Education Research Funding Program (ERFP)
24RFP Information for NIE Faculty

NIE Office of Education Research (OER)
30 April 2020
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Grant Call Information
Education Research Funding Programme (ERFP)

• The 24th Request for Proposals (RFP) is the 5th call of the 4th tranche of research funding from the Ministry of Education (MOE), Singapore for the continuity of NIE’s Education Research Funding Program (ERFP) (FY2018-2022).

• It is open to Institutes of Higher Learning (IHL) for the second time. The Call for IHLs takes place once each year (alternate ERFP calls).

• The ERFP focusses on education research in Singapore (in terms of knowledge, capability and structure), developing innovations in existing and emerging niche research areas, and growing hubs of research excellence to support Singapore’s education system in providing “Research-Informed Education for Future-ready Learners.”

• Click here for examples of ERFP Projects.
# Grant Call Information
## ERFP Funding Quantum

<table>
<thead>
<tr>
<th>Grant Tier</th>
<th>Quantum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>&lt; S$150K</td>
</tr>
<tr>
<td>Tier 2</td>
<td>S$150K to &lt; S$350K</td>
</tr>
<tr>
<td>Tier 3 &amp; Programmatic Proposal</td>
<td>≥ S$350K</td>
</tr>
</tbody>
</table>
Programmatic Research Proposal Scope and Submission Details

Scope
Programmatic research is defined by an overarching research theme which focuses on a key educational issue, problem, phenomena or outcome, along with sub-themes – closely related research studies that address important aspects or components of the issue, problem, phenomena or outcome.

It is not enough that projects are thematically linked; they must be inter-dependent (‘the whole is greater than the parts’). This means that projects have to show not only coherence but cohesion. Examples might be shared use of data, multiple projects addressing the same RQs, exploring alternate solution to same problem. Other options for inter-dependence are possible.

Programmatic research therefore has 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.

Submission Process and Details
All Programmatic Proposals applications are submitted online via ROMS. However, if NIE Applicants are submitting a Programmatic Proposal with IHL members as Project PIs, the submission is to be done via the softcopy Programmatic Proposal Application Form and emailed to oergrant@nie.edu.sg. OER will forward the programmatic applications to the respective Reporting Officer/ Institution’s Director of Research (DoR) for endorsement after completeness checks.
Programmatic Research Project Structure

Lead PI & Co-Lead PI (Mandatory)

Project Research

Project 1 PI

Project 2 PI

Project 3 PI

Project n* PI

*The average number of themes for a typical programmatic research is between two to five.

Diagram showing the relationship of Programmatic Project and its Projects
Programmatic Research Budget Structure

A graphical overview of the programme’s budget structure

Note: For further information on Programmatic Research, please refer to the 24RFP ERFP Administrative Guidelines
ERFP Research and Development

Research Grants

‘Research’ grants have the overarching purpose of producing new knowledge or addressing a theoretical issue/problem which may lead to improvements in classroom practice, enhance student outcomes, and build organizational and teacher capacities. They should be situations within a broader international understanding but have clear, local relevance.

Development Grants

‘Development’ grants must have a clear focus on developing, implementing and evaluating deliverables which are generally usable ‘products’ (e.g., new curriculum, educational tools, databases, etc.) in the local context. 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.
ERFP Research Grant Application Review Process

The Education Research Committees (ERCs) convene twice a year in tandem with the grant call cycle.

- **MOE ERC**: Approve Tier 3, Programmatic and MOE-Contracted Proposals
- **NIE ERC**: Approve Tier 2, Recommend Tier 3 and Programmatic Proposals
- **OER ERC**: Approve Tier 1, Recommend Tier 2, 3 and Programmatic Proposals
- **ERFP Expert Panel**: Review and Recommend Tier 1, 2, 3 and Programmatic Proposals that merit funding
- **Reviewer Evaluation**: Reviewers: Internal, External and MOE Experts
- **Initial Review**: Evaluation of Methodological Rigor and Objectives by OER
Principal Investigator (PI) and Team Member Eligibility Criteria

