

Professional learning research insights: Considerations for online professional learning

October 2026

Professional learning is a common strategy for improving practice in schools and early childhood education and care (ECEC) services to enhance learning outcomes for children and young people. The [Australian Education Research Organisation \(AERO\)](#) and the [Victorian Academy of Teaching and Leadership \(the Academy\)](#) have partnered to explore how schools can optimise the value of professional learning delivered online. This research summary outlines findings from research conducted by each organisation.

Professional learning is essential to improving teaching quality, student outcomes and school performance. Evidence from the [Australian Institute for Teaching and School Leadership \(AITSL\)](#) and an [Australian Council for Educational Research \(ACER\)](#) report by Cassity & Wong (2024) shows that sustained, high-quality professional learning strengthens instructional practice, enhances leadership capability and supports retention. Effective professional learning builds both individual expertise and collective capacity, making it a key lever for school and system improvement and sustainability.

This summary examines the enablers and barriers to participating in online professional learning, with the aim of identifying how schools can better support staff to enhance the effectiveness of their online learning experience. It draws on findings from the Academy's 2025 Impact Evaluation survey (the Academy survey) and research conducted by AERO (AERO study) in partnership with Training 24/7, an online professional learning provider. Quotes throughout this summary are drawn from the Academy survey.

Professional learning in an online world

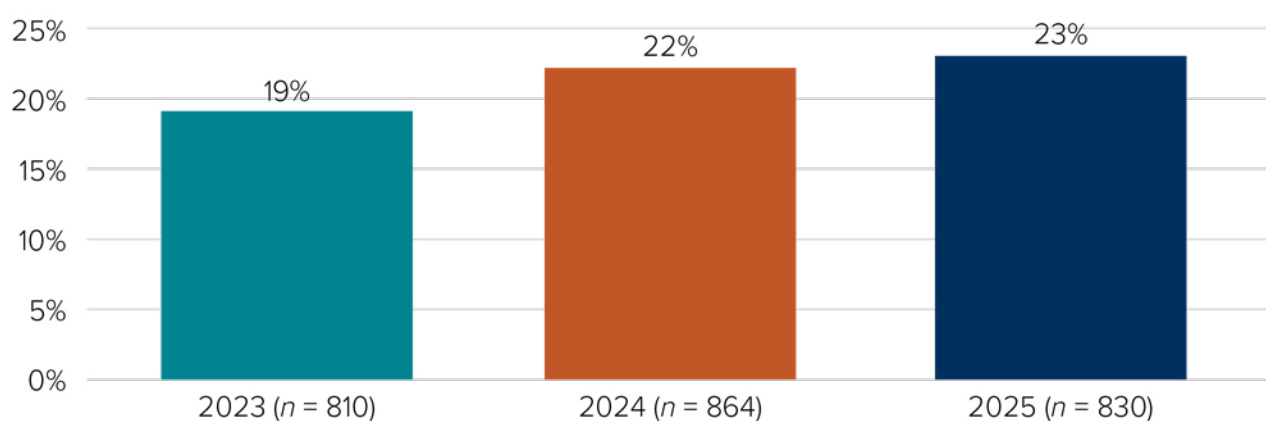
Online professional learning offers clear benefits – particularly improved access, flexibility and affordability – making it an attractive approach to professional learning. International systematic reviews and syntheses (Bragg et al., 2021; Huang et al., 2024; Stavermann, 2024; Yigit et al., 2024), along with a recent meta-analysis (Morina et al., 2025) highlight its contribution to improving teacher knowledge and classroom practice.

Unsurprisingly, participation in online professional learning is growing (AITSL, 2023). Despite this growth, onsite and blended professional learning (where some parts are delivered onsite and some online) remain the preferred delivery modes for many educators (NSW Education Standards Authority, 2022). This preference is often linked to the view that traditional onsite delivery provides greater opportunities for engagement and direct interaction with facilitators and peers, making it a less isolating experience (Li et al., 2023). For example, participants in the Academy professional learning found collaboration more effective when sessions were in-person. As one participant put it:

Working with your local colleagues is really, really important. Getting opportunities to meet other teachers in the area and hear what they're doing is fantastic.

Consistent with this, the Academy survey revealed that only about a fifth of school leaders preferred fully online professional learning. This preference is, however, gradually increasing – rising from 19% in 2023 to 22% in 2024 and 23% in 2025 (Figure 1).

Figure 1: Preference for online professional learning, school leaders



Source: Academy survey module 2023–2025, Department of Education's principal survey.

Note: The Academy provides both online and in-person professional learning opportunities in both metropolitan and regional centres. Preference for online professional learning is similar among respondents from metropolitan and regional areas.

