

Integrating TPACK and Hybrid Instructional Design Models: A Conceptual Training Framework for CEFR A1 Arabic Language Teachers

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ABSTRACT

The implementation of the Common European Framework of Reference for Languages (CEFR) A1 in Arabic education requires a transition toward communicative, student-centered instruction. Although a hybrid instructional design (ID) model combining ADDIE, Dick & Carey, and the Successive Approximation Model (SAM) was previously developed for CEFR A1 Arabic modules, teachers often lack the competence to execute it effectively, risking implementer error. To address this gap, this concept paper proposes a teacher training framework integrating Technological Pedagogical Content Knowledge (TPACK) across the five phases of the hybrid ID model: Analysis, Design, Development, Implementation, and Evaluation. Positioned as an enabling knowledge base, TPACK guides teachers through hands-on training tasks and deliverable creation, balancing objective alignment with rapid prototyping. Additionally, the paper considers operational challenges such as teacher workload and digital readiness, proposing practical institutional solutions to reduce technical burdens. Serving as a vital prerequisite prior to empirical pilot testing, this framework provides a structured roadmap for Continuous Professional Development (CPD) programs, ultimately empowering Arabic educators to deliver effective, tech-integrated CEFR A1 instruction in real-world educational settings.

Keywords: CEFR A1, TPACK Framework, Hybrid Instructional Design, Teacher Training Framework, Arabic Language Education

INTRODUCTION

The global landscape of foreign language education, including Arabic, is rapidly evolving with the adoption of the Common European Framework of Reference for Languages (CEFR) standard. In Malaysia, the implementation of CEFR within the Arabic language curriculum aims to foster communication-based competence within real-life contexts. To achieve these goals, a shift from traditional memorization to learner-centered approaches is required.

However, a major constraint for contemporary Arabic educators is developing instructional materials that align with the CEFR framework (Abd Rahman et al., 2024; Abdul Malik et al., 2025). Addressing this issue, a prior conceptual study by Abdul Raup et al. (2025) developed a hybrid instructional design (ID) framework integrating the ADDIE, Dick & Carey, and Successive Approximation Model (SAM) specifically for CEFR A1 Arabic module development. Nevertheless, despite providing a structured foundation, its practical execution is hindered by low teacher readiness and competence.

This lack of readiness and competence poses a significant risk to successful module implementation (Nafisah et al., 2025). Directly testing this hybrid module empirically without prior teacher training risks yielding flawed outcomes due to implementer error rather than module design weaknesses. Consequently,

establishing a Technological Pedagogical Content Knowledge (TPACK) training framework is a vital theoretical and practical prerequisite to equip teachers with necessary skills.

Accordingly, this concept paper aims to develop a comprehensive teacher professional development training framework by integrating the TPACK model across the five phases of the hybrid ID framework (Analysis, Design, Development, Implementation, and Evaluation). The proposed framework is expected to provide a structured roadmap for Continuous Professional Development (CPD) programs, ensuring that Arabic language teachers are equipped with the holistic competencies required to effectively plan, deliver, and evaluate CEFR A1-based instruction.

LITERATURE REVIEW

CEFR Framework in Arabic Language Education (A1 Level)

The Common European Framework of Reference for Languages (CEFR), developed by the Council of Europe (2001), is a widely recognized international standard for assessing foreign language proficiency. It comprises three main proficiency levels ranging from beginner to advanced, where the lowest level is A1 and the highest is C2 (Nurdianto & Ismail, 2020). The main focus of CEFR is communicative competence, which emphasizes students' ability to use the language in real-life situations rather than just memorizing grammar rules. Overall, CEFR helps teachers plan curricula, teaching methods, and assessments that suit learners' needs (Musthofa, 2022).

