EVALUATING THE EFFECTIVENESS OF CULTURALLY RELEVANT RESOURCES IN STEM EDUCATION IN RURAL SECONDARY SCHOOLS – Solomon Islands

Karen Mavis Alependava, Pacific Adventist University Master of Philosophy proposal

Background and problem: Rural schools lack STEM equipment. Local resources offer potential, but evidence of effectiveness remains limited.

Purpose: Identify and evaluate the effectiveness of cultural relevant resources in STEM education

Methodology

Pragmatism Paradigm leading to Sequential Exploratory Mixed-Methods design.

CONCEPTUAL FRAMEWORK

Figure 2.1. Input–Process–Output model with contextual influences



RESEARCH QUESTIONS

1. Which resources?
2. Teacher views/use?

3. How effective for student learning?

4. Which strategies can strengthen STEM?

Rasmawan et al. (2025), Chandra et al. (2025), Matindike & Ramdhany (2025).

LITERATURE GAP

Method gap: mainly descriptive studies. No empirical evidence that it does work (Rasmawan et al., 2025; Hua, 2026).

Context gap: rural Solomon Islands and wider Pacific remain under researched (Chandra et al., 2025; UNESCO, 2024).

Practice gap: limited guidance on resources and lesson use. (Matindike & Ramdhany, 2025; Shuley, 2026)

EXPECTED CONTRIBUTION

Teachers: guidance on selecting and using local resources.

Students: culturally connected, meaningful STEM learning.

Schools: curriculum support.

Global: agrees with SDG4 ‘Quality Education

Research Communities: provide evidence from Rural Pacific context