Design and Development of Pro-Tadris: A Multilevel Reflective Assessment Framework for Pre-Service Arabic Language Teachers

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ABSTRACT

This study presents Pro-Tadris, an authentic, alternative, and transformative assessment framework developed to enhance the professional growth of final-year pre-service Arabic language teachers at UPSI. Rooted in constructivist and social constructivist learning theories, the framework is conceptualized through an integrated model combining Design Thinking, ARCS Motivational Model, Universal Design for Learning (UDL), and reflective practice. Emphasizing multilayered knowledge and structured reflection, Pro-Tadris promotes learner autonomy and collaboration through elements of heutagogy and peeragogy. Implemented through a seven-station learning model, the framework supports differentiated assessment across cognitive, affective, and psychomotor domains. A design-based research approach was employed, involving iterative development, implementation, and evaluation. Qualitative data from reflections, peer feedback, and expert reviews indicate improved pedagogical reasoning, motivation, and professional identity formation. This study offers a scalable model for culturally responsive Arabic teacher education and contributes to the growing discourse on reflective, student-centered assessment in the digital and multilingual era.

Keywords: Pro-Tadris, Reflective Assessment, Arabic Language Teacher Education, Heutagogy, Design Thinking

INTRODUCTION

The preparation of pre-service teachers is widely acknowledged as a critical determinant of educational quality, particularly in language education where pedagogy is deeply intertwined with linguistic, cultural, and identity-based dimensions. Within the domain of Arabic language instruction, this complexity is further amplified by the need to uphold linguistic authenticity, foster cross-cultural understanding, and cultivate pedagogical adaptability in response to contemporary classroom realities. Consequently, there is an urgent need for assessment approaches that move beyond traditional knowledge-based evaluation toward models that are authentic, reflective, and transformative [1], [2].

Despite this growing recognition, assessment practices in Arabic language teacher education remain predominantly conservative—centered on content knowledge recall, technical lesson delivery, and rigid forms of classroom management. These frameworks often marginalize the essential process of teacher reflection, and neglect the development of pedagogical identity, instructional innovation, and learner-centered decision-making. In a 21st-century educational context, where teachers are expected to navigate multilingual, multicultural, and digital learning environments, this gap poses a serious limitation to effective teacher preparation.

Reflective practice, long regarded as a cornerstone of effective teacher education [3], provides a valuable lens through which pre-service teachers can examine their assumptions, interpret classroom experiences, and construct meaningful professional knowledge [4]. More recent models advocate for multilevel reflection—personal (beliefs and values), pedagogical (subject knowledge and teaching strategies), and practical (classroom implementation and decision-making)—as a means to develop teachers who are both self-aware and professionally competent [5].

However, in the context of Arabic teacher training, there remains a scarcity of empirically grounded, theoretically informed, and culturally responsive assessment tools that translate this reflective vision into structured, practical implementation. Furthermore, the emerging fields of heutagogy (self-determined learning) and peeragogy (peer-based knowledge co-construction) have not yet been meaningfully integrated into the core of Arabic language teacher preparation—despite their relevance in developing autonomy, collaboration, and critical thinking.

In response to these gaps, this study introduces Pro-Tadris, a multilevel reflective assessment framework designed specifically for final-year undergraduate students enrolled in the Bachelor of Arabic Language Education program at University Pendidikan Sultan Idris (UPSI). Grounded in constructivist and social constructivist learning theories, and structured through an integrated model combining Design Thinking, the ARCS Motivational Model, and the Universal Design for Learning (UDL), Pro-Tadris scaffolds assessment through seven sequential learning stations. Each station is aligned with differentiated assessment tasks that address cognitive, affective, and psychomotor domains while fostering autonomy, reflection, and peer collaboration.

Developed through a design-based research (DBR) approach, the Pro-Tadris framework was iteratively co-constructed with teacher educators and students, refined through classroom implementation, and evaluated for its impact on reflective growth, motivation, and teaching competence.