PI Eligibility Requirement
• Full time academic staff (hired on the IHL’s academic track / academic contract)
• For development grants, applicants should preferably have a doctorate degree

Team Member Eligibility Requirement
• Full time academic can apply as team members (Co-PI and Collaborators)
• Non-academic staff with expertise that is relevant to the project can be a research team member with justifications on the role. E.g. MOE Experts
• The inclusion of at least one 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.
## Investigator’s Eligibility

<table>
<thead>
<tr>
<th>Role</th>
<th>Principal Investigator</th>
<th>Co-Principal Investigator</th>
<th>Collaborator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Research</td>
<td>Development</td>
<td>Research</td>
</tr>
<tr>
<td>Professor</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research Scientist</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Lecturer</td>
<td>Yes, with doctorate degree only</td>
<td>Preferably with doctorate degree</td>
<td>Preferably with doctorate degree</td>
</tr>
<tr>
<td>Teaching Fellow</td>
<td>Yes, with doctorate degree only</td>
<td>Preferably with doctorate degree</td>
<td>Preferably with doctorate degree</td>
</tr>
<tr>
<td>Post-Doctoral Fellow</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Focus of Research

INSPIRING LEARNING
TRANSFORMING TEACHING
ADVANCING RESEARCH
Science of Learning in Education focusses on research that employs neural and physiological research methods that are portable with ease of implementation in schools. Research funded in this area will propel the evolution of new principles of teaching and learning that make strong connections between neurobiological structures and processes, contexts of learning and educational outcomes.

The Science of Learning in Education (SoLE) focus for the 24th ERFP call draws upon a science-based understanding to assess the effectiveness of educational methods and to develop new teaching and learning strategies that can lead to actionable and scalable interventions within the education system, enhance learning outcomes through adopting a more holistic understanding of learning, and translate upstream SoLE research findings to downstream learning implications.
24RFP Themed Call – Science of Learning in Education (SoLE)

Researchers, practitioners and MOE partners are encouraged to develop research ideas that draw on interdisciplinary fields and expertise to biologically-ground analyses of behaviours and learning that can lead to:

i. evidence-informed research that can solve problems in education,
ii. inform pedagogical redesign,
iii. address issues of scale & sustainability, or
iv. support educational system goals.

The key areas of focus for the will be in the following areas, but not limited to:
• Human Potential
• Cognitive and Mental Wellbeing
• Physical Health
• Diet/Nutrition
• Educational Neuroscience

NIE OER also welcomes applications for the 24RFP with MOE Priority Research Foci.
Planning Your Research

Note that all proposals need not fit within SoLE for the 24RFP but all proposals should indicate how they fit within the above options for research foci and programme.

Thus, in planning your research focus, you should consider how your proposed project fits within the MOE priority research foci, the research programmes of the Future-Ready Learners’ Agenda, and the special SoLE call.
### NIE OER 4th Tranche Research Programmes

<table>
<thead>
<tr>
<th>Research Programmes under OER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cognitive, Emotional and Social Development (CESD)</td>
</tr>
<tr>
<td>2. Teacher Professionalism and Learning (TPAL)</td>
</tr>
<tr>
<td>3. Schools, Leadership and System Studies (SLSS)</td>
</tr>
<tr>
<td>4. Lifelong Learning, Cognition and Wellbeing (LLCW)</td>
</tr>
<tr>
<td>5. Learning Sciences and Innovation (LSI)</td>
</tr>
</tbody>
</table>
# MOE Priority Research Foci