Specifically at the CEFR A1 level (Basic User), teaching focuses on simple communication skills such as self-introductions and simple interactions (Abd Rahman et al., 2024). However, teaching at this level creates major challenges for teachers. Teachers must not only guide beginners through Arabic script, pronunciation, and basic grammar, but they also struggle to turn general CEFR A1 guidelines into interactive, theme-based classroom activities. Many Arabic teachers lack specialized training in CEFR-aligned instructional design, often reverting to traditional teacher-centered and rote-memorization approaches (Abdul Malik et al., 2025). Consequently, this gap highlights the urgent need for structured instructional modules and targeted teacher training programs (Nurdianto & Ismail, 2020; Abdul Raup et al., 2025).

The Hybrid Instructional Design Framework

Instructional Design (ID) models provide step-by-step structured guidelines for developing teaching materials (Ali et al., 2021). However, using only one traditional model often falls short in addressing the complex needs of a CEFR A1 Arabic curriculum. To address this limitation, a hybrid ID framework was proposed by integrating three established models: ADDIE, Dick & Carey, and the Successive Approximation Model (SAM) (Abdul Raup et al., 2025). This hybrid approach overcomes the limitations of using a single model, providing a comprehensive and adaptive system for module development.

In this integrated framework, each model plays a specific and important role. First, the ADDIE model provides the core five-phase structure: Analysis, Design, Development, Implementation, and Evaluation. Second, the Dick & Carey model contributes detailed, systematic steps for setting clear learning objectives and aligned assessments. Finally, SAM brings flexibility to the process through "rapid prototyping" and iterative feedback loops, enabling teachers to draft, test, and refine instructional materials continuously. Together, these three models create a strong yet flexible guide for educators to develop CEFR-aligned instructional materials.

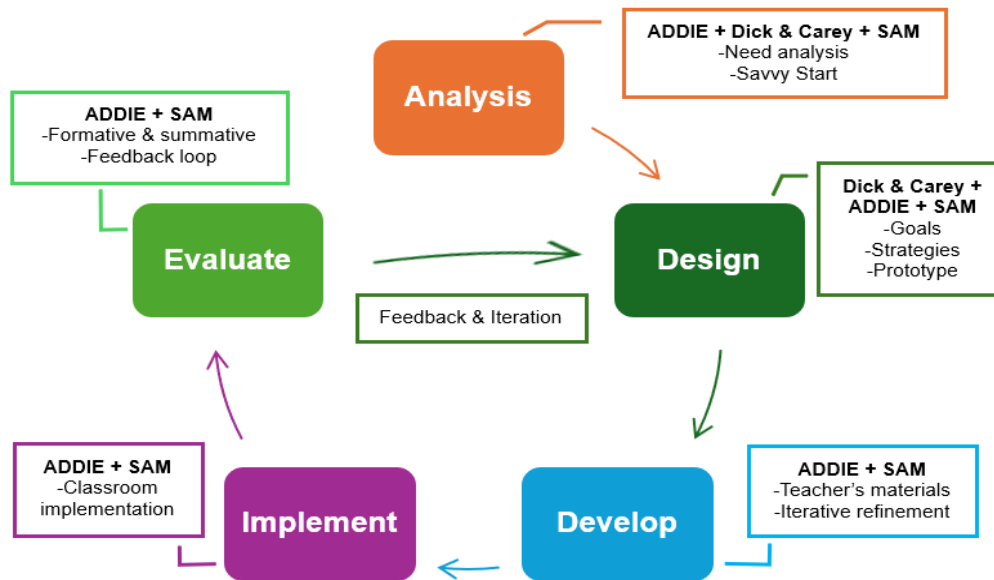


Figure 1 The Hybrid Instructional Design Framework

Technological Pedagogical Content Knowledge (TPACK)

The Technological Pedagogical Content Knowledge (TPACK) framework, introduced by Mishra and Koehler (2006), describes the essential knowledge teachers need to integrate technology effectively into their instruction. The framework consists of three core domains: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). Rather than treating technology as an isolated tool, TPACK emphasizes the interactions between these domains—forming Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and full TPACK integration. True technology integration occurs when teachers understand how to select and use digital tools to support specific teaching strategies and learning objectives.

