedded professional learning connects formative assessment practices to the everyday work of teachers and leaders.

- Differentiated professional learning addresses the different formative assessment needs of schools, teachers and leaders.
- Expert-led professional learning strengthens understanding and use of formative assessment practices.

Common challenges to formative assessment professional learning

Unsurprisingly, there are many challenges to formative assessment professional learning and work in schools. The environmental scan shows that jurisdictions are grappling with similar challenges to improve formative assessment practices in schools. Common challenges include understanding how to meet the diverse needs of teachers and schools to improve formative assessment practices, understanding how to address gaps in assessment skills and pedagogical content knowledge, ensuring schools are supported to stay the course to support changes in teacher practice and evaluating the impact of professional learning on teacher practice and student learning.

5.3   User-centred design research

A 2019 user research report investigated teacher and school leader experience with learning progressions and formative assessment (YouthInsight 2019). A multi-modal research design was used to facilitate access to the target audience for this project, enabling a range of schools, school leaders, teachers, students and parents to participate in this research. Key findings from this research include:

About the learning progressions

- Teachers and school leaders had significant and increasing awareness of the National Literacy and Numeracy Learning Progressions (NLNLP).
- For those that have knowledge and engagement with the NLNP, it was viewed as a tool that will help develop a common language and create high expectations among teachers, students and parents around student learning and progress. It was also seen as helping diagnose where students are at and where they should get to next.
- The slow adoption of NLNP in schools was found to be due to some common barriers. Teachers and some school leaders find them unwieldy, overwhelming, and time-consuming to familiarise themselves with and to understand.
- School leaders are worried that it will add to the teachers' burden, especially if it is not supported by strong professional learning that will allow them to effectively apply it in their classroom.
- Some teachers saw little benefit in using the progressions and didn't want to change their way of teaching or believed that they were not relevant to their school or state.

About formative assessment

- School leaders and teachers (either individually or as a team) progress through four phases when focussing on an upcoming topic or unit of work: identifying goals, planning, teaching and learning, and measuring.
- Teachers and school leaders utilised various data sources to support student learning and measuring progress.
- There was extensive and frequent use of technology, online resources and tools used by teachers and school leaders.
- There is still a huge burden on teachers' time to find, evaluate and align resources to the curriculum they teach. In addition, inconsistencies in the understanding, interpretation and implementation of the curriculum aggravated this pain due to the guesswork involved, which resulted in teachers being less confident in teaching and assessing students.
- Teachers value the information and data from their classrooms, but there are data collection challenges and an overall lack of data management and protocols in schools.
- Overall, managing the different capabilities among students was reported as a significant challenge for teachers' planning, teaching, assessing and reporting.
- Students reported a lack of awareness about where they are in their learning, what their learning gaps are and what do they need to focus on next.

5.4   Market research to inform communications for the Learning Progressions and Online Formative Assessment National Initiative

A 2019 market research report was conducted to inform communications for the initiative (Orima Research 2019). The primary objective of the research was to inform a high-level communications strategy to support the successful development and introduction of the initiative. The methodology included five focus groups, one mini focus group, and one in-depth interview with teachers, school leaders, parents, and AITSL representatives.

The main findings were:
- There was a wide variation in current methods of assessing student progress and in approaches to teaching to meet individual student learning needs across schools, systems, subjects and states.
- Many educators were aware of current literacy and numeracy progressions, with more awareness among primary and mathematics educators and limited awareness among parents.
- 'Learning progressions' was a familiar term but with mixed and varied levels of understanding.
- The research identified a broad range of personal, current and historical environmental factors that influenced participants' reactions and perceptions to the key messaging and initiative.
- Exposure to key messaging about the initiative generated many questions, concerns and confusion. This indicates that there are significant information gaps that need to be addressed.
- For most participants, immediate perceptions of the initiative tended to be negative. However, favourable perceptions were elicited after greater discussion and the provision of further information.
- Challenges include:
   o   Multiple current applications of assessments, and educators unclear how the initiative fits in.
   o   Environmental and historical factors that are impacting on perceptions and raising concerns; for example, about data usage and increased teacher workloads.
   o   Initiative is still abstract, which reduces its capacity to answer questions and address concerns.
- Ways to address challenges include:
   o   A strategic communications approach that establishes a clear and unifying value proposition for the initiative will be critical to addressing risks and building the support required for its development and future adoption.
   o   Encourage future collaboration and usage.
   o   Place students at centre: benefits for student learning must be the focus as this is the end outcome/benefit.
   o   Acknowledge current efforts and successes in supporting individual student learning.
   o   Position educators as having control of when and how tools and information are used and communicated.
   o   Emphasise a collaborative approach to development.
- To effectively build understanding and support for the initiative, it is evident that key messaging needs to address four key stages:
   1.   Make the case
   2.   Explain the concept and value proposition
   3.   Introduce the initiative
   4.   Explain implementation