<table>
<thead>
<tr>
<th>Research Foci</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Instructional Core</strong></td>
<td>Pedagogical research that studies the teaching and learning practices in the instructional core (academic and non-academic) and how to improve these practices is important and useful to MOE. Possible lines of inquiry include research to describe and measure patterns of curriculum, instruction and assessment practices in Singapore schools; measure and explain the impact of these practices on student outcomes with consideration of student/classroom characteristics; as well as identify opportunities for improvement through interventions and professional development.</td>
</tr>
<tr>
<td><strong>2. Contexts of Learning</strong></td>
<td>Learning occurs within multiple socio-cultural-historical contexts which interact with individual differences to affect learning. A nuanced understanding of the complex interactions among these contexts and their impact on individual learning is needed to better shape educational policies and customise effective programmes. Possible lines of inquiry include research to examine less formal learning environments (including out-of-school and online) which affect learning; as well as understand the diverse needs, schooling experiences and life contexts (e.g., home, community) of students (beyond their individual differences) so as to enhance their overall learning and well-being.</td>
</tr>
<tr>
<td><strong>3. Early Childhood Education</strong></td>
<td>Children’s early years can critically affect their longer-term developmental trajectories, and quality early childhood education plays an important role in developing their potential to the fullest. Possible lines of inquiry include research to examine structural and process factors which influence children’s learning and developmental outcomes (including non-academic areas); design effective professional development for pre-school practitioners; as well as understand the levers and mechanisms which can help narrow developmental and learning gaps for low progressing children (including those from disadvantaged backgrounds).</td>
</tr>
</tbody>
</table>
## MOE Priority Research Foci

<table>
<thead>
<tr>
<th>Research Foci</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Bilingualism and Biliteracy Education</td>
<td>Bilingual policy has been a cornerstone of Singapore’s national curriculum. Contextually-attuned research is needed to advance our understanding and strengthen our approaches in English and Mother Tongue Languages learning. Possible lines of inquiry include research to support and motivate students who are less proficient in English and Mother Tongue Languages; develop age-appropriate language proficiency measures; as well as understand the perceived role and value of Mother Tongue Languages and English Language among families and in society.</td>
</tr>
<tr>
<td>5. Lifelong Learning</td>
<td>It is important to help our learners develop not only the competencies that allow them to access further learning (i.e., learn how to learn), but also the desire to learn, so that they can and will continue to learn long after they leave school. Possible lines of inquiry include research to examine the knowledge, skills, attitudes and values (KSAV) that are essential for a student to be an effective lifelong learner beyond their schooling years; as well as understand the relationship between these KSAV and 21st century competencies (including adaptability, resilience, perseverance) needed to thrive in life and at work.</td>
</tr>
</tbody>
</table>
Administrative Matters
## Timeline 24RFP Grant Call

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 April 2020</td>
<td>Grant Call Announcement</td>
</tr>
<tr>
<td>*22 May 2020 (5pm)</td>
<td>Submission of Expression of Interest (Required for all submissions)</td>
</tr>
<tr>
<td>*1 Jul 2020 (5pm)</td>
<td>Submission deadline of proposals by Applicants</td>
</tr>
<tr>
<td>13 Jul 2020</td>
<td>Deadline for Endorsement by Reporting Officer</td>
</tr>
<tr>
<td>10 to 13 Jul 2020</td>
<td>Initial Screening</td>
</tr>
<tr>
<td>14 to 15 Jul 2020</td>
<td>Clearance of proposals by Dean, ER</td>
</tr>
<tr>
<td>16 Jul - 31 Aug 2020</td>
<td>Stage 1 - Peer Review of Proposals</td>
</tr>
<tr>
<td>3 Sep 2020</td>
<td>Sending of Peer Reviews to ERFP Expert Panel (3 weeks before Panel Convenes)</td>
</tr>
<tr>
<td>21 - 24 Sep 2020</td>
<td>Stage 2 - ERFP Expert Panel</td>
</tr>
<tr>
<td>28 Sep - 29 Sep 2020</td>
<td>Stage 3 - OER Education Research Committee (ERC)</td>
</tr>
<tr>
<td>9 Nov – 12 Nov 2020</td>
<td>Stage 4 - NIE Education Research Committee (ERC)</td>
</tr>
<tr>
<td>Dec 2020 / Jan 2021</td>
<td>Award of Tier 1 and Tier 2 Projects</td>
</tr>
<tr>
<td>End Jan 2021</td>
<td>MOE Education Research Committee (ERC)</td>
</tr>
<tr>
<td>Mar 2021</td>
<td>Award of Tier 3 and Programmatic Projects</td>
</tr>
</tbody>
</table>

