33RFP ERFP Grant Writing Workshop: *Development Grants*

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11 March 2025, 1pm

Outline

- Aims and scope
- Grant types
- Funding quantum
- Grant review process
- Considerations in grant application.
- Sharing by A/P Adrian Kwek (SUSS) and Asst Prof Wen Yun (NIE) on their experiences in applying and conducting development projects
- Q&A

ERFP Aims

- Strengthening the foundation (in terms of knowledge, capability, and structure) for education research, development and innovation in existing and emerging research areas.
- Encourage efforts to design, develop and implement strategic, evidence-based, theoretically-warranted, collaborative, scientifically-rigorous and outcomes-focused innovations in schools and classrooms
- Primary aims: improve classroom practice, enhance student outcomes, and build organizational and teacher capacities

ERFP Scope

Projects should fall within the following scope:

a) Early childhood, primary, secondary and/or junior college/centralised institute education-related.
b) Studies on other parts of the education system that link to the emphasis of ERFP might be considered if those links are clearly articulated.
c) May involve formal or informal learning linked to (a).
d) Teacher education and teacher professional learning for Singapore's education system.
e) Studies of pathways of education and/or lifelong learning which are based in or include participants from higher education are allowed (bearing in mind (b)). Projects that are limited to benefits for higher education not related to (a) are excluded.
f) Meta-analysis/meta-synthesis studies can be submitted for funding if the studies meet all of the ERFP requirements. This includes ensuring that the scope of the synthesis is well-defined, and the proposed budget and methodology are clearly articulated in line with the intended scope. Traditional literature reviews are not within the funding scope.
g) International comparisons are allowed on a case-by-case basis. Funds cannot be sent overseas. Please see funding guidelines.

Value proposition

Well-articulated problem and relevance of the proposal to MOE

- Theoretical and international contribution
  - Related to up-to-date key issues, gaps and theoretical concepts
  - Highlight Singapore's educational research capacity
- Local impact (as well as practical value)
  - MOE 5th Tranche Research Priorities
    - https://erfp.edu.sg/moe-research-priorities/
    - 33RFP Grant Call Administrative Guidelines (https://erfp.edu.sg/wp-content/uploads/2025/02/33RFP-Administrative-Guidelines.pdf)

Grant Categories

‘**Research’ grants**

- Produce new knowledge or addressing a theoretical issue/problem which may lead to
  - improvements in classroom practice
  - enhanced student outcomes
  - building organizational and teacher capacities.
- They should be situated within a broader international understanding but have clear, local relevance.

‘**Development’ grants**

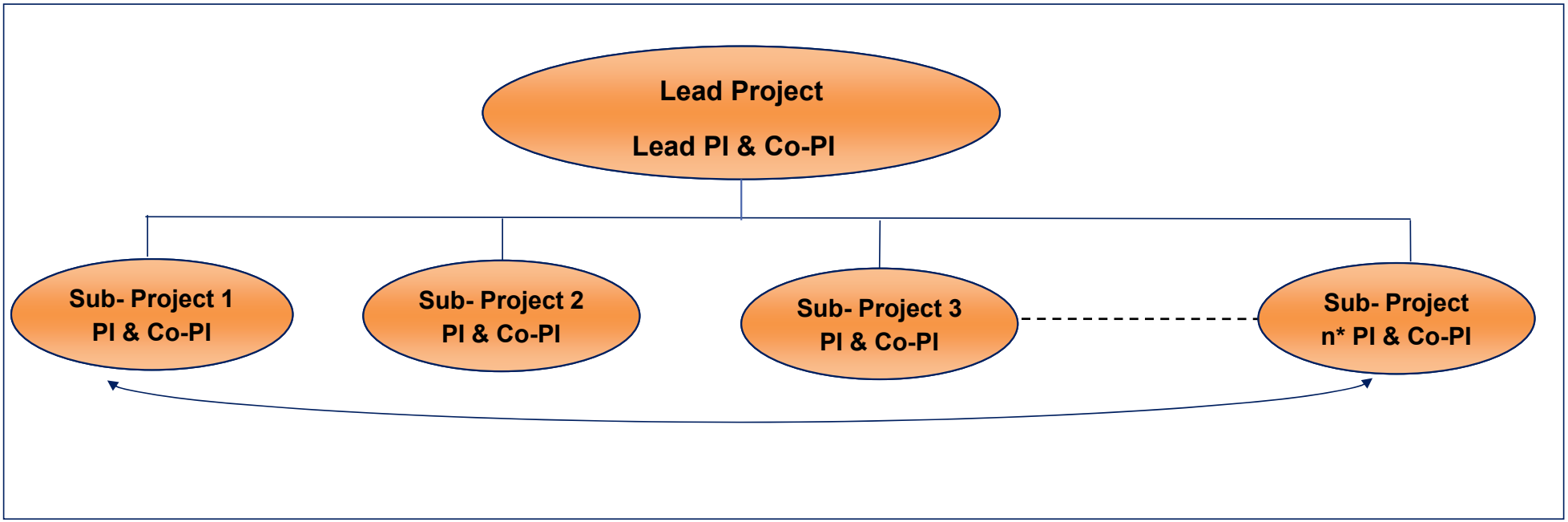
- Focus on developing, implementing and evaluating deliverables which are generally usable ‘products’
  - e.g. new curriculum, educational tools, databases, etc.
- These might be translation projects that build on and evaluate an implementation from a previous grant.
- Development grants should recognize relevant international work but the focus is on local deliverables/outputs.

