

MONASH Q PROJECT

Improving quality use of research evidence in practice: Insights from cross-sector codesign

Q Co-design Summary Monash University May 2022



May 2022

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1. EXECUTIVE SUMMARY

The Q Project is a 5-year partnership between Monash University and the Paul Ramsay Foundation to understand and improve the use of research evidence in Australian schools. In 2021, the project hosted two series of co-design workshops with teachers, school leaders, and other education stakeholders to develop improvement interventions. Co-design is an approach which involves participants exploring, developing, and testing responses to shared challenges. Forty-nine teachers, school leaders, and system leaders across five jurisdictions took part and shared their collective knowledge and expertise to identify ways to improve research use in Australian schools. This document reports on the outcomes and implications of this co-design process.

Key Findings

Co-design participants made recommendations in relation to: a research use Professional Learning (PL) program; other enabling factors to improve research use; and feedback on the co-design process itself.

For the PL program, participants recommended:

- a series of program principles and pedagogical guidelines;
- a potential program structure supported by coaching or mentoring;
- specific 'research evidence use' topics and content areas;
- the consideration of external factors to ensure an impactful program; and
- possible monitoring and evaluation strategies.

For other enabling factors to improve research use, participants recommended:

- research use to be embedded in system processes and artefacts;
- financial support to 'buy' time for educators to engage with research;
- formal research-focused roles/functions within schools;
- professional network/association support for research use;
- support for access to, and curation of, research evidence; and
- a greater focus on school-university research partnerships.

For the co-design approach, participants reported:

- a positive co-design experience, particularly the small group, professional conversations; and
- the value of and need for ongoing system-wide connections.



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Implications and next steps

These recommendations, together with the research literature, our empirical research in schools^{1, 2} and ongoing stakeholder engagement, provide the basis for evidence-informed approaches to improve research use in Australian schools. More specifically, these co-design findings have implications in three main areas as outlined below.

The PL program learning design

- The learning design for the PL program integrates coaching and school-based project activities. It draws on the project's Quality Use of Research Evidence (QURE) Framework, up-to-date empirical insights on evidence use, and practical examples from Australian schools. It is informed by research evidence and designed around priority learning outcome for research evidence use.
- Program development is underway, with three 20 hour 10-week trials schedules for 2022, commencing in May.
- Monash Q partners and stakeholders continue to assist with the recruitment, as well as the future scaling up and sustainability
 of the program.
- Program evaluation will take place internally and externally, as part of the overall project impact. Additional stand-alone programs/resources for coaching and mentoring will be further developed by the Q Project as capacity allows.

Other enabling factors to improve research use

- Stakeholders, such as national and state level jurisdictions, universities, professional networks and associations, and principals, have a key role in supporting improved research use in schools.
- The Monash Q Team will integrate relevant enablers into the PL program and elaborate on the specific recommendations for other stakeholders through information/policy briefs.

The co-design approach

- There was value in providing opportunities for professional engagement by participants from all levels of the education system.
- The Monash Q team will continue to engage system-wide stakeholder throughout the PL trials, and through ongoing updates, events, and conferences.
- The co-design process will continue to be evaluated during the remaining two years of the project.

Overall, the cross-sector co-design activities identified eight different ways to improve research use in Australian schools. These included: professional learning; coaching; system processes/artefacts; financial support; research-focused roles in schools; professional association/network support; research access and curation; and school-university partnerships.

The co-design process also enabled the Monash Q Project to engage a growing practice base of research users, who together can support PL and change, along with the broader conditions needed to support quality use of research within an effective evidence ecosystem.

¹ Rickinson, M., Gleeson, J., Walsh, L., Salisbury, M., Cutler, B., & Cirkony, C. (2021). *Using research well in Australian schools*. Monash University. https://doi.org/10.26180/14783637

² Walsh, L., Gleeson, J., Cutler, B., Rickinson, M., Cirkony, C., & Salisbury, M. (2022). What, why, when and how: Australian educators' use of research in schools. Monash University. https://doi.org/10.26180/17192990.v1

³ Rickinson, M., Walsh, L., Cirkony, C., Salisbury, M., & Gleeson, J. (2020). *Quality use of research evidence framework*. Monash University. https://doi.org/10.26180/14071508.v2



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2. INTRODUCTION

The Q Project is a 5-year partnership between Monash University and the Paul Ramsay Foundation to understand and improve the use of research evidence in Australian schools. In its first year, the project conceptualised quality use of research evidence in the education sector. In its second year, the team conducted school-based research to understand educators' use of research evidence in practice. In its third year, we undertook activities to develop ways to improve research use. Activities involved initial research activities, along with two series of co-design workshops with teachers, school leaders, and other education stakeholders. Forty-nine teachers, school leaders, and system leaders across five jurisdictions took part and shared their collective knowledge and expertise to identify ways to improve research use in Australian schools. The rest of the report explains the co-design methodology, and then discusses the insights that emerged from the process and the implications for future work.

