2025 TERTIARY EDUCATION RESEARCH FUND GRANT CALL

April 2025

1. INTRODUCTION

1.1.   The Tertiary Education Research Fund (TRF) funds applied educational research projects focused on Pre-Employment Training (PET). Projects are awarded on a competitive basis across Singapore's Institutes of Higher Learning (IHLs)[1] to fulfil the following objectives:

   a. Empower educators and institutions to actively and continuously improve teaching and learning (T&L) practices for PET based on reliable research and data.
   b. Promote effective and innovative T&L practices which have the potential to improve the quality of T&L in PET across all IHLs in Singapore.

1.2.   TRF projects may take one of the following forms:

   a. Ideation or Proof of Concept Projects
   These projects develop existing ideas into implementable models (e.g. synthesis of existing principles or theories to develop a curriculum/lesson for the class or division).

   b. Translation Projects
   These projects implement proven and tested ideas in new contexts (e.g. the implementation of an idea from one faculty to another).

   c. Scaling Projects
   These projects implement tested ideas in a larger number of sites than currently in practice (e.g. implementing an idea across the different faculties in an institution).

   d. Evaluation Projects
   These projects verify the worth or effectiveness of new and/or existing projects, programmes, procedures and/or interventions, as well as the overall outcome or change (e.g. how successful the implementation of an intervention has been).

1.3.   **All TRF proposals are required to incorporate the measurement of student outcomes**, since this is important for all teaching and learning-related research projects.

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[1] The IHLs are National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore Management University (SMU), Singapore University of Technology and Design (SUTD), Singapore Institute of Technology (SIT), Singapore University of Social Sciences (SUSS), Temasek Polytechnic (TP), Nanyang Polytechnic (NYP), Ngee Ann Polytechnic (NP), Republic Polytechnic (RP), Singapore Polytechnic (SP) and the Institute of Technical Education (ITE).

2. THEMATIC FOCUS

2.1.   In addition to the general grant call, the 2025 grant call strongly encourages proposals which address one or more of the following themes:

Theme 1:   Development of Interdisciplinary Education
To explore teaching and learning practices which equip students to become effective interdisciplinary learners with a good balance of breadth and specialisation in their knowledge and skills.

Theme 2:   Meeting the Needs of a Diverse Range of Learners

To explore teaching and learning practices which help meet the needs of a diverse range of learners. These may consider (but not be limited to) aspects such as students' socioeconomic backgrounds, intellectual, social and emotional development, career progression and special needs.

Theme 3:   Preparing Students for the Future Workplace

To explore teaching and learning practices which equip students with competencies and life skills to enter the workforce, and develop the desire and ability to continue to learn so as to remain agile and resilient in their career journeys, amid industry and workplace disruptions. These may include (but not be limited to) areas such as soft skills, technical skills, applied learning and industry exposure.

Theme 4:   Leveraging Technology to Enhance and Personalise the Learning Experience

To explore teaching and learning practices which leverage the latest technologies, with the aim of enhancing the quality of higher education and skills training, and catering more closely to students' individual learning needs.

3. FUNDING

3.1.   There are two tiers of funding available:

3.1.1. **Tier A: Up to S$150,000 per project over a 2-year period.** This aims to support smaller-scale studies.

3.1.2. **Tier B: Up to S250,000 per project over a 3-year period.** This aims to support longer-term studies seeking to scale up or translate positive outcomes from earlier projects.

4. ELIGIBILITY

4.1.   PIs and co-Is must be full-time staff[2] of the IHLs at the time of application, as well as during the entire project duration[3].

4.2.   Subject to the eligibility of the applicants, TRF allows for joint submission from institutions.

4.3.   Unless expressly allowed by MOE, the funds or any part thereof shall not be channelled to fund research and development activities overseas.