This paper details the theoretical underpinnings, design methodology, and research findings of the Pro-Tadris framework. It argues that embedding structured, layered reflection within an authentic, inclusive, and socially mediated assessment structure has the potential to transform how Arabic language teachers are trained—shifting the paradigm from technical delivery to critical, adaptive, and empowered pedagogy. In doing so, this study contributes to advancing reflective, theory-informed assessment models and offers scalable implications for teacher education in diverse linguistic and cultural contexts.

LITERATURE REVIEW

The evolution of teacher education has increasingly emphasized the integration of reflective practice as a means of fostering deeper pedagogical understanding and professional growth [4], [6]. Reflective practice, involves a critical inquiry into one's teaching experiences, beliefs, and practices [3]. Its relevance has been substantiated across numerous studies, showing that structured reflection enhances instructional decision-making, adaptability, and self-efficacy among pre-service teachers [5], [7].

Multilevel Reflection in Teacher Education

Recent research underscores the value of multilevel reflective models that engage teachers in reflection across personal, professional, and practical domains [8], [9]. These models acknowledge the complexity of teaching and promote a layered understanding of how beliefs, knowledge, and classroom action interact. For example, Korthagen's "onion model" illustrates how core beliefs, identity, mission, and competencies align to shape teaching behavior. Such multilevel frameworks have shown promise in developing reflective depth, but their application within specific cultural and linguistic contexts—such as Arabic language education—remains limited and underexplored.

Assessment in Pre-Service Teacher Education

Traditional assessment approaches in teacher education have focused predominantly on performance metrics

and content knowledge, often neglecting the formative role of reflection in developing effective educators [10]. These models acknowledge the complexity of teaching and p. While portfolios and teaching practicum reports are widely used, they frequently lack a coherent structure that connects reflective insights to teacher identity and pedagogical growth [11]. Scholars have advocated for more dynamic assessment models that prioritize reflection as both a process and an outcome of teacher preparation [12].

Reflective Practice in Arabic Language Teacher Education

In Arabic language teacher education, the emphasis on grammar-oriented instruction and canonical texts has historically overshadowed reflective pedagogy and learner-centered methodologies [13], [14]. Although there is increasing recognition of the need for reform, including the integration of reflective strategies, the field lacks robust frameworks that operationalize reflection into teacher training and assessment in meaningful ways. Few studies have explored the unique cognitive, linguistic, and cultural dimensions that Arabic language teachers navigate, particularly during the formative pre-service phase.

The Need for a Contextualized Reflective Framework

Given these challenges, there is a critical need for a culturally responsive, multilevel assessment framework that can support Arabic language teacher candidates in reflecting on their professional development. Such a framework should bridge theory and practice, facilitate identity formation, and provide teacher educators with structured tools for guiding reflective growth. The Pro-Tadris framework responds to this need by aligning theoretical constructs of multilevel reflection with practical assessment components tailored to the specific demands of Arabic language instruction.

Theoretical Framework

The development of Pro-Tadris is anchored in a synergistic theoretical foundation that integrates core elements from Constructivist Learning Theory, Social Constructivism, the Universal Design for Learning (UDL), the ARCS Motivational Model, and the Design Thinking model. Together, these theories offer a coherent pedagogical rationale for designing an authentic, reflective, and transformative assessment model suitable for the evolving demands of Arabic teacher education.

Constructivist Learning Theory emphasizes that learners construct knowledge through active, contextual engagement with their environment [15]. In Pro-Tadris, pre-service teachers engage in problem-solving, innovation, and self-evaluation within real instructional settings—allowing them to internalize knowledge through practice. Complementing this, Social Constructivism underscores the social nature of learning, where cognitive growth is facilitated through dialogue, peer interaction, and scaffolding [16]. The Pro-Tadris framework embeds peeragogy principles by enabling collaborative planning, peer review, and co-construction of knowledge through shared teaching and reflection experiences.