3. METHODOLOGY

To improve educator's use of research in school, the Monash Q Project considered the range of capacity building activities across the education, health, and social care sectors. Our initial research indicated that despite the widespread global reliance on PL to improve educational quality, its impact is often weak.^{4, 5} Furthermore, it showed that across all sectors, the role of professional expertise, where practitioners integrate tacit and explicit knowledge, played a key role in decision making.⁶ To address the complexities of improving teaching practice, we drew on behavioural perspectives to understand the actions, enablers, and barriers to high quality evidence use.⁷ We also drew from systems perspectives to guide impactful, sustained, and potentially large-scale change.⁸ These perspectives enabled us to identify specific ways to support PL and change along with the broader conditions needed to support research evidence use. This included the engagement of stakeholders across the education system, through a co-design process.

Co-design is an approach which involves participants exploring, developing, and testing responses to shared challenges. It is based on the principle of participatory design, where those who are affected by the design decisions, should be involved in the process of making the decisions. It is a novel method for engaging citizens and stakeholders and has promise for policy-making. Typically, participants work through a series of phases to address a design challenge (e.g., understand the project scope; generate, test, and evaluate designs). These phases are highly interactive, draw from relevant research to inform the process and scope, and can take place over range of timeframes, from an hour (i.e., rapid design) to many days. The process typically takes place in settings relevant to the end user, but digital technologies can support many of these interactive activities online. Figure 1 provides an overview of our co-design inputs, processes, and outcomes.

⁴ Kennedy, M. M. (2016). How does professional development improve teaching? Review of Educational Research, 86(4), 945-980. https://doi.org/10.3102/0034654315626800

McChesney, K., & Aldridge, J. M. (2019). What gets in the way? A new conceptual model for the trajectory from teacher professional development to impact. *Professional Development in Education*, 47(5), 834-852. https://doi.org/10.1080/19415257.2019.1667412

⁶ Rickinson, M., Cirkony, C., Walsh, L., Gleeson, J., Salisbury, M., & Boaz, A. (2021) Insights from a cross-sector review on how to conceptualise the quality of use of research evidence. *Humanities and Social Sciences Communications*, 8, Article 141. https://doi.org/10.1057/s41599-021-00821-x

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*, 6, Article 42. https://doi.org/10.1186/1748-5908-6-42

⁸ Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., & Dutton, J. (2012). Schools that learn (updated and revised): A fifth discipline fieldbook for educators, parents, and everyone who cares about education. Currency.

⁹ Blomkamp, E. (2018). The promise of co-design for public policy. *Australian Journal of Public Administration*, 77(4), 729-743. https://onlinelibrary.wiley.com/doi/10.1111/1467-8500.12310

¹⁰ Martin, B., & Hanington, B. (2012). *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions*. Rockport Publishers.



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Figure 1. Overview of co-design approach - inputs, processes, and outcomes.

The process began with a series of research activities to provide an understanding of effective research use improvement approaches. We conducted a rapid review of the research literature to understand effective PL approaches, as well as the underlying issues and broader conditions associated with PL and sustained change. In addition, we undertook a cross-sector review on capacity building for research use, to understand approaches in the health, social care, and policy sectors. We also we drew on empirical insights from our 2020 school-based interviews. Building on these various inputs, a series of co-design workshops were then held with teachers, school leaders, and other education stakeholders to identity and shape specific ways to improve research use in Australian schools.

In 2021, the Monash Q Project co-facilitated two series of online workshops, in collaboration with BehaviourWorks Australia. These three-hour workshops took place in Zoom, involved large and small group interactions, as well as pre- and post- workshop surveys. The **first series** of co-design workshops resulted in guidance for the development and implementation of a PL program. The **second series** resulted in the identification of key system-wide enablers to support research use in schools. In total, we had 27 school educators and 28 system stakeholders across five jurisdictions participate from a range of school types and organisations, contributing a collective 200 hours towards the identification and development of improvement strategies for research use. Details on the recruitment process, participants, workshop activities, data collection and analysis are outlined in Appendix 1.

