EMBEDDING COACHING-INFORMED DESIGN INTO TECHNOLOGY-ENHANCED LEARNING PLATFORMS:

AN EIGHT-CYCLE DESIGN-BASED RESEARCH STUDY

Rihan Mustapha

Independent Researcher & Educator, Riyadh, Saudi Arabia

1. THE PROBLEM

Current TEL Platforms are Content-Centered

- CONTENT
- ACTIVITY
- ASSESSMENT
- COMPLETION

Missing Critical Elements

- Developmental dialogue
- Structured reflection
- Adaptive coaching feedback
- Transfer-to-practice support

Research Gap

Limited research has explored how coaching-informed developmental processes can be systematically integrated into digital learning architectures.

2. RESEARCH PURPOSE

To investigate how coaching-informed design can be embedded within a technology-enhanced learning platform to enhance:

- Learner agency
- Reflective depth
- Engagement quality
- Transfer to professional practice

3. METHODOLOGY

Design-Based Research (DBR)
One Academic Year

Participants
150 Learners

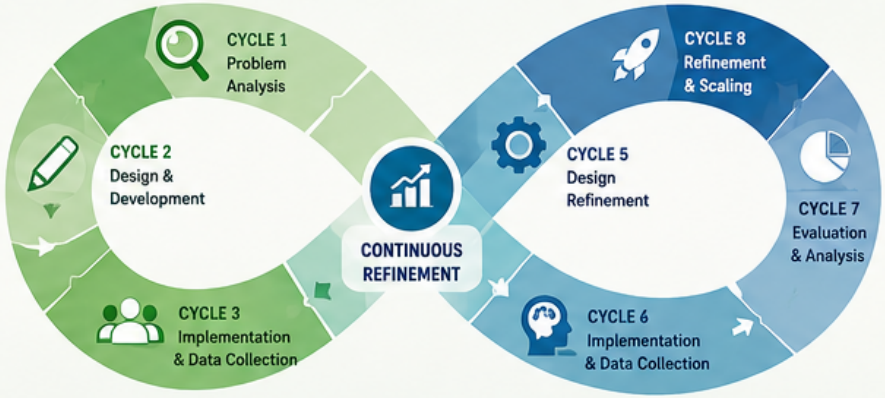
Implementation
8 Iterative Design Cycles

Data Sources

- Reflective artifacts
- Platform analytics
- Learner perception surveys
- Facilitator observations

4. EIGHT-CYCLE DESIGN-BASED BESEARCH (DBR) PROCESS

Iterative cycles of design, implementation, analysis, and refinement



5. COACHING-INFORMED DESIGN MODEL

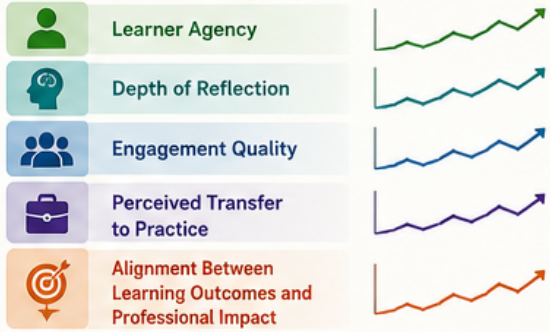
Key Design Features

- Structured reflective interfaces
- Dialogic coaching sequences
- Adaptive feedback mechanisms
- Development-focused learning pathways

Reflection is embedded throughout the learning journey rather than added as a post-learning activity.

6. KEY FINDINGS

Across successive design cycles, findings demonstrated:



The coaching-informed approach consistently outperformed traditional content-driven digital learning structures in supporting developmental learning outcomes.

7. CONCEPTUAL FRAMEWORK

COACHING-INFORMED TECHNOLOGY-ENHANCED LEARNING

This developmental cycle became the central architecture of the learning platform.

8. IMPLICATIONS

This study demonstrates that developmental dialogue can be systematically embedded within digital learning environments.

The resulting framework offers scalable, research-informed design principles for:

- Higher Education
- Professional Development
- Corporate Learning
- Leadership Development
- Online & Blended Learning Environments

9. KEYWORDS

Educational Technology | Technology-Enhanced Learning | Coaching-Informed Design | Design-Based Research | Higher Education | Learner Engagement | Reflective Practice | Instructional Design | Professional Development

> "When coaching is designed into technology, learning becomes a journey of reflection, insight, and action—leading to meaningful professional transformation."