

THE WORKFORCE DEVELOPMENT APPLIED RESEARCH FUND (WDARF) GRANT CALL

**BEST PRACTICE GUIDE TO WRITING FULL
PROPOSAL**



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1. Introduction

This Best Practice Guide aims to assist applicants in developing stronger proposals by highlighting common pitfalls identified from past review comments and providing guidance on the methodological and conceptual framing in applied research proposals.

2. Previous Review Comments

The below provides a summary of the top five review comments provided by the Expert Review Panel and the SSG Research Committee during their review of past proposals. Both the ERP and SSG Research Committee would note strengths of each proposal as well, but these are the comments most often made on qualities of the proposals to be enhanced.

2.1 Review Comments by Expert Review Panel

I. Clearer research questions and objectives


Research questions and objectives must be clear and their suitability to address the research problem need to be apparent.

II. Relevant research literature

Review of existing and up-to-date international literature relevant to the research problem and demonstrate understanding of current knowledge in the area of proposed research. To include critical analysis of the literature on their methodologies, findings and limitations etc. to highlight the gap that the proposed research aimed to address. References on the literature cited in the proposal must be provided.

III. Clearly/strongly theoretically framed. Theory must be linked to research design and tools.

Enhance clarity of proposal by providing a comprehensive outline of the theoretical and conceptual framework to be used in the study. By fully explaining the main theories, concepts, and definitions, it can effectively



guide the research direction and establish a logical relationship between the framework and the problem to be addressed.

Refer to Annex A for Guidance on methodological and conceptual framing in applied research proposals for WDARF funding.

IV. Method to be clearly explained.

Method needs to match with or linked to research questions. The methodological approach must be sufficiently explained and argued to be appropriate to address the research questions/objectives. The approach should be supported by adequate discussion of current literature relevant to the proposed approach. Rigor in determining sample sizes and incentive rate should be demonstrated.

V. Fitting the aim of WDARF grant call.

- Proposal must be relevant to the selected challenge statement/research theme.
- Proposal should prioritise the aim of WDARF grant call rather than seeking national funding for internal evaluations or to look for new sources of students for internal courses.
- Proposal should prioritise the aim of WDARF grant call rather than development of product /system not connected to a research question.

2.2 Review Comments by SSG Research Committee

I. Relevance to CET and implication to policy.

The proposed topic should have strong relevance or significance to CET at the present time. The proposed needs to have the potential to inform or enhance practice in the area of skills development and adult learning in Singapore.

II. Transferability and Applicability

Findings derived from proposed research need to be applicable beyond the specific context of the study. For example, a research study that demonstrates transferability to other sectors will be more strongly considered for support.



III. Scalability

Although the proposed research may yield positive results, its impact can be significantly enhanced by expanding or replicating it to benefit larger populations or address similar challenges in different settings.

IV. Clear objective

Proposal can be further strengthened by providing greater clarity in the research questions and the proposed solutions.

V. Study should be novel.

Proposed study can be enhanced by incorporating contemporary topics and methodologies that are at the forefront of current research, ensuring its relevance and impact in the field. Proposed research needs to address current needs or emerging trends.

3. **Guidance on methodological and conceptual framing in applied research proposals for WDARF funding**


(This guide was prepared by members of the Expert Review Panel - Ann-Marie Bathmaker, Phil Brown, Yew-Jin Lee, Aiki Nikolaidis, in May 2025)

What sort of problems does applied social research aim to address? This can be stated in many different ways, such as: What are the human consequences of climate change? How can social inclusion be increased through the use of new technologies? What is important to note for the WDARF research call is that the funding is looking to support proposals that can be 'applied' or have some form of generalisation beyond the context of your own research project.

This document is intended as an outline or orientation for thinking through methodological issues and conceptual framing in applied research. It is not intended as a strict prescriptive framework for WDARF funding applications.

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3.1 10 key points for developing the conceptual and methodological framing of an applied social research project relevant to SkillsFuture Singapore (SSG)