*Note: NIE OER will not accept late submissions of expressions of interest and full proposal submission after the respective deadlines above.
NIE Education Research Funding Programme (ERFP)

A. ERFP Grant Call and Briefings
1. 24th Request for Proposals: Announcement [20 Apr 2020]
2. 24th Request for Proposals: Briefing Slides

B. Link to Research Operation Management System (ROMS)

Note: All applications for ERFP (Tier 1-3) as well as Programmatic Proposal are submitted online via ROMS™

1. Research Operation Management System (ROMS)
2. ROMS Official Manual for ERFP Tier 1-3 Grant Applicants
3. ROMS Official Manual for ERFP Tier PP Grant Applicants

NIE Portal (http://portal.nie.edu.sg/): Login > Services > Academic > Research > NIE Education Research Funding Programme (ERFP)
ROMS Link: 24RFP ERFP Guidelines and Application Package

Application

Application

Application
24RFP ERFP Guidelines and Application Package

24th Request for Proposals: 20 Apr 2020
Expression of Interest: 22 May 2020, 5pm
Submission Deadline: 01 Jul 2020, 5pm
Endorsement by Reporting Officer: 13 Jul 2020

The NIE, Office of Education Research has announced its 24RFP in the 4th Tranche of ERFP Funding on 20 Apr 2020. This application package contains the Administrative Guidelines and Forms for applicants’ reference.

For more information, please visit our websites and staff portal:

i. National Institute of Education, Office of Education Research Website
ii. Grant Call Announcement and Information can be found in the NIE ERFP Website
iii. Guidelines and Forms for ERFP can be found in the NIE Staff Portal [http://portal.nie.edu.sg] Login > Services > Academic > Research > NIE Education Research Funding Programme (ERFP)]
ERFP Administrative Guidelines

Administrative Guidelines for ERFP Applicants

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Case for Support - Recommendations and Contingencies

Your Case for Support should cover the following items:

<table>
<thead>
<tr>
<th>Research Project</th>
<th>Development Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Objectives of the Research Project</td>
<td>a) Purpose</td>
</tr>
<tr>
<td>b) Relevance to MOE / NIE / OER / IHL’s Goals and Directions</td>
<td>b) Relevance to MOE / NIE / OER / IHL’s Goals and Directions</td>
</tr>
<tr>
<td>c) Literature Review</td>
<td>c) Review of Current Development Landscape</td>
</tr>
<tr>
<td>d) Purpose of Proposed Study</td>
<td>d) Project Life Cycle</td>
</tr>
<tr>
<td>e) Competitive / Comparative Advantage</td>
<td>e) Evaluation Phase of the Development</td>
</tr>
<tr>
<td>f) Description of Principal Investigator’s and Team Members’ Effort Level in Project</td>
<td>f) Competitive / Comparative Advantage</td>
</tr>
<tr>
<td>g) Description of Principal Investigator’s and Team Members’ Effort Level in Project</td>
<td></td>
</tr>
</tbody>
</table>

Although not specified in the application form, please also include brief comments on ethical considerations and contingency plans (especially for larger projects).

For Programmatic proposals, include a short description of how the programmatic research will be managed by the team. The case for support should also state how the projects are linked or in what way they work together for greater synergy.
Case for Support for Development Projects

This should broadly cover the following items:

1. **Development Phase**
   - **Purpose (Why)**
     - E.g., build software which will make reading comprehension in Chinese more engaging.
   - **Deliverables (What)**
     - E.g., provide software and manual to fulfill the above purpose.
   - **Objectives (What)**
     - Specifically what you intend to achieve, i.e., indicators of success, key performance indexes.
   - **Project Life Cycle (How)**
     - E.g., Details of how the software will be developed.

2. **Evaluation Phase**
   - Evaluate whether or not you achieved the objectives of the project.
   - E.g., How the success of software is being tested.

If objectives are not achieved, redesign the development.

Iterative Development
(2nd phase of evaluation)
Comments on Budget in Case for Support

For projects which are exploratory or where results are dependent on previous stages, the Case for Support should include comments on the budget for the respective stages and tasks.
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.