5.5   Australian Charter for the Professional Learning of Teachers and School Leaders

This Charter outlines a shared responsibility and commitment to high-quality professional learning. The document affirms the importance of professional learning for improving student outcomes, articulates the expectation for all teachers and school leaders to engage in professional learning, and describes the characteristics of high-quality professional learning.

The Charter explains that effective professional learning is relevant, collaborative and future focussed[2]:

- **Relevant** professional learning should:
    o   assist teachers and school leaders to meet the identified needs of their own students
    o   challenge assumptions about current practice
    o   be based on current research on effective leadership, teaching and learning
    o   link closely to school, sector and system goals and initiatives
    o   be matched to the experiences, strengths, current knowledge, career stage and goals of the adult learner
    o   be available when needed.
- **Collaborative** professional learning should:
    o   promote teacher and leader ownership of their learning through active involvement
    o   provide opportunities to receive feedback on practice, and observe the practice of others
    o   offer support to change practice through coaching, mentoring and reflection
    o   provide opportunities to access and learn from experts
    o   develop professional learning communities within and between schools
    o   use technology to enrich collaboration and learning.
- **Future focussed** professional learning should:
    o   equip teachers and school leaders to deal with future as well as current challenges
    o   promote action research and inquiry and develops teachers as researchers
    o   develop high level skills that allow teachers and school leaders to adapt and excel in a rapidly changing and hyper-connected world
    o   support teachers and school leaders to explore research that challenges their thinking, encourages them to develop their own theories of practice and promotes use of a range of effective pedagogical practices
    o   promote innovation in teacher and school leader practice.

Additionally, the Charter emphasises that professional learning is most effective when it takes place within a high-quality professional learning culture, which is characterised by:

- a high degree of leadership support for ongoing adult learning and risk-taking
- collective responsibility for improving practice
- disciplined collaboration aimed at specific and relevant goals that relate to the learning needs of students
- high levels of trust, interaction and interdependence
- support for professional learning through school structures, explicit planning and the allocation of time
- a focus on the professional learning that is most likely to be effective in improving professional practice and student outcomes.

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[2] AITSL 2012

6   Appendix B: Findings from consultations

The professional learning specifications prioritise feedback from teachers and school leaders, while the trial design had a heavier focus on system and sector leader consultation, recognising the need for professional learning to align with, and be supported, by jurisdictional priorities. Table 11 outlines the group consultation schedule.

Table 11: Group consultation schedule

Stakeholder	Date(s)	Details
ACARA F–12 Curriculum Reference Group	14 June 2019 13 September 2019	• Jurisdictional and federal government representatives, nominated by the relevant member of the Australian Education Senior Officials Committee, and one nominee from the National Catholic Education Commission and the Independent Schools Council of Australia • Outlined the purpose of the environmental scan and sought confirmation to consult with members for the scan. • Focussed on eliciting details of a preferred professional learning approach for the Learning Progressions and Online Formative Assessment National Initiative (the initiative) to support a variety of classroom contexts
Professional Growth Network	23 July 2019	• About 40–50 members from different jurisdictions • Discussion focussed on details about the professional learning and trial design • Small groups formed, based on like jurisdictions
School Leadership and Teaching Expert Standing Committee	1 August 2019	• This group included 18 members of teacher regulators, teachers, and school leaders. • 90-minute session focussed on eliciting details of a preferred professional learning approach for the initiative, which supported a variety of school contexts as well as expert advice on enablers and barriers to effective implementation.
Teacher Practice Reference Group	5 August 2019 9–10 September 2019	• This group included 27 members who are teachers or school leaders. • These sessions focussed on eliciting details of a preferred professional learning approach for the initiative to support a variety of classroom contexts.
Association of Independent Schools	9 August 2019	• Discussion focussed on unique challenges of independent schools

Findings from consultations and the environmental scan are detailed below.