1. **Align with WDARF Themes and Priorities:** Ensure the research directly supports SkillsFuture Singapore's goals in workforce development, skills development, and adult learning, with clear policy and practice implications.
2. **Identify a Clear and Relevant Problem:** Define a focused research issue that addresses local needs and demonstrates its significance within Singapore's context.
3. **Review and Position in Existing Literature:** Conduct a thorough literature review to establish what is known, highlight gaps, and position your study within ongoing debates and research.
4. **Develop a Coherent Conceptual Framework:** Use conceptual tools that systematically guide your research, linking context, problem, theory, and methods cohesively.
5. **Select and Justify Methodologies:** Choose methodological approaches that align with your conceptual framing and research questions and provide clear justification for your choices.
6. **Ensure Scalability and Practical Outcomes:** Focus on applied research that can be scaled and translated into practice and policy impact within Singapore's skills ecosystem.
7. **Incorporate Diverse Expertise:** Engage a mix of social researchers, technical experts, and industry partners to strengthen the proposal's relevance and robustness.
8. **Be Critical and Analytical:** Avoid superficial use of popular topics (e.g. AI) unless they are essential, and provide deep analysis with justified conceptual choices.
9. **Plan for Broad Dissemination:** Develop strategies to share findings across diverse channels and stakeholders to enhance uptake and impact, contributing to policy, practice and research.
10. **Maintain Feasibility and Clarity:** Ensure your proposal is realistic, well-structured, and avoids over-promising or unnecessary complexity.



3.2 What is applied research?


For a long time, it was thought that doing basic research always preceded applied research. Once people had made new discoveries or findings, this was followed up by development, and then production/operations – a very linear model that STEM R&D seemed to exemplify. This model also appeared to treat basic and applied research as in opposition, which is definitely inaccurate. Both purposes of research are clearly warranted whether in the natural or social sciences.

Basic and applied research can indeed co-exist very well in what has been called Pasteur's Quadrant. Researchers working in this frame seek basic understanding of phenomena as well as applying knowledge to solve problems in the world. Such dual purposes are also described as use-inspired basic research. Such research characterized the many contributions made both to scientific knowledge and improvements in human society by Louis Pasteur.

Other researchers may wish to strongly identify with applied research where solving current/emerging issues in policy or practice is the core focus. Generating new knowledge here attempts to achieve a better understanding of what is taking place in the context of action, connected to a project's aims and objectives. This is a highly practical endeavour, and it is much more than using or creating tools, kits, or apps, and collecting data to prove that a new technology or intervention “works.”

Regardless of whichever stances researchers adopt, their proposals need to demonstrate rigour, coherence, and potential impact or scalability among other important considerations shared in the WDARF documents. Grant applicants would do well to pay attention to the following criteria as they consider how their proposals may increase knowledge and/or change practice in CET, workforce development, skills development, and adult learning:

- Relevance to WDARF research themes and challenges
- Potential contributions to existing/emerging policy and/or practice
- Deep understanding of local needs and significance of problem in the context of Singapore.



Sometimes, new knowledge useful for changing practice or policymaking may not be immediately obvious to the research team. This highlights why communicating and sharing one's findings across a variety of different channels and stakeholders is often mutually beneficial. Better yet, getting a diversity of expertise on board the team may strengthen the initial conceptualisation of the proposals and play different but valuable supportive roles throughout the project.




3.3 What do conceptual tools do in an applied research project?

Conceptual frameworks and tools act like maps that give coherence to a research project. They provide a systematic way to organize the exploration of a problem. Conceptual tools “think forward”: they guide data collection, analysis and interpretation of data, and the process of making judgements, drawing conclusions and putting forward recommendations.

How do you decide on and develop a suitable conceptual framework for an applied research project?

Once you’ve identified a specific issue, problem, or gap in our knowledge, you need to reflect on the context in which this applied research question is being raised. It’s typically based on issues you’ve been thinking about for some time. Developing a conceptual frame helps with being able to see and challenge your own and others’ taken-for-granted assumptions about the issue you are focusing on. Reviewing previous research establishes what is already known and what we do not know, and what ideas, models and/or conceptual tools have been used to consider the problem by other researchers. This background reading and the way you’ve been thinking about your focus will shape how you understand the ‘problem’ to be studied and guide the selection of research methods that will drive your investigations. In other words, your understanding defines how you conceptually frame your research proposal. This conceptual frame acts as the lens which links your research context, problem, theory, and methods into a coherent whole. As an example, if you are investigating AI, job redesign and digital skills in mid-level occupations in financial services, some of the key concepts that are used to describe, categorise or understand these issues may include technological adoption, workforce automation/transformation, digital skills, job redesign, social inclusion/inequality, and so on.

These concepts are sometimes described as the building blocks of theories which enable you to offer systematic explanations for what you’re aiming to study. Here it’s important to recognise that your conceptual toolkit may not be the only way to study your research problem. You need to be mindful of other ways of conceptually framing what you want to



study, and justifying the choices you make. Demonstrating a recognition of other concepts/theories is a strength not weakness.