The Universal Design for Learning (UDL) framework informs the inclusive architecture of Pro-Tadris by ensuring multiple means of engagement, representation, and expression [17]. Assessment tasks within the framework offer varied entry points to accommodate learner diversity while maintaining alignment with the intended learning outcomes. The ARCS Motivational Model ensures sustained learner engagement by integrating components of Attention, Relevance, Confidence, and Satisfaction [18]. These are operationalized through choice-driven tasks, feedback loops, and authentic teaching simulations.

Finally, the Design Thinking model underpins the design and development methodology of Pro-Tadris [19]. The stages—Empathize, Define, Ideate, Prototype, and Test—guide the framework's iterative construction and refinement, allowing responsiveness to real classroom challenges and stakeholder input. This combination of theories supports the shift toward heutagogical learning where learners are empowered to self-direct their growth, make informed decisions, and develop a resilient teaching identity. Fig. 1 illustrates the research theoretical framework.
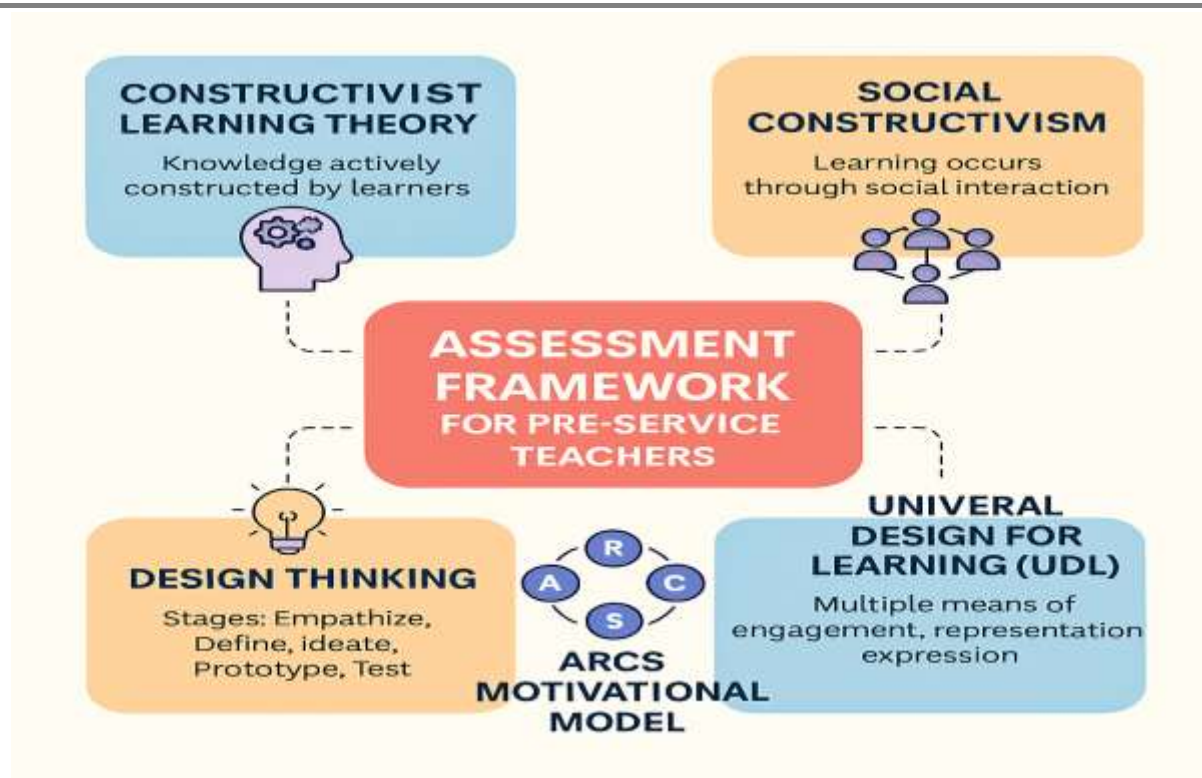
Fig. 1 Research Theoretical Framework