In particular, be sure to include RA work at each stage (e.g. instrument development, data archiving, final report preparation).
Information on MOE Priority Research Foci: Instructional Core
Instructional Core Priority Research Focus

• Pedagogical research that studies the teaching and learning practices in the instructional core (academic and non-academic) and how to improve these practices

• Possible lines of inquiry include:
  - Research to describe and measure *patterns of curriculum, instruction and assessment practices* in Singapore schools
  - Measure and explain the *impact of these practices on student outcomes* with consideration of student/classroom characteristics
  - Identify *opportunities for improvement* through interventions and professional development
What is the Instructional Core?

The “Instructional Core” focuses on *understanding what goes on and what works in Singapore’s classrooms.*

Specifically, the Instructional Core comprises:

“the teacher and the student in the presence of content … it is the *relationship* between the teacher, the student, and the content—*not* the qualities of any one of them by themselves—that determines the nature of instructional practice, [even though] each … has its own particular role and resources to bring to the instructional process” (City et al., 2009, pp. 22-23).
The Instructional Core is characterised by the interactions among the three elements …

- Actual enactment of planned teaching and learning experiences in the classroom by the teacher and actual responses of the students
- Process by which teacher uses content knowledge (the “what” of teaching), pedagogical knowledge (the “how” of teaching), and pedagogical content knowledge (the “how to teach specific what” of teaching) to “package” the content to facilitate student learning
- Student’s engagement in the learning experiences, designed and presented by the teacher in the classroom

“Classrooms” are not restricted to the physical classrooms. They can include any “space” (including virtual spaces, CCAs) where learning and teaching take place.

(Adapted from the conception by City, Elmore, Fiarman and Teitel, 2009)
Why Instructional Core?
(Why not just ‘classroom research’?)

• Attempt to conceptually define the type of studies that have a high(er) degree of potential relevance and utility to MOE

• By focusing on the 3 elements (teacher, students, content) and the enacted interactions between them, studies can shed light on the state of T&L in Singapore schools, and how to improve T&L.
Instructional Core Broad Research Questions

• **How do teachers teach in Singapore?**
  – How well does the enacted curriculum match the planned curriculum?
  – What are the pedagogies commonly adopted in Singapore classrooms and what makes them unique to Singapore?
  – How do teachers implement new pedagogical practices adopted by MOE? How much, if at all, do they adapt the practice taking into account the local contexts of their classrooms?

• **Why do teachers teach the way they do?**
  – What factors explain the variations in pedagogical practice in Singapore?

• **How effective are the teachers?**
  – How does the enacted curriculum impact student learning?
  – Which pedagogical practices are more effective and which are less effective?
  – Why are they more/less effective, for what (i.e. content of learning, including subject disciplines, 21CC and non-academic skills) and for whom (i.e., student characteristics such as grade level, stream, and home background)?
Increasing Utility of Instructional Core Studies

- NIE works with MOE to implement research on the priority area of the Instructional Core
  - To further usable knowledge to improve teaching and learning
  - To help increase relevance and utility of Instructional Core studies

- Since 2015, Instructional Core projects are coordinated by NIE’s CORE Research Office (CORERO), established to assist, synthesise, and facilitate stakeholder engagement for Instructional Core projects.
Instructional Core Design Considerations

• Greater focus on utility of findings in terms of informing policymaking, programme development and instructional practice
  – Where appropriate, CORERO and MOE will facilitate collaborations between NIE PIs and MOE Representative(s) from relevant MOE divisions
  – Role of MOE Representative(s) to be worked out within project team, e.g.,
    • Advice on choice of schools (e.g., in view of latest policy/programme changes)
    • Within the parameters of the research design, advice on how to increase findings’ utility
    • Provide useful information on policy initiatives
    • Facilitate regular dissemination of interim findings from project team to relevant MOE communities to increase potential utility initiatives
Instructional Core Design Considerations