The following sections outline the outcomes of the two co-design workshops in terms of insights into PL (Section 3), other enabling factors to improve research use (Section 4) and the co-design approach itself (Section 5).

¹¹ Cirkony, C., Rickinson, M., Walsh, L., Gleeson, J., Salisbury, M., Cutler, B., Berry, A. & Smith, K. (2021). Beyond effective approaches: A rapid review response to designing professional learning. *Professional Development in Education*. Advance online publication. https://doi.org/10.1080/19415257.2021.1973075



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4. INSIGHTS INTO PROFESSIONAL LEARNING

The first series of co-design workshops generated recommendations to guide the development and implementation of a PL program to improve the use of research, supported by coaching and/or mentoring. Participants' provided insights across five main areas, with specific recommendations (Table 1).

Table 1: Insights and recommendations for PL

Areas of Insight	Recommendations	Example Quote
PL Guidelines and Principles	 Make it contextual, relevant, and practical; Empower teachers and build confidence; Encourage 'vertical teams' involving teachers, school and system leaders; Foster collaboration between participants; Deliver as blended learning that is ongoing and retrievable. 	"[The teacher development team] would always front end their presentations with the research in an easily accessible way that provide those links to staff beforehand so they could read it, then they would show this is what it looks like in the classroom." (System leader, MACS)
PL Program Structure	 Offer as an ongoing multi-staged PL program; Include applied project work in the school or classroom between sessions; Include parallel coaching or mentoring support. 	"Changing practice and learning about it is not a 20-minute conversation at the end of the day, and then you're ready and go it takes time. You need to think, you need to reflectbecause acquiring new knowledge and challenging your own takes time takes a lot of courage to learn." (School leader, VIC)
PL Topics	 What is research? Why use research? Asking good research questions Research literacy Accessing research Including students in research. 	"Research skills need to be taught. You don't just know how to research; you need to be told explicitly what to do." (Teacher, NSW)
External factors to ensure impact	 Ensure support from school leadership, relevant sector/system organisations, and policy ecosystems; Show alignment with school plans, priorities, and practices; Enable access to publicly available research evidence, resources, and tools; Acknowledge participation through accreditation. 	"For leaders, for whatever the innovation is that you're looking at, that you might be pulling research in for, it has to be an area of system priority, otherwise, the leader isn't going to go with it in the first place." (School leader, SA).
Monitoring and Evaluating PL across Multiple Indicators	 Examine evidence of changing practice and its impact; Explore changes in questions teachers ask about their practice and research; Track changes in the dialogue in the staffroom about research use; Investigate changes in student outcomes aligned to the identified improvement focus. 	"Not every single teacher or leader in a school has to do the finding or reading of research, but everyone can engage in a research conversation and in fact, use research well." (Systems leader, MACS).



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5. INSIGHTS INTO OTHER ENABLING FACTORS TO IMPROVE RESEARCH USE

The second series of co-design workshops generated six recommendations associated with leadership, school plans and priorities, and access to research, to support quality use of research evidence. Participants' provided insights across six main areas, with specific recommendations (Table 2).

Table 2: Insights and recommendations for other enablers to improve research use

Areas of Insights	Recommendations	Example Quote
Education system's planning and processes	Research use needs to be embedded in the education system's processes and artefacts such as policy documents (e.g., strategic planning documents, school improvement plans, performance development plans, Australian Professional Standards for Teachers).	"Academic research isn't really baked into our system." (Teacher, VIC).
Financial Support	There is a need for financial support to 'buy' time for school-based educators to engage with research use (e.g., grants, provision of casual relief teachers to free up staff capacity).	"How do we, and schools that have high equity funds, build in teacher release? Whereas those who don't have high equity funds can't get their time, they got to find other ways to try and convince their [administrators to provide release time] So, I think some schools are very disadvantaged." (School leader, NSW).
Research-focused roles/functions in schools	There is a need for formal research- focused roles/functions in schools, where specific personnel engage with research (e.g., assistant principal, research broker, specialist staff).	"Are we asking [educators] to engage both with research we provide and other research and teach kids at the same time? So there's something about the channels, as well as the trust in the curation and the translation. And that's all on top of whether the research is actually useful, contextual, and accessible." (System leader, SA).
Education networks and associations	Education networks and associations need to support research use through promotion, access, curation, and synthesis (e.g., principal associations, professional associations, AERO, ESA, government education departments).	"We don't always have particular staff who are strongly linked to those Associations. It's sort of ebbs and flows." (School leader, VIC)
Access to and curation of research evidence	The above networks and associations need to provide access to primary studies/databases, and relevant curated research synthesis.	"How do teachers even get to know about current research, let alone how can we support them to use it?" (Teacher, NSW).
School-university research partnerships	There is need for a greater focus on school-university research partnerships/relationships to connect research to practice through artefacts (e.g., articles) and research experts (e.g., people).	There is a "lack of interface between schools and researchers" (School leader, QLD).