RESEARCH METHODOLOGY

This study adopted a Design and Development Research (DDR) approach to guide the creation and evaluation of Pro-Tadris, a multilevel reflective assessment framework for pre-service Arabic language teachers. DDR was chosen due to its focus on the systematic development of educational innovations and its emphasis on practical solutions to instructional problems. The research process was carried out in two phases: the design and development phase, and the evaluation phase. Data were gathered through expert validation, classroom implementation, and student feedback to ensure the product's effectiveness and relevance.

A. Research Design (DDR)

This study adopted a Design and Development Research (DDR) methodology, suitable for bridging theoretical foundations with practical educational innovation. The DDR process allowed for iterative co-design, implementation, and evaluation of the Pro-Tadris framework in authentic classroom environments. It was conducted over three main phases: (1) Needs Analysis, (2) Design and Development, and (3) Evaluation and Refinement. The study involved 114 final-year undergraduate students from the Bachelor of Arabic Language Education program at Sultan Idris Education University. Participants engaged in a 14-week cycle of learning structured around seven thematic stations that integrated reflective assessment tasks, peer teaching, innovation development, and action research proposal writing.

Phase 1 : (Needs Analysis), data were collected through document reviews, interviews with teacher educators, and focus groups with students to identify gaps in existing assessment practices. These insights informed the theoretical framing and initial design of the Pro-Tadris prototype.

Phase 2 : (Design and Development) followed the Design Thinking model. Empathize and Define stages shaped the initial design; Ideation led to the structuring of learning stations; Prototyping produced rubrics and tools; Testing occurred via classroom trials. The seven stations aligned with cognitive, affective, and psychomotor domains and incorporated elements of reflection, peer learning, and formative feedback.

Phase 3 : (Evaluation and Refinement) employed a mixed-method approach. Quantitative data were gathered using ARCS-based questionnaires on motivation and engagement. Qualitative data were obtained through