• CORE Research Office can help NIE PIs:
  – Design of research grant
  – Methodological advice when needed, including established methodologies
  – Co-construct or suggest new developments in methodologies of studying T&L in classrooms
  – Advice on implementation issues
  – Preparing for dissemination to MOE policymakers to better facilitate the potential impact of findings from research projects on policies, programmes and practice
  – Synthesize across Instructional Core studies to further improve the potential utility of findings to MOE and NIE AGs
## Selected Instructional Core Projects

<table>
<thead>
<tr>
<th>Broad Content Area</th>
<th>Project Title</th>
<th>PI</th>
<th>MOE Reps</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Studies Pedagogies and Educational Outcomes</td>
<td>Core 3 Research Programme: Baseline Investigation of Subject-Domain Pedagogies in Singapore’s Primary and Secondary Classrooms (C3-PP)</td>
<td>Dr Beng Kiat Dennis KWEK</td>
<td>CPDD</td>
</tr>
<tr>
<td>Differentiated Instruction</td>
<td>Exploratory Study of Singapore Teachers’ Implementations and Experiences of Differentiated Instruction</td>
<td>Asst Prof Tang Tang HENG</td>
<td>CPDD</td>
</tr>
<tr>
<td>21st CC / ELit</td>
<td>Cultivating Cosmopolitan Virtues through Critical, Aesthetic and Ethical Engagements with Literature</td>
<td>Asst Prof Shen Li Suzanne CHOO</td>
<td>CPDD</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Calculus for Teaching and Learning: An Exploratory Study</td>
<td>Assoc Prof Tin Lam TOH</td>
<td>CPDD</td>
</tr>
<tr>
<td>Science / SEN</td>
<td>Science Teachers and Teaching of Special Education Needs Students</td>
<td>Asst Prof Tang Wee TEO</td>
<td>CPDD</td>
</tr>
<tr>
<td>Teacher Learning &amp; PD</td>
<td>Teacher learning with classroom assessment in Singapore schools</td>
<td>Asst Prof Heng JIANG</td>
<td>CPO</td>
</tr>
<tr>
<td>English Language</td>
<td>Integrating Multiliteracies into the English Language Classroom: Developing an Instructional Approach to Teach Multimodal Literacy</td>
<td>Asst Prof Fei Victor LIM</td>
<td>CPDD</td>
</tr>
</tbody>
</table>
# Selected Instructional Core Projects

<table>
<thead>
<tr>
<th>Broad Content Area</th>
<th>Project Title</th>
<th>PI</th>
<th>MOE Reps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Secondary Teachers’ and Students’ Experiences of Assessment Feedback</td>
<td>Assoc Prof Heng Kiat Kelvin TAN</td>
<td>Assessment Policy &amp; Practice</td>
</tr>
<tr>
<td>Pre-school (EL/MT)</td>
<td>Biliterate Shared Book Intervention with Disadvantaged Preschoolers</td>
<td>Assoc Prof Viniti VAISH</td>
<td>MTLB</td>
</tr>
<tr>
<td>Assessment</td>
<td>Building Teachers’ and Students’ Capacities in Student-Involved Assessment in Primary Classrooms</td>
<td>Dr Hwei Ming WONG</td>
<td>CPO, SCSB</td>
</tr>
<tr>
<td>MT</td>
<td>CORE 3 Research Programme: Baseline Investigation of Mother Tongue Pedagogies in Singapore’s Primary and Secondary Classrooms (C3MT)</td>
<td>Dr Beng Kiat Dennis Kwek</td>
<td>MTLB</td>
</tr>
<tr>
<td>Science</td>
<td>Developing Science Teachers’ Language Awareness to Enhance the Teaching of Disciplinary Literacy: A Study of Teachers’ Lesson Enactments through the Lens of Adaptive Expertise</td>
<td>Dr Lay Hoon SEAH</td>
<td>CPDD</td>
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</tbody>
</table>
Some Non-Examples

• Classroom management
  – Generally about teachers and students. Missing in Content.

• Design and development of curriculum framework and standards
  – Generally focusing on content. Missing in Teacher as well as Student.

• Peer learning
  – Generally involves students and content. Missing in Teacher.