In Arabic language education, TPACK is critical for empowering teachers to deliver modern, student-centered lessons. To teach CEFR A1 Arabic effectively, educators must combine language subject knowledge (CK), communicative teaching methods (PK), and appropriate digital tools (TK). Without adequate TPACK, teachers often struggle to apply complex instructional design models in real classroom settings (Raphaella Batha Augustine Sampar & Suziyani Mohamed, 2023; Reethumol, 2024). Therefore, developing teachers' TPACK serves as a vital foundation for implementing the hybrid ID framework, ensuring that digital technology meaningfully enhances language learning rather than serving as a passive add-on.

DISCUSSION

Conceptual Framework: Integrating TPACK into the Hybrid Instructional Design Framework

Conceptually, the Hybrid ID framework and the TPACK model fulfill distinct yet highly complementary roles. While the Hybrid ID framework governs the structured module design process, TPACK targets the teacher's core knowledge domains. Integrating TPACK into the Hybrid Instructional Design (ID) framework not only establishes a more structured ID system, but also ensures it is thoroughly enriched with effective content, instructional strategies, and technologies. In this conceptual framework, the Hybrid ID model (combining ADDIE, Dick & Carey, and SAM) serves as the structural roadmap across five key phases: Analysis, Design, Development, Implementation, and Evaluation. Meanwhile, TPACK acts as the foundational engine, providing the core knowledge and specific competencies teachers require to execute each phase effectively.

For CEFR A1 Arabic language education, this integration ensures that instructional design is not executed purely as a mechanical process. Instead, it embeds Content Knowledge (CK - A1 vocabulary and basic grammar), Pedagogical Knowledge (PK - communicative language teaching), and Technological Knowledge (TK - interactive digital tools) into every stage of module development. By anchoring teacher professional development within this integrated framework, educators acquire the holistic competencies required to plan, deliver, and evaluate technology-enhanced CEFR A1 instruction, thereby minimizing the risk of implementer error.

Phase-by-Phase Framework Implementation

Operationalizing the framework maps teacher professional development across the five phases of the Hybrid ID model. The structured rigor of ADDIE and Dick & Carey establishes objective alignment and process stability, while the Successive Approximation Model (SAM) introduces continuous flexibility and rapid iteration. Concurrently, TPACK functions as the enabling knowledge base that equips educators to produce tangible deliverables at every stage. Table 1 outlines this phase-by-phase implementation matrix.

Table 1 Phase-by-Phase Implementation Matrix of TPACK and Hybrid ID for CEFR A1 Arabic Teacher Training

PHASE	HYBRID ID DOMAINS	TPACK DOMAINS	FOCUS & TEACHER TRAINING ACTIVITIES	TRAINING DELIVERABLES
Analysis	ADDIE + Dick & Carey + SAM	1. CK, PCK 2. TPK 3. TPACK	1. CEFR A1 Content Analysis: Mapping A1 vocabulary, expressions, and grammar structures by theme (e.g., Self-Introduction, Family). 2. Digital Learner Profiling: Designing digital needs analysis instruments to collect baseline proficiency and learning style data. 3. Savvy Start Brainstorming: Identifying targeted digital tools to address beginner comprehension barriers.	• Learner Needs Analysis Report • A1 Level Profile • CEFR A1 Content Domain Map
Design	Dick & Carey + ADDIE + SAM	1. PCK 2. TPK 3. TPACK	1. Constructive Alignment Design: Formulating communicative Learning Objectives and lesson plans aligned with A1 descriptors. 2. Digital Pedagogical Selection: Selecting communicative pedagogical methods and matching them with appropriate technology platforms. 3. Early Prototype Development / Savvy Start: Planning and designing basic interactive activity prototypes prior to full module construction.	• Module Blueprint • Alpha Prototype Package
Development	ADDIE + SAM	TPACK	1. Digital & Multimedia Material Development: Hands-on practice building digitized A1 Arabic materials, including recording audio, designing interactive slides, and creating digital worksheets. 2. Iterative Refinement Cycles: Conducting peer reviews to evaluate language (CK), pedagogy (PK), and technology (TK), refining Alpha drafts into Beta versions.	• Digitized CEFR A1 Teaching Module Package • Revised Module (Beta Version)
Implement	ADDIE +	TPACK	1. Micro-Teaching Simulation:	• Micro-Teaching Session