So conceptual tools are not decoration to lay on top of your proposed project. They are there to be used. And, only use conceptual tools that truly contribute to your analysis and understanding of what it is you want to study. And whatever conceptual frame you use, make sure you define how you intend to use it. In the earlier example, don't assume that there is a shared understanding of generative AI, nor assume existing policies can be treated as given. What needs to be analysed includes the unintended consequences of policy actions, such as when policies aimed at raising participation rates in vocational training may add to parental pressures for increased access to university.

Experienced researchers understand that building up familiarity with the relevant theories, methods, and indeed the social problem itself would take time. WDARF applicants who have been successful have demonstrated that they have grasped these essentials of research, describing them in a thoughtful and careful manner even if they don't have all the answers at hand.

To summarise:


A coherent conceptual framework in applied social research refers to a structured set of concepts and theoretical tools that systematically guide your investigation of a specific problem or issue. It works as a kind of map that links your research context, the problem you're addressing, relevant theories, and the methods you plan to use, ensuring all parts of the project fit together meaningfully.

A good conceptual framework does more than just decorate your research; it actively shapes how you define your problem, decide on methods, collect and analyze data, and draw conclusions. It helps make explicit the assumptions and ideas underlying your study, clarifies key concepts, and ensures that your research questions, methods, and analysis are logically aligned. For instance, if you're studying AI-driven job redesign, your framework might include concepts like technological adoption, digital skills, and workforce transformation, and these would guide your data collection and interpretation.



In short, coherence in a conceptual framework means that your research isn't just a patchwork of ideas and methods but a well-integrated project where each element supports and enhances the others.

At the end of this document, Appendix 1 provides a small number of examples of how researchers have used methodological and conceptual framing in workplace learning projects, and Appendix 2 lists resources and journals that are key sources for applied research.



3.4 Key steps in developing and using conceptual tools and methodological framing in applied research

1. Identify the problematic to be addressed.
2. Carry out a literature search, then read and review relevant literature. What do we already know? What are the gaps? What ideas and models and approaches have been used to research the problem in previous work? How is what we know relevant to the problem as it exists in Singapore?
3. Refine the problem, which may well include narrowing the focus to more specific aspects of the problem.
4. Decide on appropriate conceptual tools.
5. Identify a methodological approach that is suitable to address the problem.
6. Explain and justify the methodology and conceptual tools that are chosen.
7. Plan out and describe clearly the methods to be used. Make sure that they are congruent with the conceptual and methodological framing.
8. Use ideas, models and/or conceptual tools for the process of analysis and interpretation.
9. Offer conclusions that clearly come out of a systematic analysis and interpretation of the evidence, with implications for practice and for understanding and thinking about the problem studied for the future.

3.5 WDARF bids: Some Do's and Don'ts

Don't fail the 'so what' test...a contribution of substance.

Don't over-promise...What is 'doable'? ...be realistic.

Don't over-complicate. Conceptual weaknesses - only use those essential to the proposed study.

Don't be limited to whatever is flavour of the month, e.g. AI.

Don't assume we know what AI is! Be analytical.

Do follow WDARF guidelines: 'applied' does not simply mean make an 'intervention'... projects need to be scalable and translatable.

Do take command...give us confidence you know what you're doing...

Do focus on Singapore but also think more widely. Policy, concepts/ theoretical considerations are international...

Do make sure you seek funding for those who can truly add value...but no more...

Do discuss/engage with 'social' researchers, as well as specialists in your scientific field.

Do think about how proposals engage with industry/employers.

Finally: Do apply.



APPENDIX 1: Published examples of methodological and conceptual framing in workplace learning projects

Special Issue of *Studies in Continuing Education* (2021, 43:2)

Configuring enterprises as spaces for learning: possibilities, risks and limits

8 articles from the 2019 *Researching Work & Learning (RWL) International Conference*.

<https://www.tandfonline.com/doi/full/10.1080/0158037X.2021.1927307>

Henshaw, B.; Mishra, B.K.; Sayers, W.; Pervez, Z. (2025)

Unveiling the Impact of Socioeconomic and Demographic Factors on Graduate Salaries: A Machine Learning Explanatory Analytical Approach Using Higher Education Statistical Agency Data. *Analytics* 2025, 4, <https://doi.org/10.3390/analytics4010010> OPEN ACCESS

Anne Karhapää, Raija Hämäläinen & Johanna Pöysä-Tarhonen (2025)

Digital work practices that promote informal workplace learning: digital ethnography in a knowledge work context, *Studies in Continuing Education*, 47:1, 1-18.