• Interventions focusing on student learning
  – While may involve content and students, some interventions do not involve teachers as part of the design and/or enactment of a new instructional approach.

Key Considerations to Remember:
• Involve all 3 components: Teachers, Students & Content, AND
• At least one relationship between them (interactions, engagement, design)
• Interventions should fulfil above 2 considerations
Information on MOE Priority Research Foci: Contexts of Learning
Contexts of Learning

Description in ROMS

Learning occurs within multiple socio-cultural-historical contexts which interact with individual differences to affect learning. A nuanced understanding of the complex interactions among these contexts and their impact on individual learning is needed to better shape educational policies and customise effective programmes.

Possible lines of inquiry include research to examine less formal learning environments (including out-of-school and online) which affect learning; as well as understand the diverse needs, schooling experiences and life contexts (e.g., home, community) of students (beyond their individual differences) so as to enhance their overall learning and well-being.
Contexts of Learning

• **Contexts of Learning:**
  Studies on interactive contexts of teaching & learning, how these relate to improving classroom practices, understanding Singapore's *socio-cultural milieu*; e.g., studies on home-school contextual links; out-of-school learning; online learning, etc.

• Two proposed areas:
  • Contexts of teaching & learning
  • Social contexts of learning

• Learning & teaching occur in multiple interacting contexts to shape: a.) students, teachers, interactions; b.) curriculum; c.) schooling & system
### Contexts of Learning

<table>
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<tr>
<th>Priority Areas</th>
<th>Early Childhood</th>
<th>K-12</th>
<th>Adult Development</th>
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<td><strong>Contexts of Learning</strong></td>
<td>Effects of early social marginalization</td>
<td>Interest based learning</td>
<td>Meaning &amp; purpose</td>
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<td>Integrating formal &amp; informal learning</td>
<td>School clusters improvement &amp; partnership</td>
<td>Improving parents’ assessment literacy</td>
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<td></td>
<td>Pathways – longitudinal to examine transitions to work</td>
<td>Pathways through school &amp; work</td>
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**CoL:** Effects of marginalization – impact of low SES; Meaning & Purpose – workload, stress, sleep; public perceptions; students’ sense of purpose/meaning; Interest-based: sustained interest, grit, passion; Formal & Informal: looking at practices outside of schools that promote learning; Pathways – longitudinal to examine transitions to work
## Selected Contexts of Learning Projects

<table>
<thead>
<tr>
<th>MOE Key Priority Research Areas</th>
<th>Project Title</th>
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<td>Contexts of Learning</td>
<td>Peer Power: How do <strong>Peer Relationships and Peer Network</strong> Attributes Influence Students' Academic, Motivational and Well-being Outcomes</td>
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<td>Lifelong Learning</td>
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<td>Instructional Core</td>
<td>Designing for greater authenticity in Geographical Investigations (GI) through local microclimate studies with the <strong>Internet of Things</strong> (IoT) and open-source <strong>environmental sensors</strong></td>
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<td>Contexts of Learning</td>
<td>Leveraging on augmented reality technologies for Establishment of Science Trail: An exploratory study</td>
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<td>Building an evidence-base for teacher education: A longitudinal and cross-sectional study of the PGDE programmes</td>
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<tr>
<td>Contexts of Learning</td>
<td>CoSIC: Developing a Pedagogical Co-Skilling Framework and Recommender System for School-Industry-Community (SIC) Partnerships</td>
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<td>Lifelong Learning</td>
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<tr>
<td>Contexts of Learning</td>
<td>Developing and Piloting an Assessment Tool of Daily Living Skills for Students with Special Educational Needs (SEN) in Singapore</td>
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</table>
Contact Information

• For general grants queries, please email OER Grant (NIE) oergrant@nie.edu.sg

• For budgetary queries, please email Research Grant Management Unit (OER) oer.rgmu@nie.edu.sg

• For ICT related budgetary advice, please contact servicedesk@nie.edu.sg.

• For technical assistance on ROMS, please email Research Operation Management System IT Support (NIE) servicedesk@nie.edu.sg.
Thank You

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