Main Grant Types

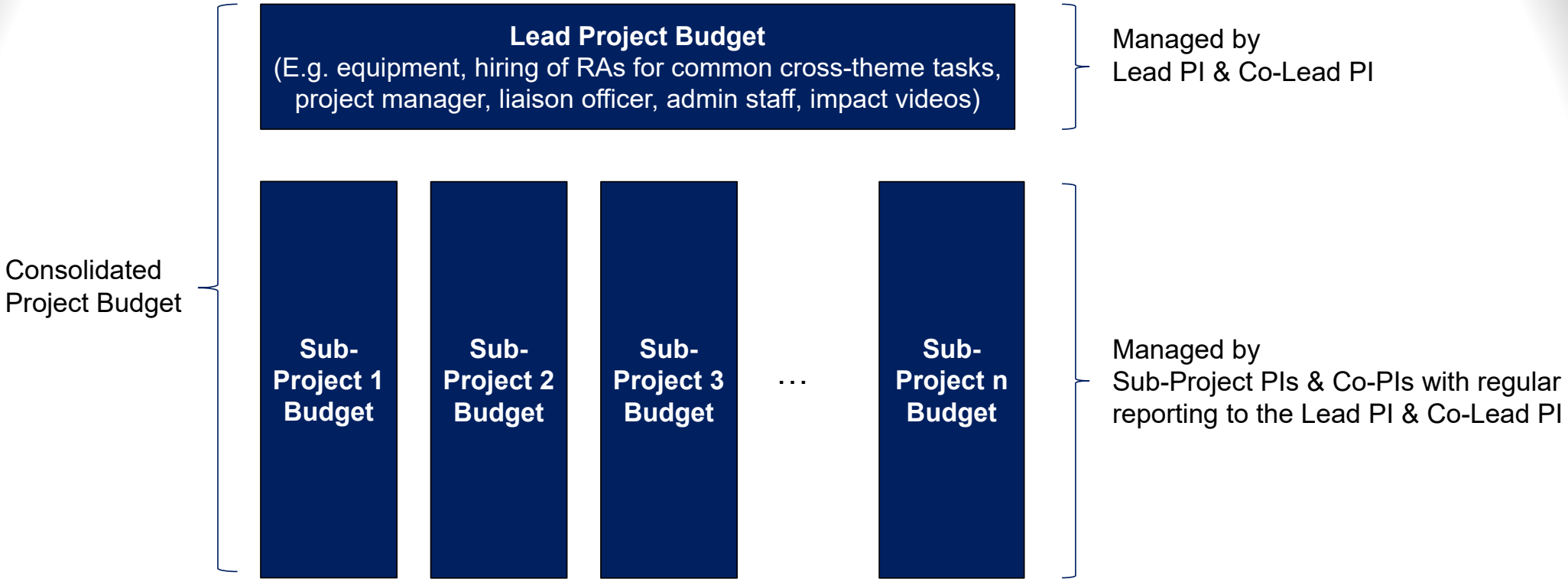
'Programmatic' research

- A specific category of proposals which have a funding quantum of a Tier 3 proposal
- Defined by an over-arching research theme which focuses on a key educational issue, problem, phenomena or outcome, along with a number of interlinked sub-themes.
  - The sub-themes are investigated through specific research studies (i.e., 'projects') that address important aspects or components of the over-arching issue, problem, phenomena or outcome.
  - They have a common strand or focus, supported by a common theoretical framework, and undertakes a coherent, comprehensive, multi-faceted approach to understanding and addressing the issue, problem, phenomena or outcome.
- Have strong translational efforts as part of its agenda, including:
  - encouraging stakeholders to be actively involved at the proposal design stage
  - building in time and funding for professional development
  - designing an innovation or intervention as part of the proposal
  - hiring journalistic writers to translate findings for various stakeholders.

Programmatic Research - Project Structure



Programmatic Research - Budget Structure



Programmatic research may have team members from different institutions.

For further information on Programmatic Research, please refer to the 33RFP ERFP Administrative Guidelines

https://erfp.edu.sg/useful-resources/

MOE Research Priorities

- ERFP 5th Tranche MOE Research Priorities
- ERFP 5th Tranche Research Priorities Annex (Descriptions of research agendas)

32RFP Grant Call Materials

- 32RFP ERFP Grant Call Briefing Slides

Tips for Grant Writing

Theme	Description	Materials
General	For wide general audience, covering fundamentals and common issues by Dr Fannie Khng during 30RFP	Video; Reference Slides
Intervention studies	Using Conjecture Mapping to Improve the Conceptualization of Intervention Studies) by Dr David Huang during 30RFP	Video; Reference Slides
For Principal Investigators new to ERFP	General and essential processes for new principal investigators by Dr Elizabeth Koh during 31RFP	Video; Reference Slides
Tier 3 and Programmatic Proposals	For PIs interested in applying for Tier 3 and Programmatic Proposals by Dr Elizabeth Koh and A/P Lee Ngan Hoe	Video; Reference Slides

Showing 1 to 4 of 4 entries

Research Types

Each application should also indicate a 'research type'. There should be only one 'type' for each proposal. This has implications for potential follow up, scalability and sustainability (from the study findings).

Foundational/Baseline/Exploratory:

- Contribute to core/basic knowledge in education including understanding teaching/learning, components and processes in learning and instruction; education systems and models.