Teachers and school leaders are also increasingly recognising the value of online professional learning and reporting positive experiences (AITSL, 2023; NSW Education Standards Authority, 2022). The overwhelming majority of respondents to the Academy survey report being 'satisfied' or 'very satisfied' with the professional learning they received, with no difference found between those who engage online compared to onsite (89% for both formats). Further, similar proportions of participants indicate that the professional learning they engaged in had a positive impact on their practice regardless of whether they engaged online or onsite (87% for online and 88% for onsite). Interviews with teachers and school leaders in the AERO study further reinforce these findings, with most participants expressing satisfaction with their online professional learning experience.

Online professional learning is, therefore, well-received and considered to be effective by participants, yet many educators continue to prefer onsite or blended delivery modes. This highlights the importance of identifying ways for schools to support online professional learning to maximise participant engagement while leveraging its effectiveness, convenience and affordability.

What makes professional learning effective

Research from the [Education Endowment Foundation](#) (EEF) has identified 14 mechanisms that underpin effective professional learning (Sims et al., 2021). The mechanisms are divided into 4 categories:

- **Building knowledge** involves supporting teachers in *managing cognitive load* and *revisiting prior knowledge*, helping them connect new learning with what they already know.
- **Motivating staff** includes *setting and agreeing on goals*, *presenting information from a credible source* and *providing affirmation and reinforcement after progress* to sustain engagement and commitment.
- **Developing teaching techniques** focuses on the practical side of improvement through *instruction*, *social support*, *modelling*, *monitoring and feedback* and *rehearsal* of new approaches.
- **Embedding practice** ensures that new learning becomes routine by *providing prompts and cues*, *prompting action planning*, *encouraging monitoring* and *promoting context-specific repetition*.

Well-designed and effectively delivered professional learning – regardless of delivery mode – typically aligns with these mechanisms. Professional learning is most effective when it incorporates mechanisms from all 4 categories, reflecting a ‘balanced design’.

Identifying high-quality professional learning can be difficult due to the overwhelming volume of professional learning options available. This is especially the case online, where easy access to professional learning further increases the volume of choices. The EEF’s research (Sims et al., 2021) and [Effective Professional Development Guidance Report](#) help navigate these options by outlining what to look for to ensure professional learning uses a balanced design and incorporates effective mechanisms.

A further consideration for selecting online professional learning is that the balanced design categories of developing teaching techniques and embedding practice may be challenging to deliver online. For example, online professional learning – particularly in asynchronous formats – may not readily provide social support, monitoring or feedback.

There is currently no dedicated guidance on how to apply effective professional learning mechanisms and the balanced design to online professional learning, or how to support professional learning in ways that strengthen mechanisms that are harder to deliver online. Accordingly, when considering school-based supports that enable effective engagement in online professional learning, we also examine how these supports might strengthen mechanisms that are more difficult to deliver online.

Enablers of engagement in online professional learning

Participants across the AERO and Academy studies described what supported their engagement in online professional learning. While these types of support are relevant to all professional learning, they’re especially important in online environments. The convenience of online professional learning – such as the ability to quickly join sessions and access materials from anywhere or at any time – can create the impression that less support is needed to ensure a positive online experience. However, competing demands, in-school responsibilities and unforeseen interruptions are more likely when participating in online professional learning, especially when the professional learning is completed during school hours.

Leadership support and alignment with school priorities

Teachers and school leaders in the AERO study described intentional leadership support as central to enabling participation and sustaining engagement in online professional learning. This included:

- provision of time to engage in the online professional learning, especially support with scheduling and protecting time to participate in professional learning
- accountability and follow-up, including formal and informal check-ins to keep participants on track
- maintaining leadership and participant enthusiasm throughout by being visible, interested and positive about the learning
- demonstrating a clear link to school priorities, reinforcing the relevance of the online professional learning to school goals.

Such intentional leadership to support and facilitate participation can reinforce and extend the mechanisms related to motivation, particularly if focused on monitoring progress, affirmation of learning and setting and agreeing on goals (Sims et al., 2021). Reinforcing these mechanisms could be particularly helpful for online professional learning that's asynchronous or has a limited amount of live interaction.

When this support from school leadership isn't in place, or isn't sufficient, a range of barriers may emerge, such as teachers lacking time to fully engage with professional learning content. These barriers are discussed in the next section.

Opportunities for collaboration and peer support

AERO's study highlighted opportunities for collaboration as an enabler to participation in and engagement with online professional learning. These findings align with and reinforce mechanisms of effective professional learning that develop teaching techniques and embed practice, such as social support, rehearsal, monitoring and feedback, and promoting context-specific repetition (Sims et al., 2021).

Collaboration and support included:

- completing the professional learning with colleagues
- opportunities to discuss and clarify concepts with others during the learning process
- opportunities to reflect on content with others
- opportunities to jointly consider and apply learnings from the content to the school context
- sharing knowledge gained with other staff in team meetings.