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6. INSIGHTS INTO THE CO-DESIGN APPROACH

Given that co-design is a relatively new method in education research, we invited participants to complete a survey after the first workshop, to improve our approach. Most responses highlighted positive experiences with the small group discussions and the value of cross-sector professional conversations. For example, one participant stated it was helpful "to be able to have rigorous, professional conversation with others from a variety of educational settings" (DM, Department of Education, SA).

A few indicated the need for more time and to mix up the groups during the smaller breakout sessions instead of working with the same group throughout (e.g., to hear different perspectives). In response, for the second series of workshop, the facilitators mixed the groups for each activity, but given the ongoing demands on educators during the pandemic, maintained the same three-hour time frame. Overall, our co-design approach elicited high quality results in an interactive multi-stakeholder three-hour online format.

7. SUMMARY AND IMPLICATIONS

Taken together, the insights emerging from the co-design workshops can be seen to highlight eight enabling factors connected to improving the use of research evidence in Australian education. Drawing on the preceding sections, Table 3 outlines each of the eight enabling factors, identifies the potential system stakeholders responsible for implementing them, along with the suggested role of the Q Project Team.

Importantly, while these enablers highlight themes that are already recognised within the international literature, their value lies in their:

- specificity to the current Australian context;
- generation through in-depth stakeholder engagement; and
- integration of school, system, and researcher perspectives.

Taken as a whole, these enabling factors work together as a systems-wide influence to address and support the multi-faceted aspects associated with quality use of research evidence.

The enabling factors in Table 3 below, together with the research literature and ongoing stakeholder engagement, provide the basis for evidence-informed approaches to improve research use in Australian schools. The implications of these findings from the codesign process can be considered in the following three areas.

The PL Program learning design

The learning design for PL program integrates coaching and school-based project activities. It draws on the project's <u>QURE</u> Framework, ¹² up-to-date empirical insights on evidence use, and practical examples from Australian schools.

¹² Rickinson, M., Walsh, L., Cirkony, C., Salisbury, M., & Gleeson, J. (2020). Quality use of research evidence framework. Monash University. https://doi.org/10.26180/14071508.v2



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Table 3: Enabling factors, potential implementers, and suggested role of Monash Q Project Team

Enabling Factor	Focus	'Implementers'	Q team's role	
1. PL program (s)	Teacher and leader research use capability and confidence	Q team	Development and delivery	
2. Coaching (and mentoring)	Teacher and leader research use capability and confidence	Q team	Development and delivery	
3. Education system's processes and artefacts	Include requirements for evidence base and for evidence use in school improvement plans, teacher performance plans, etc.	Education jurisdictions	 Recommendations/policy brief Relevant resources developed for & embedded in PL program 	
4. Financial support	To buy teacher time to attend PL and/or engage with research evidence (e.g., CRTs)	Education jurisdictions, schools	Recommendations/policy brief	
5. Research-focused function in schools	The function to promote, support and broker research evidence used is embedded into existing role (s) within schools (e.g., instructional leads, librarians)	Education jurisdictions, Principals	 Describe function with different case studies of how it manifests within schools currently Relevant resources developed for & embedded in PL program (e.g., case illustrations) 	
6. Education networks and associations	Principal associations and professional organisations promote and support expanded research evidence use in schools	Networks and associations	 Facilitate and participate in partnerships Relevant resources developed for & embedded in PL program (e.g., case illustrations) 	
7. Access to, and curation of, research evidence	Educators are both provided access to primary studies/databases and engaged with relevant curated research synthesis	Professional organisations, education jurisdictions, ESA/AERO	 Recommendations/policy brief Facilitates partnerships 	
8. School - university research partnerships	Engage schools and teachers in research partnerships with universities that address context relevant issues, develop teachers as researchers, and increase research use capability	Universities /schools	 Describe partnership characteristics that build teachers as researchers and increase research use capability Implement example partnerships that have this focus Relevant resources developed for & embedded in PL program (e.g., case illustrations) 	

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The program is designed around the priority learning outcomes ^{13, 14, 15} that were co-constructed by 24 respondents, inclusive of the Monash Q Team, key partners, and co-design participants. These learning outcomes identify the knowledge, skills, and practices for quality use of research evidence, which can be achieved during a 20-hour online program.