  - test, develop or refine theories
  - develop innovations in methodologies or technologies
  - examine relationships among constructs
- Establish logical connections for future interventions or potential strategies to improve education outcomes.

Design and development:

- Draw on existing theory and evidence to design and develop interventions or strategies to improve educational outcomes
  - pilot tests and subsequent evaluations of fully developed interventions to determine achievement of outcomes under various conditions
- Results from these studies could lead to addition work to understand foundational theory or indicate subsequent interventions for more advanced testing or lead to translations (if warranted).

Research Types

Efficacy

- These studies estimate impact under 'ideal' circumstances.
  - a higher level of support or developer/researcher involvement than would be the case under normal circumstances.

Effectiveness

- These studies examine the effectiveness of strategies under typical (or near typical) conditions in the target context.
  - more involvement of policy makers/practitioners and more use of 'normal' supports offered in the system.

Scale-up

- These studies examine effectiveness in a wide range of circumstances (e.g., populations, conditions, contexts).
  - developers/researchers are usually involved in the planning and evaluation of scale-up research
  - the day-to-day implementation will extensively involve the policy makers/practitioners.

See examples @ https://www.nsf.gov/pubs/2013/nsf13126/nsf13126.pdf

Intervention Projects

ERFP projects which include intervention as one of the core components are important as ERFP is an education research grant with a focus on generating research findings to improve teaching and learning.

Intervention projects include a tangible tool, resource or framework, which can be newly developed or an improvement of existing interventions and their pedagogical use.

- ICT/AI innovation, support programmes, teaching tools and curricular resources, changes in pedagogical practice and framework, or spatial/environmental design

Intervention projects can be categorized as 'Research' or 'Development' types. They are typically not Foundation/Baseline/Exploratory, though these types of projects might have small-scale intervention components.

An intervention project must include an evaluation component, which examines the efficacy and effectiveness of the intervention, as one part of the overall effort to study the development or scaling of the intervention, in order to inform future system-wide implementation.