reflective journals, peer assessments, instructor observations, and focus group discussions. These data revealed growth in self-awareness, pedagogical competence, and reflective ability, leading to adjustments in pacing, task clarity, and rubric criteria. Fig. 2 below illustrates the adaptation of the Pro-Tadris Model.
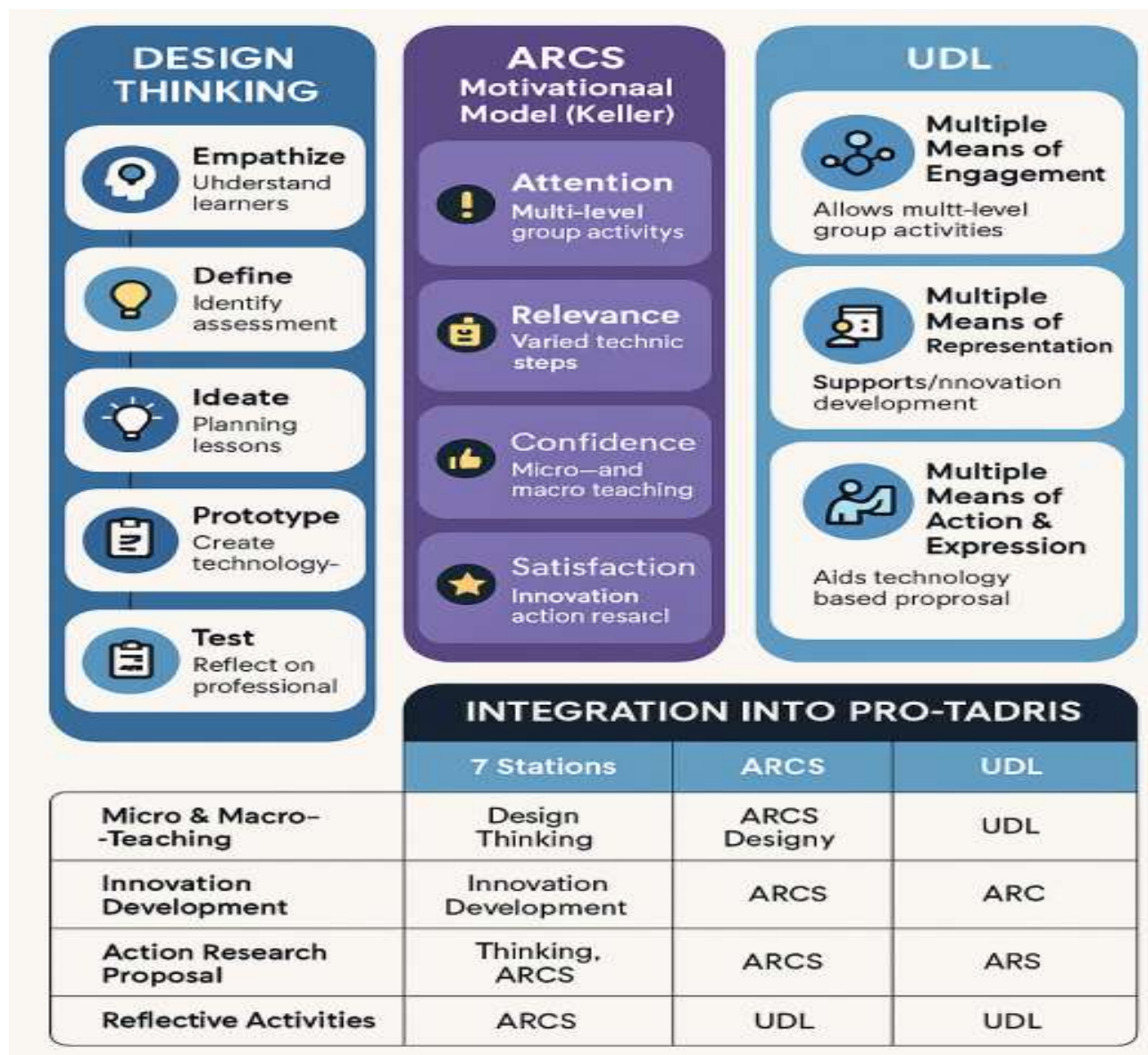

7 Stations	Design Thinking	ARCS	UDL
Micro & Macro–Teaching	Design Thinking	ARCS Designy	UDL
Innovation Development	Innovation Development	ARCS	ARC
Action Research Proposal	Thinking, ARCS	ARCS	ARS
Reflective Activities	ARCS	UDL	UDL

Fig. 2 Adaptation of the Pro-Tadris Model

FINDINGS AND DISCUSSION

This section presents the key findings of the study based on data collected throughout the implementation of the Pro-Tadris model. The results are organized according to the research objectives and are discussed in relation to relevant literature and theoretical frameworks. Each finding is interpreted to highlight its significance, followed by a discussion that connects the outcomes with the broader context of Arabic language teacher education.

A. Overview of Key Findings

The implementation of the Pro-Tadris framework over 14 weeks yielded several notable outcomes in the domains of cognitive development, reflective capacity, collaborative learning, and motivation among pre-service Arabic language teachers. Findings emerged from both quantitative survey data and qualitative insights, including reflective journals, peer assessments, focus group interviews, and instructor observations. The results suggest that Pro-Tadris not only met its intended objectives but also facilitated a meaningful transformation in how learners perceive, experience, and respond to assessment tasks in teacher education.

B. Enhanced Cognitive Engagement through Multilevel Assessment

Analysis of students' teaching artefacts, innovation projects, and proposals revealed a clear progression across Bloom's cognitive domains. Learners demonstrated the ability to apply theoretical knowledge (C3), analyze instructional practices (C4), evaluate peer performances (C5), and create innovative solutions (C6). This cognitive trajectory was supported by the intentional sequencing of learning stations, enabling differentiated learning while maintaining coherence across the course.