Alongside participants' recommendations, the learning design was informed by research evidence including high quality PL approaches, ¹⁶ an explicit PL theory of change model, ¹⁷ the constructive alignment of learning outcomes, activities, and evaluation, ¹⁸ developmental approaches to support adaptive evaluation processes, ¹⁹ and effective remote PL approaches. ^{20, 21}

Next steps: The learning design underpins the content and digital development of the online program. Program development is underway, with three 20 hour 10-week trials scheduled for 2022, commencing in May. Monash Q partners and stakeholders continue to assist with the recruitment, as well as the future scaling up and sustainability of the program. Program evaluation will take place internally and externally, as part of the overall project impact. Additional stand-alone programs/resources for coaching and mentoring will be further developed by the Q Project as capacity allows.

Other enabling factors to improve research use

The other enabling factors identify roles not only for the Monash Q Team, but also for system-wide stakeholders. System-wide stakeholders include national and state level jurisdictions, universities, professional networks and associations, and principals. These stakeholders have a key role in building the connections between evidence generation, synthesis, distribution, and use – to create an effective 'evidence ecosystem.^{22, 23}

Next steps: The Monash Q Team will focus on the PL program, coaching and mentoring activities, integrate relevant enablers into the program, and elaborate on the specific recommendations to other stakeholders through information/policy briefs.

¹³ Australian Institute for Teaching and School Leadership (AITSL) (n.d.). The Essential Guide to Professional Learning. AITSL. https://www.aitsl.edu.au/docs/default-source/default-document-library/the-essential-guide-to-evaluationc02cad91b1e86477b58fff00006709da.pdf?sfvrsn=25a2ec3c_2

¹⁴ Biggs, J., & Tang, C. (2007). Outcomes-based teaching and learning (OBTL). Why is it, How do we make it work? https://www.cetl.hku.hk/wp-content/uploads/2016/08/OBTL_what_why_how1.pdf

¹⁵ Bloom, B. S. (1956). *Taxonomy of educational objectives. Vol. 1: Cognitive domain.* David McKay.

¹⁶ Cirkony, C., Rickinson, M., Walsh, L., Gleeson, J., Salisbury, M., Cutler, B., Berry, A., & Smith, K. (2021). Beyond effective approaches: A rapid review response to designing professional learning. *Professional Development in Education*. Advance online publication. https://doi.org/10.1080/19415257.2021.1973075

¹⁷ Korthagen, F. (2017). Inconvenient truths about teacher learning: Towards professional development 3.0. *Teachers and Teaching*, 23(4), 387-405. https://doi.org/10.1080/13540602.2016.1211523

¹⁸ Biggs, J.B. (2014). Constructive alignment in university teaching. HERDSA Review of Higher Education, 1, 5-22. https://www.herdsa.org.au/herdsa-review-higher-education-vol-1/5-22

¹⁹ Patton, M. Q. (2011). Developmental evaluation: Applying complexity concepts to enhance innovation and use. Guilford Press.

²⁰ Education Endowment Foundation (EEF). (2020) Remote professional development. Rapid evidence assessment. EEF. https://evidenceforlearning.org.au/assets/Uploads/Remote-PD-Evidence-Assessment.pdf

²¹ Education Endowment Foundation (EEF). (2021). Effective professional development: Guidance report. EEF. https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/effective-professional-development

²² Boaz, A., & Nutley, S. (2019). Using evidence. In A. Boaz, H. Davies, A. Fraser, & S. Nutley, (Eds.), *What works now? Evidence-informed policy and practice* (pp. 251-277). Policy Press.

²³ Sharples, J. (2013). Evidence for the frontline. *Alliance for Useful Evidence*. https://apo.org.au/node/34800



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The co-design approach

Feedback from the first workshop was largely positive, and we were able to successfully implement mixed breakout groups for the second workshop. Participants' engagement in system-wide professional conversations, suggested the need for similar ongoing connections.