Participants in the AERO study also highlighted that leadership support for collaborative learning strengthened engagement and the application of new learnings into practice. This facilitated interactions with peers, both during and after the online professional learning sessions. Discussing ideas with colleagues supported understanding, allowed teachers to test and refine their thinking, give and receive feedback, and made it easier to translate online content into classroom practice.

Content that's relevant and practically useful

When content is perceived as relevant and aligned with school context, priorities and needs, it also supports motivation and strengthens teachers' commitment to engage (Darling-Hammond et al., 2017). Teachers in the AERO study reported higher engagement with online professional learning when content was clearly relevant, practically useful and closely connected to existing classroom practices. When examples reflected teachers' school realities, engagement increased, whereas content that felt disconnected from local contexts reduced engagement. Respondents to the Academy survey also highlighted the relevant and timely content, with one participant commenting:

[The professional learning] was also really relevant to the mathematics information that is coming out and how to implement it in schools.

Flexibility in delivery

The way the course content was delivered was another enabler. Participants in the AERO study valued course content being delivered in smaller chunks (modules), which helped manage cognitive load. Further, teachers in the AERO study appreciated being able to skip modules they had already mastered, and being able to return to modules to revisit prior learning. Both managing cognitive load and revisiting prior knowledge are mechanisms that support teachers in connecting new learning with what they already know, consolidating new knowledge over time (Sims et al., 2021).

An engaging and easy-to-navigate online platform also contributes to successful professional learning (Ahmed, 2022). An easy-to-navigate platform was indicated as an enabler by 29% of participants in the Academy survey and was also important to participants in the AERO study.

Finally – and unsurprisingly – online professional learning was valued for its flexibility and convenience, enabling participants to manage their attendance among competing demands, including when and how they access resources. As one participant said:

[I] appreciated that this was online as it made it easier to fit in a very busy day.

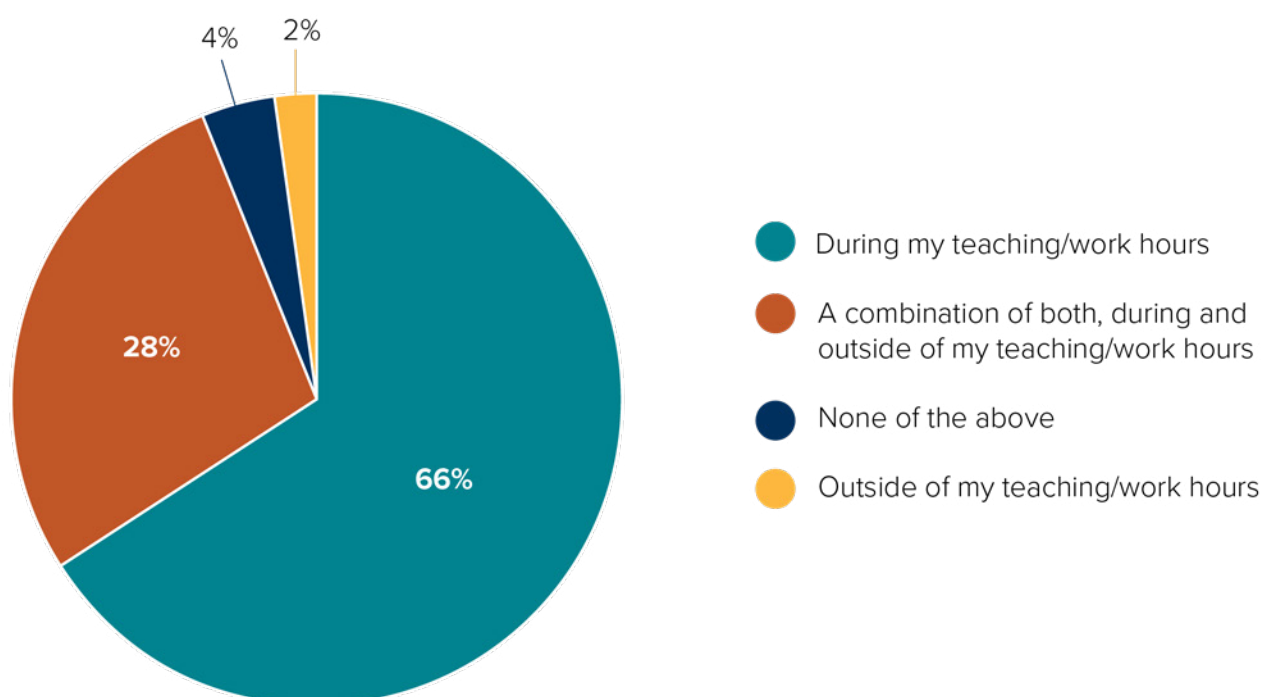
Barriers to engagement in online professional learning

Participants in both studies also discussed what hindered their participation and engagement in online professional learning. While some of these barriers are at an individual or school level, others relate to the learning platform, delivery style or structure of the professional learning.

