Bridging Research and Policy: Strengthening Evidence-Based Policymaking in Education, Science, and Culture in Southeast Asia

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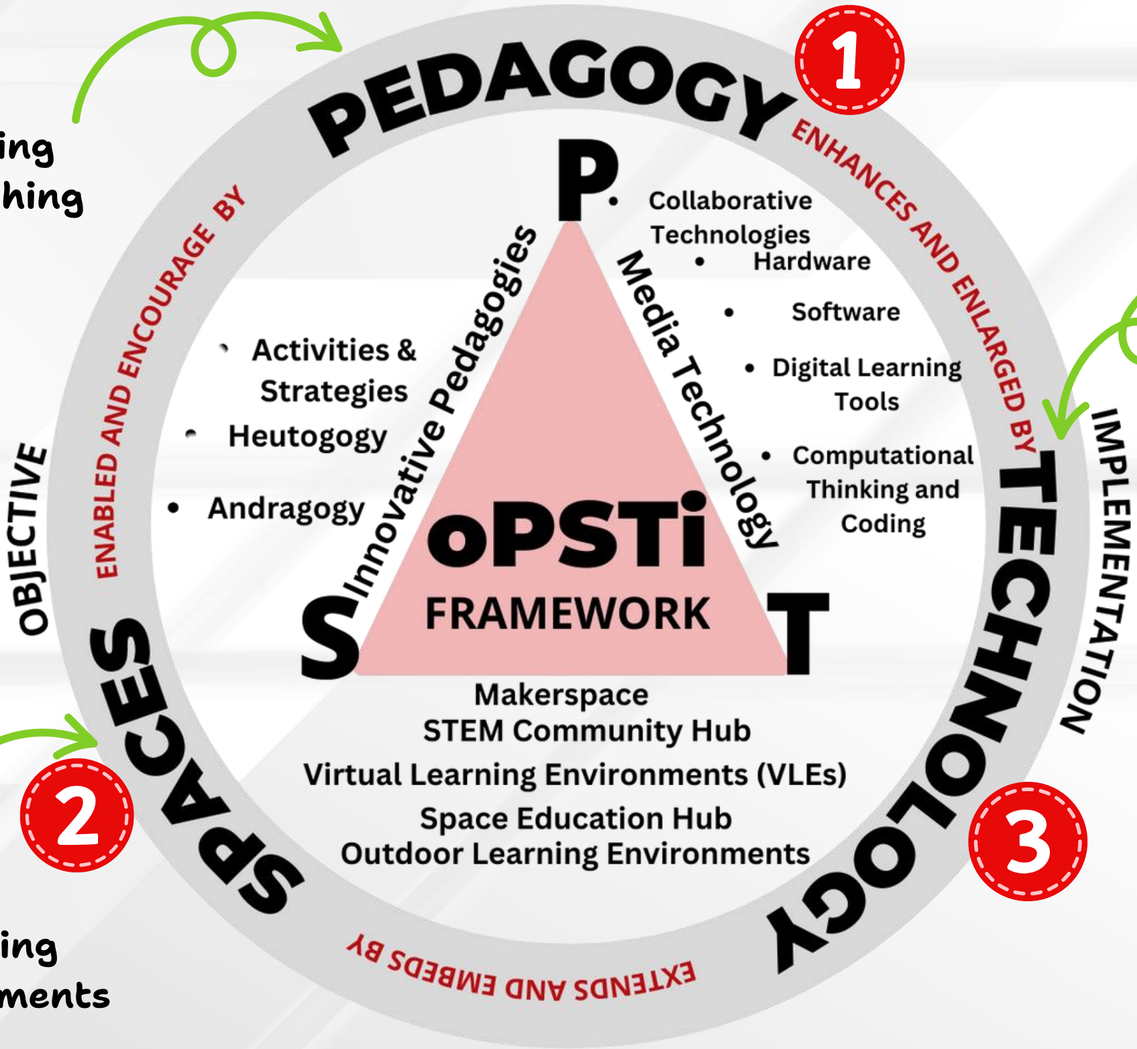
✅ Key Research Conducted

Enhancing STEM Learning Through Innovative Teaching Strategies



Enriching STEM Education Through Technology Tools

Facilitating STEM Learning Through Adaptive Environments

✅ Education Initiatives

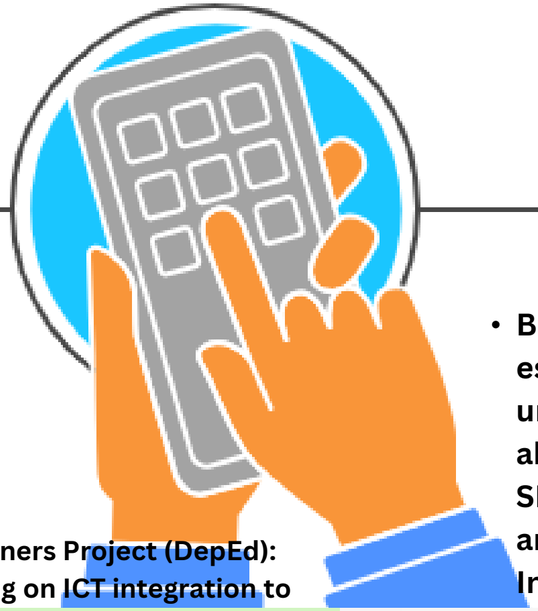
Digital Transformation

Supporting digital transformation in education, aligning with Industry 4.0 strategies.

- National Industry 4.0 and digital economy policies
- Supports ASEAN Digital Masterplan 2025 goals

Example Policy:

- Malaysia's National Policy on Industry 4.0 (Industry4WRD): Encourages integration of digital technologies (AI, IoT, robotics) into education to build a skilled workforce.
- Thailand's Digital Economy Promotion Master Plan: Includes digital infrastructure upgrades and education digitalisation to foster innovation.



Teacher Capacity

Strengthening teacher capacity to integrate innovative pedagogies and technologies.

- Supports UNESCO's ICT Competency Framework for Teachers, which emphasises integrating technology into pedagogy.

Example Policy:

- Philippines' Digital Learners Project (DepEd): Includes teacher training on ICT integration to transform classroom practices.
- Singapore's ICT Masterplan for Education: Provides continuous professional development in digital pedagogies and STEM.

Equitable STEM Access

Enhancing equitable access to STEM education through adaptive spaces and hubs.

- Bridges learning gaps, especially for rural, underserved, and differently-abled learners, aligning with SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities).

Example Policy:

- Indonesia's STEM Learning Ecosystem Policy: Supports establishment of STEM hubs in rural areas to ensure equitable access.
- Cambodia's STEM Education Policy 2020-2025: Focuses on equitable STEM learning spaces and teacher development to improve STEM enrolment and outcomes.

✅ Relevance to Policy Needs

1. Supports Malaysia's Digital Economy Blueprint and regional priorities on STEM and digital literacy.
2. Provides a structured teacher training model for integrating computational thinking and digital tools.
3. Promotes flexible, inclusive learning spaces aligned with 21st-century education reforms.

✅ Research to Policy Translation

1

Invest in digital infrastructure and teacher training.

Develop guidelines and funding frameworks for blended and makerspace learning environments.

2

Policy recommendations