Next steps: The Monash Q team will continue to engage system-wide stakeholder throughout the PL trials, and through ongoing updates, events, and conferences. The evaluation of the co-design approach as a participatory method is part of the overall project impact process, with ongoing evaluation activities planned for the remaining two years of the project.

In conclusion, the cross-sector co-design activities identified eight different ways to improve research use in Australian schools. These included: professional learning; coaching; system processes/artefacts; financial support; research-focused roles in schools; professional association/network support; research access and curation; and school-university partnerships.

The co-design process also enabled the Monash Q Project to engage a growing practice base of research users, who together can support PL and change, along with the broader conditions needed to support quality use of research within an effective evidence ecosystem.



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APPENDIX: CO-DESIGN METHODOLOGY

Recruitment

To improve research evidence use across the system, the Monash Q Project recruited both school-based educators, along with key stakeholders with interest and expertise in evidence use, from each of the five participating jurisdictions in the Monash Q Project (i.e. Melbourne Archdiocese Catholic Schools, New South Wales, Queensland, South Australia, and Victoria). Recruitment drew from schools already associated with the Monash Q Project, along with additional system stakeholder, in line with our ethics approvals. The expression of interest involved a survey to gather relevant information about stakeholders to assist us in selecting diverse groups for each jurisdiction. Most participants included teachers and school leaders with a range of experience, and from diverse settings (e.g., primary/secondary schools, government/independent schools; new/experienced educators; urban, regional, and rural schools; high/low SES schools). Other participants were from the system-level (e.g., PL administrators from state government departments of education, PL providers, coaches, evidence providers). In total, we had 49 school and system stakeholders across five jurisdictions participate from a range of school types and organisations, contributing a collective 200 hours towards the identification and development of improvement strategies for research use (see Table 4).

Table 4: Background of Participants in the 2021 Co-design Workshops

Role		Schools- by Jurisdiction	School Sector & Type	School Characteristics	
28 school employees	11 Teachers	1 MACS	20 Government	25 Metro	
	5 Middle Leaders	11 NSW	7 Independent	2 Inner Regional	
	12 Senior Leaders	5 QLD 1 SA	1 Catholic	1 Outer Regional	
		10 VIC	9 Primary	11 ICSEA <1000	
			12 Secondary	16 ICSEA >=1000*	
			7 Combined 2		
21 system	12 Departments of	3 MACS			
stakeholders	Education or similar	6 NSW	NA		
	4 National organisations	2 QLD			
	2 University	3 SA			
	2 Independent Sector	2 VIC			
		4 National			

^{*}ICSEA for one school is not assigned

Co-design workshops

For each workshop, participants were provided with pre-reading regarding the Q Project and initial insights into educators' research use. Each workshop was organised into three phases. During the 'Digest' phase, participants discussed the pre-workshop materials in small groups, then shared their ideas with the larger group. During the 'Direct' phase, facilitators led whole-group discussions around the development focus areas (e.g., PL, accessing research). During the 'Design' phase, participants were provided with a series of prompts for each focus area and worked in small mixed groups to address these in GoogleDrive documents. Each workshop also included pre- and post-surveys with closed and open-ended questions regarding the workshop experience, enablers for research use, and priority learning outcomes for a PL program.

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Co-design experience

The user-experience survey included two open-ended questions regarding participants' experience of the co-design workshop. Of the 27 participants, we received 17 and 9 responses for each question respectively. The first question stated: What aspect(s) of the co-design workshop(s) were most helpful for developing effective interventions around research use in schools? The second question stated: What advice would you give to improve future co-design workshops?

Data collection and analysis

Whole-group discussions were recorded, and the documents generated in GoogleDrive were collected for analysis. The full data set comprised video/audio recordings of all whole group interactions, along with the GoogleDrive documents generated by each of the groups, for each workshop. The recordings were transcribed and edited for analysis. Transcriptions and documents were analysed using the 'document analysis' method, combining content and thematic analysis to organise the data according to the prompts and identify the patterns across the documents. ^{24, 25} Each summary document was shared back with all co-designed participants along with other education stakeholders, for their feedback. The surveys were also analysed using thematic analysis. For the priority learning outcomes, responses from participants, other stakeholders, and the Monash Q Project team were collated and mapped to finalise the list of priority outcomes for a 20-hour online PL program.

²⁴ Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

²⁵ Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27-40. https://doi.org/10.3316/QRJ0902027

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