5. EVALUATION GUIDELINES

5.1.   Proposals will be evaluated based on the following considerations:

5.1.1.   <u>Technical merit</u>: Clear aims and well-justified need for project, scientific and intellectual rigour with a sound understanding of existing research literature in the area proposed; strong evidence of effectiveness and/or innovation of proposed approach, a pedagogically-sound implementation plan which clearly links to the original aims of the projects, a sound evaluation plan to assess the aims and outcomes, in particular student outcomes. Particularly for the Tier B funding, clearly demonstrates how the intervention/programme to be translated or scaled up is based on existing mature teaching and learning findings and how these findings are constructively integrated to increase the effectiveness of translation or scalability.

5.1.2.   <u>Effective collaborations</u> across institutions and/or discipline areas: Collaborations and synergies across existing research capabilities in the broader research landscape in Singapore. Applicants are encouraged to draw on the best research capabilities across Singapore and collaborate across institutions and discipline areas.

5.1.3.   <u>Quality of research team</u>: Capabilities and track record of the proposed research team

5.1.4. A feasible <u>budget and resource plan</u> for the project: The cost-effectiveness and value for money of the research.

6. SUBMISSION PROTOCOL

6.1.   Submitted proposals have to be verified by the IHL's Office of Teaching and Learning (OTL) and endorsed by the Director, OTL (DTL) before it can be considered for evaluation. IHLs should send all endorsed proposals to

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[2] Defined as a minimum commitment of 9 months per year.
[3] PIs who are awarded grants must continue to meet this criterion throughout the project period. Should such PIs be on no pay leave (or not serve duties at the institution) for more than 3 months in a Calendar Year during the project, they will no longer be eligible for the grant for that Calendar Year.

MOE_HED_TRF@moe.gov.sg and Toh_Minghui@moe.gov.sg by **5 p.m. on 20 June 2025.**

6.2.   The OTL should work closely with the applicants in the preparation and submission of the documents. MOE will only liaise with the OTL for queries from applicants on the TRF proposals.

6.3.   Researchers are not allowed to submit the same proposal to different grants concurrently, i.e. parallel submissions are not allowed. Applicants should decide which grant to apply for based on the nature of their proposal and the objectives of the grant.

6.4.   Please ensure that the documents are not password- or security-restricted.

7.   PRIVACY, CONFIDENTIALITY, AND DATA SHARING

7.1.   Submission of the proposal and information within is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award. The information may be disclosed to expert panellists, staff assistants, and other government agencies as part of the review process. Information about the researchers may be added to the reviewer database and used to select potential candidates to serve as future peer reviewers or advisory committee members with or without accreditation to the proposal.

7.2.   The rights and privacy of human subjects who participate in publicly-funded research must be protected at all times.

7.3.   It is the responsibility of the investigators, their Institutional Review Board, and their Host Institutions to protect the rights of study subjects and the confidentiality of the data, and in compliance with applicable legislation such as the Personal Data Protection Act. Data shared must be anonymised, i.e. free of identifiers that would lead to linkages to or deductive disclosure of individual human subjects.

7.4.   The informed consent process should include, where appropriate, explicit provisions for sharing of data for wider or future research use to maximise the value of the data, while providing adequate safeguards for human subjects.

7.5.   Funded projects will be required to share data with government agencies[4]. The datasets can then be used by public agencies, non-government entities and researchers to (a) further spur and expand research efforts into this area, (b) generate useful and applied interventions or products to improve the quality of T&L in PET through public, academic and even

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[4] The Institutions must at all times reserve the right to make available the Materials, Research IP (and any research data derived therefrom) to the Government or public sector agencies, upon request by the Grantor, for use and linkage with other government administrative data or research data, for the purpose of public benefit beyond the completion of the Research and which such future research is approved by the relevant ethics approvals and/ or the Government.

potentially commercial sector collaborations, and (c) improve public policies and programmes.