This finding is consistent with previous studies emphasizing the effectiveness of tiered assessment and scaffolded tasks in promoting higher-order thinking [20].

C. Development of Reflective Practice and Pedagogical Identity

Students reported that structured reflection activities embedded within each station—particularly during the macro teaching and final portfolio phases—enhanced their awareness of teaching strengths, areas for improvement, and classroom dynamics. Reflective journals illustrated increasing depth and metacognitive awareness, notion of the "reflective practitioner" [3].

This growth in self-awareness was particularly evident in the transition from Station 3 (macro teaching) to Station 4 (peer review and self-assessment), where learners moved from task execution to critical analysis of their pedagogical decisions.

D. Collaborative Learning and Social Knowledge Construction

The framework's emphasis on peer teaching, co-construction of RPH (lesson plans), and feedback cycles created an environment conducive to social constructivist learning. Focus group interviews revealed that students valued the dialogic exchanges and felt more confident in articulating their instructional rationales. They also acknowledged the importance of "learning with and from peers," especially during the innovation and proposal stations.

These findings affirm the value of collaborative assessment structures in building both content mastery and professional competence [16], [21].

E. Motivation, Confidence, and Ownership of Learning

Survey responses aligned with the ARCS Motivational Model confirmed increased learner motivation across all dimensions:

1. Attention: 91% of participants agreed that varied station activities kept them engaged.

2. Relevance: 87% felt the tasks were applicable to real teaching contexts.

3. Confidence: 84% indicated that feedback from peers and instructors enhanced their self-belief.

4. Satisfaction: 89% reported a sense of accomplishment upon completing each station and presenting their outputs.

These results suggest that Pro-Tadris effectively nurtured intrinsic motivation and academic self-efficacy, contributing to more sustained and meaningful learning experiences.

F. Alignment with Educational Goals

The Pro-Tadris framework demonstrates strong alignment with transformative and authentic assessment principles, as advocated by 21st-century teacher education reform [22]. It supports holistic professional development by integrating cognitive, affective, and psychomotor domains in a single coherent system. Furthermore, it operationalizes constructivist and reflective pedagogies within a structured, scalable model

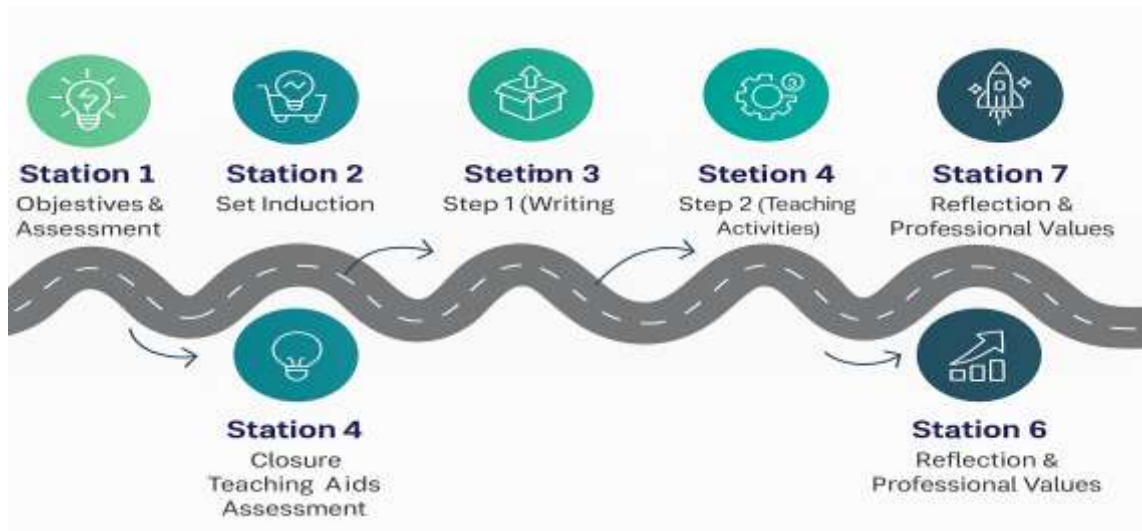suitable for other language teacher education contexts, as shown in Fig. 3 below.