Time constraints and the timing of delivery

Figure 2 shows Academy survey respondents' preferences for when professional learning was delivered.

Figure 2: Preferences for delivery time of online professional learning ($n = 521$)



Two-thirds (66%) of participants who responded to a survey about online professional learning noted that their preference for delivery time was during their teaching and/or work hours. However, over one-third (35%) of respondents noted competing workplace demands and a quarter (24%) identified workplace interruptions during online delivery as being key barriers to online access and participation. In the AERO study, participants also noted that opportunities to engage during work hours were challenging due to limited availability of relief staff – especially for small or remote schools. A participant in the Academy survey noted the challenge of maintaining focus during online learning in busy school environments:

[O]nline is great but with distractions in schools it can be hard to fully immerse yourself into the course.

Conversely, 28% of respondents to the Academy survey preferred online professional learning delivered outside teaching hours. Many participants in the AERO study also completed the online professional learning outside teaching hours. However, some participants indicated challenges with scheduling around particular weekdays and times – for example, synchronous online sessions scheduled late in the week (e.g., Friday afternoons) attracted fewer participants. When asked about synchronous online sessions – which generally offer less flexibility – over half (59%) of respondents to the Academy survey preferred sessions delivered in under 2 hours, while 44% preferred half-day (3 to 5 hours) and 20% whole-day (6 to 8 hours) sessions.

Time pressures may also explain patterns observed in completion data (AERO study), where engagement decreased as participation requirements increased. As noted, leadership support is essential to engagement and participation. However, without protected time and structural support, sustained engagement in intensive online professional learning can become difficult. This suggests that extra learning modules or requirements – while designed to strengthen professional learning – can hinder engagement if time isn't intentionally set aside to complete them.

Terminology or instructional language

Some participants in the AERO study explained how content acted as a barrier when terminology or instructional language didn't align with what schools were already using. Even small differences in wording caused confusion for some participants, highlighting the importance of ensuring professional learning uses shared language and aligns with established programs, goals and approaches. Clear terminology can bridge the gap between theoretical knowledge and classroom practice, reduce cognitive load and foster collaboration and social support through shared understanding. This can also boost professional learning mechanisms related to building knowledge and developing teaching techniques (Sims et al., 2021).

Conclusions and next steps

Previous research (Sims et al., 2021) indicates that professional learning – including when delivered online – is effective when it utilises a balanced design, incorporating mechanisms from each of the 4 categories of effective professional learning (build knowledge, motivate staff, develop teaching techniques, and embed practice). Enabling participation in online professional learning can strengthen these mechanisms and promote a more engaging learning experience. This can be achieved by school leaders intentionally providing support and encouragement throughout the professional learning, creating opportunities for staff to learn together, collaborate and reflect. Finally, participants benefit when the online professional learning is contextually relevant and aligned with their learning needs.

AERO and the Academy will continue to work on exploring the impact of online professional learning on teacher practice, and what contributes to a positive experience and positive outcomes. Future work will also examine effective approaches to delivering online professional learning and further improve understanding of the contextual barriers that affect participation. Full findings of AERO's study, using data collected from teachers and school leaders about the impact of online professional learning on teacher practice and student outcomes, will be available in 2027.

About the AERO pilot study and professional learning research

AERO has partnered with Training 24/7, an online professional learning provider, to examine the effect of online demonstration lessons (modelling) as part of a comprehensive study on online professional learning for teachers. The study began with a pilot study in 2024. This was followed by a large-scale randomised controlled trial from 2025 to 2026, with over 60 schools and 430 teachers around Australia participating in online professional learning delivered mainly as asynchronous sessions with optional live sessions. This research summary draws on interviews with 19 teachers and 7 school leaders participating in the pilot study and administrative data from across the 60 schools in the large-scale study. In addition to the partnership study with Training 24/7, AERO is conducting a [range of studies in Australian schools and ECEC services](#) to gather evidence about the mechanisms that make professional learning effective and how professional learning can be delivered at scale.

About the Academy's professional learning program and research

The Academy provides professional learning, resources and pathways for teachers and school leaders in Victoria. Professional learning offerings include online, blended (some sessions onsite and others online across the duration of the program) and onsite options in metropolitan venues and regional centres. The Academy collects impact evaluation data on all of its professional learning programs. Findings in this research summary are drawn from the 2025 Impact Survey results. The Academy gathered 4,713 survey responses evaluating the effectiveness and impact of professional learning across 385 intakes of professional learning.

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