7.6.   All publications arising from research funded by the TRF must be made publicly available no later than 12 months after the official date of publication. A copy of the publication may be deposited in the Host Institution's Open Access repository or any other subject Open Access repository, in accordance with the Host Institution's Open Access policy.

8.   FOR APPLICANT'S COMPLIANCE

8.1.   The proposal shall be self-contained, comprise a maximum of 10 pages (for Tier A proposals) and 15 pages (for Tier B proposals), and adhere to the following formatting: Arial font size 12, double-spacing, 1-inch margins. All supporting documents (e.g. quotations) should be appended. Word count and formatting limits stipulated in the application form must be strictly adhered to.

8.2.   <u>Details of Research Proposal.</u> Applicants should adhere to the guidelines listed in **Annex A** for the preparation of their proposals. They should seek guidance from their institutions' Teaching and Learning Offices where necessary.

8.3.   <u>Project Deliverables.</u> PIs should identify project deliverables expected upon completion of project and describe how they align to the respective IHL's or MOE's needs. Project deliverables may include publications in journals on education research, development of software, development of classroom teaching materials, devices, etc.

8.4.   <u>Proposed Budget and Justification.</u> Budgets should realistically reflect what is required to execute the scope of work that is proposed. Where possible, existing equipment and facilities should be used. Cost estimates should be credible, i.e. there should be no budget inflation. All proposed equipment must be supported by quotations, indicative breakdown to be provided for the types of Materials and Consumables required. A list[5] of non-fundable items is found in guidelines circulated together with this call document. MOE also reserves the right to readjust the budget after the project is approved for funding. All budgetary items should be clearly justified. **Budgetary items which lack proper justification will not be funded.**

8.5.   <u>Suggested External Reviewers.</u> Applicants may include recommendations of external reviewers, who could potentially be invited to review the proposal. Collaborators and doctoral students **should not** be nominated as external reviewers.

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[5] This list is non-exhaustive, and MOE reserves the right to make changes to the list.

Supplementary Information

ANNEX A   Details of Research Proposal

ANNEX B   List of Academic Journals in Education Research

DETAILS OF PROJECT PROPOSAL

The description of the proposed project should include:

- Vision and rationale
- Research plan
- Data collection plan
- Significance of the project
- Details of research team
- Equipment and infrastructure
- Financial plan and support
- Ethics and risks

Please include references cited at the end of the document. References <u>do not</u> count towards the 10-page (Tier A proposals) and 15-page (Tier B proposals) limit. Information provided should be sufficiently self-contained for an assessment of the proposal without further reference to other materials.

a)   Vision and Rationale

- *State the vision of the project, how it addresses the themes (if applicable) and explain the key research problem(s) and hypotheses.*
- *What does existing literature say about the aims and approach of the project?*
- *Summarise how these aims are related to improving student outcomes in your classroom/institution.*
- *Summarise how the project will add to existing research/literature and make a contribution to knowledge in the area.*

b)   Research Plan

- *Provide details on the objectives of the project and the scientific/ground challenges to be addressed. Highlight how new knowledge would be created/frontiers of science would be pushed or how new approaches to address key education problems can be developed and adopted within high fidelity on the ground.*
- *Account for the current state of the art in the subject, including existing comparable work conducted in other research institutions, and explain in detail how the proposed project contributes to knowledge in the area.*
- *Provide a full and detailed description of the research design and proposed research methods or evaluation plan to demonstrate the effectiveness of the interventions. Highlight, in particular, the novelty of the approach, and the potential to create breakthroughs. Demonstrate how the proposed work is feasible, e.g. by drawing on preliminary work by the team.*