6.1   ACARA F–12 Curriculum Reference Group

Key feedback from the F–12 Curriculum Reference Group included:
• Take care when using the terms 'assessment literacy' or 'data literacy' – 'literacy' means something specific in these contexts.
• There may be issues around the scope of the professional learning: is it a broad scope for all formative assessment or narrow (e.g. mainly for learning progressions)?
• Schools will learn a lot from where it is working well – collaboration, and sharing practice and case study examples (videos too), 'bright spots' and champion schools will be useful

- There is concern about our smaller states and territories and how they might get missed in the work with comments such as: 'What are you thinking about in terms of equity?', 'We want to trial something across different contexts'.
- Articulating the 'Why' is critical. What does the evidence base say about formative assessment against the progression?
- We should deliberately design and build in rural and remote schools; in the past we have assumed access to the technology and professional learning communities (PLCs) have different focuses and ways of working in those schools
- Teachers have been confused about progression and push back on them as they don't see how they align with the curriculum.
- AITSL's role could be to support a national model, but implementation will be done in partnership with states and sectors.

6.2   Professional Growth Network

The members of the Professional Growth Network participated in a series of questions at tables organised by jurisdiction. Below is a summary of the key responses to each question.

6.2.1   Current situation

Activity: Discuss a recent example of professional learning available to schools in your system or sector to implement formative assessment practices.

6.2.1.1   What is working well?

- Sharing case studies – but realistic, not the rose-coloured glasses
- When teams from schools come to work with teams from other schools
- Clarity of intent
- Effectiveness of PLCs to discuss formative assessment
- Needs to be a strong, shared understanding of why
- Bringing students as part of the professional learning
- Extended time with 1:1/coaching support around specific skills development – collaborative coaching
- Reflections and demonstration of how professional learning impacted/changed practice – ensures a focus on application
- Discussions with colleagues to analyse student work: identifying next steps, focussed on student needs, sharing collective expertise, enquiry process
- Different layers of professional learning: appropriate to different audiences/roles, one theme
- Instructional coaches: sustaining/supporting change
- Relationship between consultant and small team
- Know that someone's consultant is coming/checking in: accountability/expertise
- Assisting teachers with accessing the research
- Champions (small team/leader) to drive
- Co-contribution – enabler as then there's investment/skin in the game (also a challenge)

6.2.1.2   What are challenges?

- Being connected to the coal face. Action research team must align/hit with your preparation
- Challenge around a lot of effort put into the teaching and not the learning that comes out of it
- Staff movements
- Sustaining a process when agendas change
- Intent was for the consultant to step back but that doesn't always happen as planned

- Cost
- Teachers too keen to jump to action
- Dip in teacher confidence early on
- Defensiveness

6.2.2 Designing a high-quality professional learning model for the Learning Progressions and Online Formative Assessment National Initiative

Activity: Discuss the features of a high-quality professional learning model for the Learning Progressions and Online Formative Assessment National Initiative. Consider what the professional learning model would look like, how it would work in your system, and how it can be tailored for educators in different roles, career stages and school contexts.

6.2.2.1 *Key considerations for Learning Progressions and Online Formative Assessment National Initiative professional learning*