Please note the distinctions between, e.g. Design & Development vs Effectiveness as this impacts the expectations for the intervention.

Slide 13

RP0 suggested revision
Rita Elaine Silver (Assoc Prof), 2025-02-04T04:20:35.672

KT0 0 Agree, thank you
Tan Kim Chwee Daniel (Assoc Pro, 2025-02-04T04:25:56.386

ICT/AI-based Proposals

ICT/AI-based proposals

- All proposals focussing on ICT/AI-based innovations need to explicitly highlight links to teaching and learning. Proposals must clearly state the problems/issues/gaps in teaching and learning that the ICT/AI-based innovations are intended to address.
- Applicants who are thinking of putting up proposals with ICT/AI-based innovations/interventions should consider requirements for system-wide incorporation and implementation at the outset (i.e. as part of grant planning). This includes considering the existing social, technical (i.e., 'know-how'), and technological infrastructure and practices of local schools and the education system. Thus, applicants should engage MOE as early as possible.
- Some special considerations for ICT/AI tools can be found at Annex A in the 33RFP ERFP Administrative Guidelines and Terms and Conditions for Applicants: Considerations for ICT/AI innovation proposals.
- For more information or any queries, you may email Darren (CRO) at DARREN_LAI@MOE.GOV.SG or Hong Lim (ETD) at SOON_HONG_LIM@MOE.GOV.SG.

MOE Co-PIs and Collaborators

- A key purpose for involvement of MOE practitioners in ERFP-funded projects is to optimise utility for MOE policies/programmes/practice.
- MOE practitioners can participate as Co-PI or Collaborator, depending on the extent of involvement in the project
- Role of MOE Co-PI or Collaborator
  - Bring specialised and contextual knowledge (e.g., local school system, curriculum, MOE needs and priorities) to bear on the research project
  - Work with the PI and research team to
    - assess the potential/enacted utility of preliminary and final findings
    - distil and communicate insights from the findings
    - conceptualise follow- up projects (including designing or refining interventions), track the impact of interventions (if applicable) or lead in system-wide implementation (including through MOE systems)

Project Collaborations

Collaborations

Tier 3 and Programmatic Proposals are required to include Co-PIs or Collaborators from MOE (that is MOEHQ officers, Senior Specialists and Master Teachers)

If you are interested in meeting MOE Senior Specialists with similar interest, contact ERFPO grants@erfp.edu.sg and we will help you make connections.

Cross-institution collaborations are strongly encouraged to maximise research expertise (content expertise, pedagogical expertise, expertise in the workings of the local education system).