- *For projects comprising multiple project clusters or sub-projects, explain how the individual project clusters or sub-projects will be integrated. Highlight cross-dependencies and inter-disciplinary synergies wherever appropriate. For Tier B funding, plans to support successful translation and/or scaling should be included.*

c)   Data Collection Plan

- *Elaborate on the data required for the research, the sources of such data, and strategies for data collection. Where relevant, provide supporting evidence to demonstrate the feasibility of the data collection plan. This could include samples of preliminary data sets that have been collected by the research team, or written confirmation from data sources that the relevant data will be made available for the research.*
- *Elaborate on other sources of data that would be useful for the research or that would help to improve the quality of analysis, but which are currently unavailable or difficult to collect. Please be as specific as possible in the description of such data sets. Elaborate on the reasons and challenges faced in obtaining such data. Explain how such limitations could be overcome, and state if there are any budget implications in doing so.*

d)   Significance of the Project

- *Why is this project important in your institution/at the national level?*
- *How will the success of the project lead to improved student outcomes? It is important to identify specific learning outcomes that your project aims to enhance, explain why these are significant and how the impact of your proposal on these outcomes can be evaluated.*
- *Where appropriate, you are encouraged to explore local and international developments on learning outcomes, and to develop local benchmarks for learning outcomes that can be applied across different disciplines, or to specific disciplines, as well as for different education pathways, such as the applied degree pathway.*

e)   Details of Research Team

- *Describe the proposed organisational structure and include an organisational chart.*
- *Explain how the research team possesses the skills and competencies required to execute the research work successfully.*
- *Highlight the relevant track record and capabilities of individual PIs, their international standing and any unique competitive advantages that they bring to the team.*
- *Account for existing collaborations (local/international) with other research entities, or any plans to leverage on such collaborations.*

f)   Equipment and Infrastructure

- *Discuss the laboratories, shared facilities and equipment currently available for the project.*
- *Discuss those that will be offered by the Host Institution and other institutions for use (if applicable).*
- *Explain if existing infrastructure would be sufficient to conduct the proposed research project.*

g)   Financial Plan and Support

- *Discuss the Host Institution's in-kind contributions, including its plan to share space and facilities.*
- *Wherever applicable, discuss the strategy for gaining other forms of financial support (for example, from industry or public agencies).*

h)   Ethics and Risks

- *Discuss any ethical issues that might be raised by the research and how you will address these.*
- *List any risks that you anticipate in bringing the project to completion and state the actions to be taken to mitigate these risks.*

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ANNEX B

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A list of academic journals with a focus on education research is provided in the table below. Applicants are encouraged to publish their findings in at least one of these journals.

Name of Academic Journal	Brief Information
Academic Medicine	A monthly peer-reviewed medical journal covering research on medical education.
American Educational Research Journal	The American Educational Research Journal (AERJ) is the flagship journal of AERA, with articles that advance the empirical, theoretical, and methodological understanding of education and learning. It publishes original peer-reviewed analyses spanning the field of education research across all subfields and disciplines and all levels of analysis, all levels of education throughout the life span and all forms of learning.
Asia Pacific Journal of Education (APJE)	APJE focuses on education policy and governance, curriculum and pedagogy, and the translation of research for the everyday lives and practices of school leaders/management, educators and students with relevance to Asia, and the Pacific region.
Assessment & Evaluation in Higher Education	A peer-reviewed journal which publishes papers and reports on all aspects of assessment and evaluation with higher education. Its purpose is to advance understanding of assessment and evaluation practices and processes, particularly the contribution that these make to student learning and to course, staff and institutional development.
College teaching	A quarterly cross-disciplinary academic journal focused on the subject of teaching in higher education and the Scholarship of Teaching and Learning, with special focus on improving student learning.
Computers & Education	Computers & Education aims to increase knowledge and understanding of ways in which digital technology can enhance education, through the publication of high-quality research, which extends theory and practice.
Educational Psychologist	The scholarly essays, reviews, critiques, and theoretical and conceptual articles featured in this exceptional journal contribute to understanding issues, problems, and research concerning all aspects of educational psychology. From meta-analyses of studies probing the effectiveness of teaching methods to historical examinations of textbook standards, the journal provides insightful explorations of new educational concepts and accepted educational practices.