entation	SAM		Delivering simulated lessons using the developed hybrid A1 module. 2. Spontaneous Adaptation & Classroom Management: Managing technology and instructional materials flexibly based on student responses, facilitating paired/group oral interactions while operating digital tools smoothly.	Recordings • Implementation Observation Log
Evaluati on	ADDIE + SAM	1. TPK, PCK 2. PCK 3. TPACK	1. Assessment Instrument Construction: Designing assessment tools aligned with A1 descriptors. 2. Self-Reflection Practice: Evaluating teaching efficacy and student learning objective attainment against structured assessment matrices. 3. Iterative Feedback Loop: Analyzing micro-teaching feedback data to rapidly update and refine technology, pedagogy, or A1 Arabic content components.	• CEFR A1 Assessment Instruments & Rubrics • Reflection Report & Iterative Feedback Matrix • Finalized Module Package (Gold Version)

Analysis Phase: This phase combines ADDIE and Dick & Carey's systematic goal formulation with SAM's rapid Savvy Start data collection. Teachers apply CK and PCK to map CEFR A1 vocabulary, basic grammar and sentence structure by theme. Using TPK, teachers design digital instruments via Google Forms or Padlet to gather learner profiling and baseline proficiency data. Synthesizing full TPACK, teachers conduct Savvy Start brainstorming to select digital tools addressing beginner comprehension barriers. This phase produces three key deliverables: the Learner Needs Analysis Report, A1 Level Profile, and CEFR A1 Content Domain Map.

Design Phase: This phase merges Dick & Carey and ADDIE's goal-setting precision with SAM's rapid prototyping mechanism. Teachers activate PCK to construct communicative Learning Objectives and lesson plans aligned with A1 descriptors. Utilizing TPK, teachers match communicative pedagogical strategies, such as oral drills and paired dialogues, with appropriate technology platforms. Applying integrated TPACK, teachers rapidly draft an Alpha Prototype using tools like Quizlet or Wordwall prior to full assembly. The key deliverables produced include a comprehensive Module Blueprint and an Alpha Prototype Package.

Development Phase: This phase integrates ADDIE's material creation structure with SAM's iterative refinement loops. Operating through full TPACK integration, teachers gain hands-on practice building digitized A1 Arabic materials, including recording authentic dialogue audio, designing interactive slides, and creating digital worksheets. Teachers then conduct peer-review cycles to evaluate linguistic accuracy (CK), pedagogical usability (PK), and technical functionality (TK), refining drafts from Alpha to Beta versions. The resulting deliverables are the Digitized CEFR A1 Teaching Module Package and the classroom-ready Beta Version Module.

Implementation Phase: This phase pairs ADDIE's systematic classroom delivery with SAM's adaptive flexibility. Teachers demonstrate synthesized TPACK within simulated micro-teaching environments, delivering A1 lessons using their developed hybrid modules. Training emphasizes spontaneous adaptation and classroom management, enabling teachers to flexibly operate digital tools while facilitating paired or group oral interactions based on real-time student responses. This phase generates two primary deliverables: Micro-Teaching Session Recordings for self-evaluation and an Implementation Observation Log detailing instructional strengths and areas for refinement.