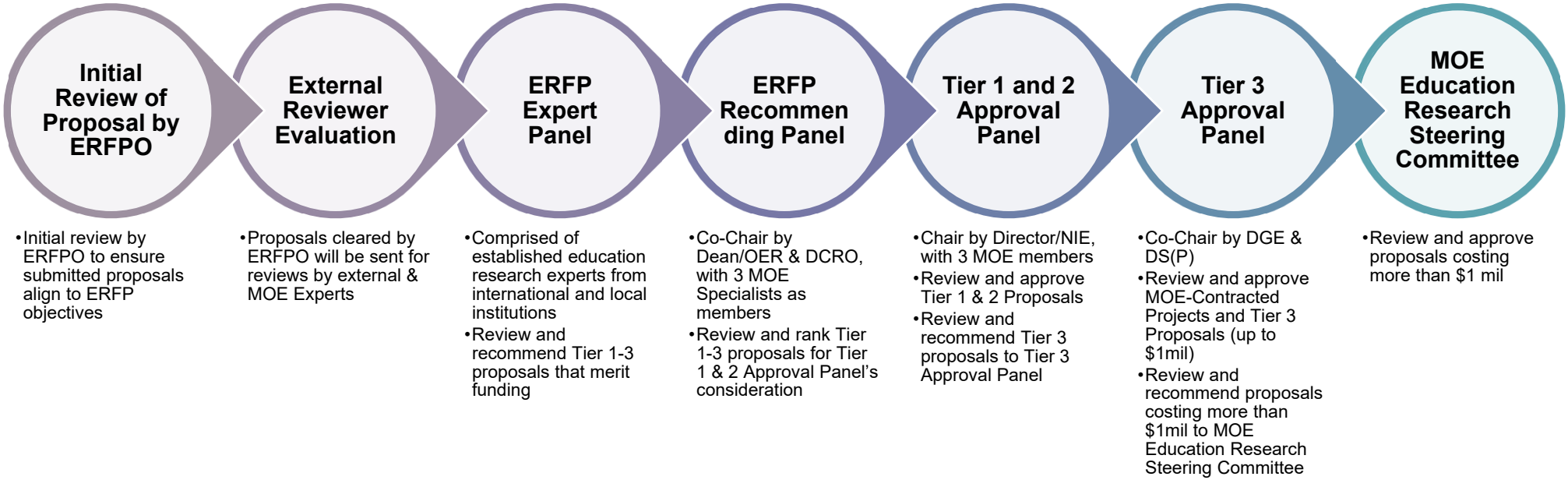
ERFP Funding Quantum

TIER	QUANTUM
1	< S$200K
2	S$200K to < S$450K
3 / Programmatic Proposal	≥ S$450K

*In the 5th tranche, the Institutional Indirect Research Costs (IIRC) is at a flat rate of 30% of the total direct costs of each approved project; IIRC will be allocated to the PI's Institution; Total project cost (i.e. including both direct and indirect cost) will be used to determine the funding tier of the proposal as shown in the Table.

Grant Application Review Process

The Approval Panel Meetings convene twice a year in tandem with the grant call cycle.



Timeline 33RFP Grant Call – for PI Submission

Timeline	Details
18 February 2025	33rd Request for Proposals
***^ 27 March 2025 (5pm)**	Expression of Interest (EOI) Deadline
^ 10 April 2025 (5pm)	Submission Deadline
17 April 2025	Endorsement by Reporting Officer / Director of Research (DoR)

*EOI must be submitted if the PI intends to submit a proposal.

^ERFPO **will not accept late submissions of EOI or of full proposals after the respective deadlines above**.

Applicants are strongly advised to submit the EOI and the proposal documents as early as possible so that there is time to resolve any issues that may arise.

Timeline 33RFP Grant Call – For Information

Timeline	Details
28 April 2025	Initial Screening
2 May 2025 to 5 June 2025	Peer Review of Proposals
2 July 2025 to 4 July 2025	ERFP Expert Panel Meeting
17 July 2025 to 18 July 2025	ERFP Recommending Panel Meeting
8 September 2025	ERFP Tier 1 and Tier 2 Approval Panel (T1T2AP) Meeting
Nov 2025 (EST)	Award of Tier 1 and Tier 2 Projects
Feb 2026 (EST)	ERFP Tier 3 Approval Panel (T3AP) Meeting
Feb/Mar 2026 (EST)	MOE Education Research Steering Committee (ERSC) Meeting
Apr/May (EST)	Award of Tier 3 and Programmatic Projects

PIs should note this timeline for planning their start date and Gantt chart (project activities).

Gantt Chart

- The Research Implementation Schedule should include sufficient detail to show the progress of work in relation to the purpose, hiring, Research Associate/Assistant (RA) work, methodology and budget.
- The Gantt Chart should be detailed and should align with justification of budget line items to show which work is undertaken when, how it relates to the budget, and especially to research teams (e.g. RA) costs.
- Key tasks undertaken by Research Associates/Assistant/Research Fellows should be clearly indicated in the Gantt Chart to support the hiring period.
- In particular, be sure to include RA work at each stage (e.g. instrument development, data archiving, final report preparation).
- For Programmatic proposals, there should be 1 Gantt Chart for each sub-project including the lead project, and 1 Gantt Chart for the overall project, showing the links across the lead and sub-projects
    - Be sure to indicate work for sub-projects and if the PP has phase or stages which are dependent on outcomes/deliverables from other sub-projects, be sure to show the timeline flow; good to design larger projects as relatively independent phases (including RQs and resources)

Gantt Chart

Implementation Schedule, Milestones, and Deliverables (Gantt Chart Format)

This chart must be completed and submitted with the application documents

Estimated start dates for 31st Request for Proposals:

Tier 1 and Tier 2 projects: from November 2025

Tier 3 and Programmatic projects: from Febuary 2026

Note: Please include the task of getting your institution's Institutional Review Board (IRB)'s approval and approval from MOE for data collection in your Gantt chart. These can take up to 3 months before data collection begins. Also take note that the process of hiring of RAs can take approximately 3 months.
Key tasks undertaken by Research Associates/Assistant/Research Fellows should be clearly indicated in the Gantt Chart to support the hiring period.