Educational Psychology Review	Educational Psychology Review is an international forum for the publication of peer-reviewed integrative review articles, special thematic issues, reflections or comments on previous research or new research directions, interviews, and research-based advice for practitioners - all pertaining to the field of educational psychology.
Educational Research Review	Educational Research Review is an international journal addressed to researchers and various agencies interested in the review of studies and theoretical papers in education at any level.
Higher Education	Examines educational developments throughout the world in universities, polytechnics, colleges, and vocational and education institutions.
Higher Education Research & Development	Publishes scholarly articles on the theory and practice of higher education and educational development.
International Journal for the Scholarship of Teaching & Learning (IJ-SoTL)	A peer-reviewed, international electronic journal published twice a year by the Center for Excellence in Teaching at Georgia Southern University to be an international vehicle for articles, essays, and discussions about the scholarship of teaching and learning (SoTL) and its applications in higher/tertiary education today.
International Journal for the scholarship of Teaching and Learning	An open, double-blind peer reviewed electronic journal for research and information about the scholarship of teaching and learning and its applications in higher education.
International Journal of Nursing Education Scholarship	A journal for original research and scholarship about health care delivery, organisation, management, workforce, policy and research methods relevant to health-related professions.
Journal of Educational Psychology	The main purpose of the Journal of Educational Psychology® is to publish original, primary psychological research pertaining to education across all ages and educational levels. A secondary purpose of the Journal is the occasional publication of exceptionally important theoretical and review articles that are pertinent to educational psychology.
Journal of Engineering Education (JEE)	A quarterly peer-reviewed academic journal covering research on engineering education.
Journal of the Scholarship of Teaching and Learning (JoSoTL)	Founded in 2001, the Journal of the Scholarship of Teaching and Learning (JoSoTL) is a forum for the dissemination of the Scholarship of Teaching and Learning in higher education for the community of teacher-scholars.
Medical Education	Medical Education seeks to be the pre-eminent journal in the field of education for health care professionals, and publishes material of the highest quality, reflecting world wide or provocative issues and perspectives.

Medical Teacher	A leading international journal publishing research into medical education for teachers and trainers in the health professions.
New directions for teaching and learning	A journal that aims to inform readers about current and future directions in teaching and learning in post-secondary education, to illuminate the context that shapes these new directions, to illustrate these new directions through examples from real settings, and to propose ways in which these new directions can be incorporated into other settings.
Review of Educational Research	The Review of Educational Research (RER) publishes critical, integrative reviews of research literature bearing on education, including conceptualizations, interpretations, and syntheses of literature and scholarly work in a field broadly relevant to education and educational research
Review of Research in Education	Review of Research in Education (RRE), published annually, provides a forum for analytic research reviews on selected education topics of significance to the field. Each volume addresses a topic of broad relevance to education and learning, and publishes articles that critically examine diverse literatures and bodies of knowledge across relevant disciplines and fields.
Scholarship of teaching and learning in psychology	A peer-reviewed academic journal that features teacher-ready reviews of current research and contemporary theories as well as empirical research designed to foster systematic intentional changes to improve teaching and learning outcomes.
Studies in Higher Education	Publishes international research on higher education issues including institutional management and performance, teaching and learning.
Teaching and Learning Inquiry	An official publication of the International Society of the Scholarship of Teaching and Learning. It includes insightful research, theory, commentary, and other scholarly works that document or facilitate investigations of teaching and learning in the higher education,
Teaching and Teacher Education	An international journal concerned primarily with teachers, teaching, and/or teacher education situated in an international perspective and context.
Teaching Sociology	Publishes articles, conversations, notes, and reviews to advance the quality of sociology instruction and the scholarship of teaching and learning in the discipline.
The Internet and Higher Education	A quarterly peer-reviewed journal devoted to addressing contemporary issues and future developments related to online learning, teaching, and administration on the Internet in post-secondary settings.