- Rather than looking at the data, and where we then will head, what about looking at it from a different perspective about data? Need to decide on a common direction and commonalities.
- Existing PLC/PLT structures
- Teachers as experts – action research (but don't use that term).
- Dylan Wiliam – Every year get better at something, and make sure improve in a way that makes a difference to kids
- Approach to have sustained professional learning, through long-term professional learning in teams
- Need to focus on the learning to learn – through all the brain science, science of learning
- Coaching – data and perform practice
- Model be neutral: built specific to context, not specific to assessment gives flexibility and transferability
- Using the data to identify patterns/curriculum issue or professional learning issue
- Readiness assessment (but not just a teacher self-assessment, need students as well): creating varying entry points and branching off
- Create continuum of expertise on formative assessment: i.e. what does a gold star look like and what does a novice look like? Can then use the readiness assessment to place on the continuum and identify next steps (professional learning aligned to each part of the continuum)
- Also consider continuum for other roles (leaders/champions)
- Make sure core components covered for all modes/options
- Variance in the school: face-to-face in school important
- Thinking about the student's view on expertise in professional learning
- Development of a model itself could be a barrier to implementation

6.2.3 Conditions for success

Activity: Discuss the conditions for success to trial the professional learning model in your system and/or sector. Consider enablers and barriers, additional support that might be required and who would be involved at a national, system and sector level.

6.2.3.1 *Barriers*

- Lack of support in terms of time, opportunity, money
- Reform/implementation fatigue
- Crowded market

6.2.3.2   Enablers and additional support

- Protocols to be specific around conversations around assessment. Specific to context.
- Include the why
- Buy in
- Respond to student data
- Need to create the conditions for schools to have an ongoing relationship with the consultant and each other

6.3   School Leadership and Teaching Expert Standing Committee

The School Leadership and Teaching Expert Standing Committee consultation involved asking for feedback on this question: What professional learning will be needed for teachers and school leaders for them to benefit from the initiative?

Feedback was categorised by professional learning for teachers or for school leaders. The key pieces of feedback included the following:

Important for both teachers and school leaders

Design specifications

- Differentiated for teachers/schools
- Patience – time needed for change
- Time/resources
- Flexibility in design and implementation

Professional learning content

- Understanding of purpose
- Whole child progress in scope
- Clarify language: formative assessment versus assessment for learning
- Evaluation of impact: What evidence will we have and how will we know we are on track?
- Student and parent engagement

Important for teachers

Design specifications

- Consistent and regular in-school support
- Case study to show what is possible
- Facilitate connections between teachers
- Flexibility to access online or at home
- Guided resources with experts to help with implementation and interpretation
- Shouldn't be too different from other types of professional development

Professional learning content

- Centred on a student learning focus area
- Consistent measures/scales for progress, reporting, moderation, collaboration
- Linked to the Australian Curriculum; not just literacy and numeracy
- Consistent way to measure evidence of impact
- Builds student agency and metacognition
- Build on existing practice; how does it work with current assessment?

- Clear advice about how to use the tool(s)
- Next steps after assessment
- Learning progression familiarity
- Curriculum and assessment knowledge
- Include assessment samples and moderation
- Clarify link between assessment tool and teaching practice

Important for school leaders

Professional learning content

- Consistent understanding across schools
- Feedback for teachers grounded in understanding problem of practice
- Signposts of positive impact along the way
- Roles and responsibilities in the school
- Strong support and communication of purpose

The participants also identified enablers and barriers including:

Enablers:

- Time and support to use the resources
- Coaching and subject-specific expertise
- Device integration and teacher IT skills
- Building off what already exists
- Common understanding of purpose
- Early adopters and models of what is possible to drive further innovation and finding pockets of high-impact exemplars

Barriers:

- Misalignment with state priorities
- Time-consuming to use the tool
- Duplication of process/efforts
- Miscommunication of purpose
- Legislative requirements
- System data collection and reporting
- Mandate or not?

6.4   Teaching Practice Reference Group

The Teaching Practice Reference Group consultation allowed participants to give feedback on important elements of professional learning for the initiative as well as to co-design prototypes of a professional learning model.