Please refer to the list below as a guide for the Gantt Chart:
Application of ethics clearance, Application of MOE data collection approval (if applicable), Appointment of staff, Literature review, Data collection, Data analysis, Discussion with MOE collaborators on translation plan (if applicable), Writing of final report and any other milestones (please indicate if a RC5 has been approved/ is pending for approval for any change in timeline).

Indicate (using 'X') the project timeline and KPIs by quarter.

Implementation Schedule (including RA duties), Milestones and Deliverables	2025				2026				2027				2028				2029				2030			
	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec
IRB Approval	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MOE Approval	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hiring of RAs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Confirming schools	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Online surveys (1) & (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Analysis of data (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classroom obervations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Focus group discussions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Analysis of data (2)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Write-up of final report	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Considerations

- Cohesion, clear structure and rigour
  - Entire proposal should be cohesive and align with the aims, research questions, deliverables and methodology
    - Grant application form
    - Case for Support

Considerations

- Methodology needs to be clearly and adequately detailed
  - Participants: Sample specified (and sampling strategy)
  - Provide example instruments/protocol (elaboration can be added to the Appendix e.g., international/local validity)
  - For relatively new methods and analysis, provide layman explanations and definitions
  - Analysis plan
    - How data will be analyzed
    - How different sources of data will be integrated and analyzed to address the research questions (RQs)/aims
    - For qualitative studies, useful to provide analytical frameworks/proposed coding schemes

Considerations

- Balance ambition with pragmaticism e.g.
  - Timeline
  - Access to/Working with schools
    - MOE co-PIs and collaborators

Ethical considerations

- Stronger consideration of ethical concerns at ‘macro’, ‘meso’ and ‘micro’ levels
- Especially for artificial intelligence research and new areas/innovations that could be more ‘invasive’
  - E.g., identifiable voices/videos, data/algorithm biases
- Provide justification and address concerns of possible ethical issues

Table 3.1 Key Ethics Questions at Three Different Levels of Inquiry

Level of inquiry	Focus	Key ethics questions for researchers to ask themselves
Micro	Individual	Does my research impinge on the individual’s right to privacy?
		Could my research offend subjects in any way?
		Could my research cause emotional distress to any of my subjects?
		Has my own conduct been ethical throughout the research process?
Meso	Group	Does my research follow the ethical guidelines of my profession and discipline?
		Have I met my duty to those who funded my research?
Macro	Society	Does my research meet societal expectations of social research?
		Have I met my social responsibilities as a researcher?

https://saylordotorg.github.io/text_principles-of-sociological-inquiry-qualitative-and-quantitative-methods/s06-03-ethics-at-micro-meso-and-macro.html

Important Considerations

- If the proposal is approved, the final version of the application documents is **binding** in that the PI cannot deviate from what is stated in the approved documents (e.g. research questions, deliverables, methodology, sample size).
- If the PI needs to deviate from what is stated in the documents due to changing circumstances, an **amendment request (RC5)** must be submitted to ERFPO for approval prior to enacting any changes.
- ERFPO has the right to reject any amendment requests.
- The inclusion of a Co-PI from the same institution as the PI is mandatory for all proposals so as to ensure continuity of the project should the PI be unable to continue.

Sharing by A/P Adrian Kwek, SUSS

REFLECTIONS FROM WORKING IN DEVELOPMENT PROJECTS …

Sharing by Asst Prof Wen Yun, NIE/NTU

REFLECTIONS FROM WORKING IN DEVELOPMENT PROJECTS …

Any Questions?

Contact Information

- For general grants queries, please email ERFPO grants@erfp.edu.sg.
- For technical assistance on ROMS, please email Research Operation Management System IT Support (NIE) servicedesk@nie.edu.sg.
- For queries on Points of Contact (POCs) of the respective IHLs, please email ERFPO grants@erfp.edu.sg.
- ERFP details can be found at https://erfp.edu.sg/