Evaluation Phase: This phase links ADDIE's formative and summative protocols with SAM's continuous feedback loop. Teachers apply TPK and PCK to build A1-aligned assessment instruments, including task-based speaking rubrics and interactive quizzes. Utilizing PCK, educators execute self-reflection to evaluate teaching efficacy against learning targets. Finally, through reflective TPACK, teachers analyze micro-

teaching feedback data to rapidly refine and optimize any weaker technological, pedagogical, or content components. This final phase produces CEFR A1 Assessment Instruments & Rubrics, a Reflection Report & Iterative Feedback Matrix, and the Finalized Module Package (Gold Version).

Potential Challenges and Practical Implications

Implementing this integrated TPACK-Hybrid ID framework faces practical challenges, particularly regarding teacher workload, time constraints, and varying levels of digital readiness among Arabic language educators. Importantly, these operational challenges manifest differently across diverse educational contexts. In resource-constrained or rural school settings, limited internet bandwidth, unstable hardware infrastructure, and lower baseline digital literacy pose severe barriers to executing SAM's cloud-based rapid prototyping and interactive digital activities. Furthermore, executing continuous prototyping alongside complex technology integration risks causing cognitive overload for teachers without sustained technical support (Jung et al., 2019). Combining CEFR A1 linguistic descriptors with new pedagogical tools might create resistance if teachers perceive the training process as overly time-consuming, technically demanding, or unsuited for their localized classroom environments.

To address these contextual barriers, educational institutions and policymakers must provide tailored support mechanisms, including dedicated professional development time and reliable digital infrastructure (Norbert & Shin, 2025). In low-resource or infrastructure-limited settings, mitigation strategies should prioritize lightweight, offline-accessible digital tools, such as downloadable interactive slides, offline audio recordings, and printable template packages to ensure equitable implementation. Providing teachers with pre-designed module templates and curated digital tool repositories significantly reduces their technical burden. Furthermore, institutional leaders should foster collaborative peer-review communities to sustain SAM's iterative cycles. Addressing these contextual needs turns the conceptual framework into an adaptable Continuous Professional Development (CPD) program, improving teacher competency while safeguarding against instructional errors in CEFR A1 Arabic across varied teaching environments.

Framework Validation Strategy and TPACK Assessment Roadmap

To operationalize and empirically validate this conceptual framework in future studies, a structured empirical testing battery utilizing Design-Based Research (DBR) or a quasi-experimental pre-test/post-test intervention model is recommended. Pilot testing involving CEFR A1 Arabic teachers across urban and rural schools will generate concrete evidence regarding the framework's feasibility, usability, and pedagogical effectiveness. Evaluating teacher competency improvements and student outcomes requires a multi-faceted evaluation roadmap:

- **TPACK Competency Measurement:** Administering validated pre- and post-training TPACK self-efficacy surveys tailored for Arabic language educators to quantitatively measure domain gains across Content Knowledge (CK), Pedagogical Knowledge (PK), Technological Knowledge (TK), and integrated TPACK.
- **Instructional Quality Observation:** Utilizing structured micro-teaching observation rubrics during the Implementation Phase to evaluate real-time pedagogical fluidity, student engagement, and digital tool integration.
- **Learner Outcome Benchmarking:** Measuring student A1 oral proficiency gains through task-based CEFR assessment rubrics following classroom delivery of the finalized module package (Gold Version).
- **Usability and Feasibility Assessment:** Administering the System Usability Scale (SUS) alongside post-implementation qualitative focus group interviews to capture teacher experience, identify operational bottlenecks, and guide iterative refinements.

CONCLUSION

This concept paper presents an integrated training framework that bridges the Hybrid Instructional Design model with TPACK to enhance teacher readiness in CEFR A1 Arabic instruction. By embedding language

content, communicative pedagogy, and digital tools across five structured phases, the framework provides a systematic roadmap for continuous professional development while mitigating the risk of implementer error. Because this work is conceptual, subsequent empirical validation through pilot testing and classroom case implementations remains essential to confirm its practical utility. Future research utilizing the proposed evaluation roadmap will provide robust empirical evidence of the framework's efficacy and guide its continuous optimization in real-world educational settings.

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