Important feedback on the challenges of implementing high-quality professional learning included:

- School context matters: particularly in a P–12 school it is hard to cater for everyone
- Engaging part-time staff is difficult, and there may be a very large proportion of these staff (50 per cent or more) in some schools
- High turnover of staff makes it hard to prioritise, and it means that new staff have to be constantly re-introduced to the previous professional learning efforts
- Professional learning budget is often not adequate

- Big picture and engaging people in a vision, understanding the purpose and relevance to each teacher
- It is difficult to keep momentum going

Participant ideas about how to address these challenges included:

- Time and timing: Making time to share learning and ensuring timing of professional learning is most effective (e.g. training at the end of the day). Have a timetable for professional learning that captures part-time staff
- Design: Make it relevant, use the Spiral of Inquiry – teacher researchers and self-learners, incorporate into Professional Development Plans, utilise coaching and mentoring, provide remote/regional schools with face-to-face opportunities, create networks of schools to share resources and learning, utilise expertise within your own context
- Leadership: Strong vision and working together towards something, use a student-centred message
- Middle leaders: Making the most of middle managers' skills to run professional learning. Develop 'champions' to lead and run professional learning communities

The five prototypes included the following features of professional learning:

- Flexibility
- Differentiated to individual learning needs and experience
- Online community forum
- Train the trainer model
- Access to online resources
- Teachers map a professional learning journey
- Engagement with school leaders as well as teachers
- Multiple sessions that are face-to-face

6.5   Association of Independent Schools

Independent school representatives were asked: What will enable implementation that leads to improved teacher practice and learning outcomes? The discussion included the following:

- Every state is doing something different, which means all sectors could come together so we can have intensive, consistent understanding of what it means
- National progressions are pushed out by ACARA, and then teachers ask what the professional learning is, but we do not have the professional learning ourselves. We need training as well
- Do not underestimate the power of the sector to influence and support practice in schools
- Strong partnership with the association in the independent sector
- Differentiation of tools and approaches is needed depending on the school
- Illustrations of practice – media, bitesize – can show schools how to use learning progressions or assessments, even with limited time
- Evolution – schools do not want it to just land – communication is important for the next stage
- Guiding principles for implementation
- Need for the case for change, narrative around why it is important work, tapping into contemporary thinking (research and evidence base), moral imperative
- Compelling narrative for change includes impact on student outcomes
- Integrated into broader practice

7   Appendix C: Glossary

The following are terms that will be used throughout the final reports. It is important to be clear on the meaning of these terms as they are critical to understanding the research and recommendations in this project.

7.1.1.1   Formative assessment[3]

Formative assessment is any form of purposeful classroom interaction that assists teachers to adjust teaching and learning. Formative assessment assists teachers to use their professional judgement to understand how well students have learnt what has been taught, the progress they have made and the progress they need to make. Teachers currently use a range of tasks, from routine observations to structured assessments, to undertake formative assessment.

The discovery phase of the Learning Progressions and Online Formative Assessment National Initiative will identify assessments schools currently use for measuring students' literacy and numeracy that align with the National Literacy and Numeracy Learning Progressions and also explore current work being undertaken across the country to assess critical and creative thinking.

7.1.1.2   Professional learning

Professional learning is the formal or informal learning experiences undertaken by teachers and school leaders that improve their individual professional practice, and a school's collective effectiveness, as measured by improved student learning, engagement with learning and wellbeing (AITSL 2012).

7.1.1.3   High-quality professional learning

According to AITSL (2012), high-quality professional learning is:
- **relevant:** Professional learning will be most engaging for adult learners and have the greatest impacts on practice when it assists teachers and school leaders to address and adapt to the challenges they face in improving student learning, engagement with learning, and wellbeing
- **collaborative:** Effective collaboration involves more than simply working together. It demands a disciplined and purposeful approach to collaborating to solve the challenges that are most important to improving student outcomes.
- **future-focussed:** Effective professional learning seeks to develop teachers and school leaders who are adaptable and able to deal with new and unexpected challenges. It exposes teachers to new and emerging practices and the theories that underpin them. It should focus not simply on improving existing practice, but also on assisting teachers and school leaders to understand the theory behind what practices work in different situations, and when and how to apply a broad repertoire of strategies.

7.1.1.4   Implementation supports

Implementation supports are the enabling factors in systems that support high-quality professional learning. These may include policies around resourcing, human capital, or accountability. Supports may be closely linked to professional learning or they may not have anything to do with professional learning at all. Supports may also be called 'conditions for success', 'system context' or 'enabling factors'.

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[3] From the Learning Progressions and Online Formative Assessment National Initiative website: https://www.lpofai.edu.au/faqs/#what-is-formative-assessment

8   Appendix D: References

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