Fig. 3 Reflective Learning and Multilevel Approaches in the 7 Stations of Pro-Tadris

G. Challenges and Areas for Improvement

Despite the positive outcomes, several challenges were noted. Some students expressed difficulty in managing workload across overlapping stations. Others requested clearer rubric descriptors for certain tasks, particularly in Station 5 (Innovation Project). Additionally, a minority (11%) found the transition from group work to individual reflection challenging without more explicit scaffolding.

These challenges informed subsequent refinements in the framework's pacing guide, assessment criteria, and support materials.

CONCLUSION AND IMPLICATIONS

A. Conclusion

This study set out to address critical gaps in assessment practices within Arabic language teacher education by developing and implementing Pro-Tadris, a multilevel reflective assessment framework. Grounded in constructivist and social constructivist theories, and informed by the Universal Design for Learning (UDL), ARCS Motivational Model, Bloom's Revised Taxonomy, and the Design Thinking process, the Pro-Tadris framework offers a transformative approach to assessment that is authentic, inclusive, and pedagogically meaningful.

The findings indicate that Pro-Tadris significantly enhanced learners' cognitive engagement, reflective thinking, collaborative learning, and intrinsic motivation. Its structured, station-based format allowed pre-service teachers to engage in differentiated tasks while fostering deeper awareness of pedagogical practices. The integration of reflective instruments and collaborative elements contributed to the development of critical professional competencies, including self-evaluation, innovation, and teaching confidence.

Overall, Pro-Tadris demonstrates that authentic, theory-driven assessment models can play a pivotal role in advancing the quality of teacher education—especially in contexts that require both cognitive rigor and affective depth.

B. Implications

1) Practical Implications

For educators and curriculum designers, Pro-Tadris provides a replicable model of how assessment can be

integrated into the instructional process as both a tool for learning and a tool for development. Its modular design allows adaptation to various disciplines and levels of teacher preparation, offering flexibility in delivery while maintaining alignment with course learning outcomes.

Teacher educators can leverage the framework to scaffold formative assessment, build professional identity, and support student-centered instruction through embedded reflection and peer feedback.

2) Theoretical Implications

The study contributes to the literature by demonstrating how multiple educational theories can be meaningfully synthesized into a coherent and functional assessment framework. It validates the constructivist orientation of assessment design and extends the application of the Design Thinking process into the realm of higher education, particularly within Islamic and Arabic language contexts.

Furthermore, Pro-Tadris affirms that motivation and reflection—often treated separately in teacher training—can be unified within a single, actionable model.

3) Future Research Implications

Future research could explore the scalability of Pro-Tadris across other language education programs, subject areas, and institutional contexts. Longitudinal studies in particular are essential to track the professional development of graduates after they enter the teaching profession. Such studies could examine how Pro-Tadris influences actual teaching practice, decision making and habits of reflection during the first years of service.

This would provide concrete evidence of the framework's lasting impact on pedagogical identity, motivation and teaching quality, and determine whether the reflective competences developed during training are maintained and applied over time.

In addition, researchers could explore how technological integration- such as e-portfolios, AI-supported feedback or immersive simulations — could further enhance the reflective and collaborative dimensions of the model. The development of user-friendly digital toolkits, visual guides or manuals based on the Pro-Tadris framework could also improve accessibility for educators who are less familiar with the principles of heutagogy and design thinking.

ACKNOWLEDGEMENT

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