<https://doi.org/10.1080/0158037X.2023.2274596> OPEN ACCESS

Amanda L. Lizier, Oriana Milani Price & Susanne Francisco (2024)

Coming to practice differently in the workplace: a practice architectures exploration of workplace learning in times of change, *Studies in Continuing Education*, 46:3.

<https://doi.org/10.1080/0158037X.2023.2186387>



Appendix 2: Useful sources and resources [non-exhaustive]

Research methods for applied research and workplace learning
Journals that publish in the fields of lifelong learning and vocational education and training

RESEARCH METHODOLOGY BOOKS

The SAGE Handbook of Applied Social Research Methods (2nd edition 2013)

<https://methods.sagepub.com/hnbk/edvol/the-sage-handbook-of-applied-social-research-methods-2e/toc>

Research Approaches on Workplace Learning. Insights from a Growing Field (2022)

<https://link.springer.com/book/10.1007/978-3-030-89582-2>

Bradbury, H. (2022). How to do action research for transformations: At a time of eco-social crisis. Edward Elgar Publishing.


Coghlan, D. (2019). Doing action research in your own organization (5th ed.). SAGE Publications.

Watkins, K., Gilbertson, E., & Nicolaidis, A. (2023). The Action Research Dissertation: Learning from Leading Change. Myers Education Press.

ARTICLES

Dickens, L., & Watkins, K. (1999). Action Research: Rethinking Lewin. *Management Learning*, 30(2), 127-140. <https://doi.org/10.1177/1350507699302002> (Original work published 1999)

Gilbertson, E., & Nicolaidis, A. (2023). Centering community building to facilitate transformative change for new teachers: An action research study. *Action Research*, 21(1), 81-103.



Lee, Y.-J., & Roth, W.-M. (2007). The individual|collective dialectic in the learning organization. *The Learning Organization*, 14(2), 92–107. DOI 10.1108/09696470710726970

Lee, Y.-J., & Roth, W.-M. (2005). The (unlikely) trajectory of learning in a salmon hatchery. *Journal of Workplace Learning*, 17(4), 243–254. DOI 10.1108/13665620510597194

Nicolaides, A., & Dzubinski, L. (2015). Collaborative developmental action inquiry: An opportunity for transformation to occur? *Journal of Transformative Education*, 14(2), 120-138.

Tosey, P., & Marshall, J. (2017). The demise of inquiry-based HRD programmes in the UK: implications for the field. *Human Resource Development International*, 20(5), 393–402. <https://doi.org/10.1080/13678868.2017.1329368>

Watkins, K., Nicolaides, A., & Marsick, V. J. (2016). Emerging action research traditions: Rigor in practice. *International Journal of Adult Vocational Education and Technology*, 7(3), 71-81.

EXAMPLE JOURNALS (in alphabetical order)

Administrative Science Quarterly
<https://journals.sagepub.com/home/asq>

Asia Pacific Education Review
<https://link.springer.com/journal/12564>

Asia Pacific Journal of Education
<https://www.tandfonline.com/journals/cape20>

Career Development International
<https://www.emerald.com/insight/publication/issn/1362-0436>



Education + Training

<https://www.emeraldgrouppublishing.com/journal/et>

European Journal of Training and Development

<https://www.emerald.com/insight/publication/issn/2046-9012>

Human Relations

<https://journals.sagepub.com/home/hum>

International Journal for Research in Vocational Education and Training

<https://journals.sub.uni-hamburg.de/hup2/ijrvet/>

International Journal of Social Research Methodology

<https://www.tandfonline.com/toc/tsrm20/current>

International Journal of Training and Development

<https://onlinelibrary.wiley.com/journal/14682419>

Journal of Education and Work

<https://www.tandfonline.com/journals/cjew20>

Journal of Vocational Education and Training

<https://www.tandfonline.com/journals/rjve20>

Journal of Workplace Learning

<https://www.emerald.com/insight/publication/issn/1366-5626>

Nordic Journal of Vocational Education and Training

<https://njvet.ep.liu.se>

Organization

<https://journals.sagepub.com/home/ORG>



Organization Studies

<https://journals.sagepub.com/home/oss>

Personnel Review

<https://www.emerald.com/insight/publication/issn/0048-3486>

Studies in Continuing Education

<https://www.tandfonline.com/journals/csce20>

The Learning Organisation

<https://www.emerald.com/insight/publication/issn/0969-6474>

Vocations and Learning

<https://link.springer.com/journal/12186>