



Female Students' Lived Experiences in the Psychology of Arabic Language Learning: Navigating Challenges, Learner Agency, and AI-Supported Adaptation

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Abstract

The growing adoption of Social-Emotional Learning (SEL) has prompted renewed discussion regarding its compatibility with faith-based educational systems, particularly Islamic Religious Education (IRE), where moral and spiritual values constitute the primary foundation of learning. This study explores how tensions between IRE and SEL emerge and are negotiated within classroom practice. Employing an interpretive qualitative case study, the research was conducted at a private Islamic senior high school in Indonesia involving three Islamic Religious Education teachers, twelve students, and one vice principal selected through purposive sampling. Data were collected through classroom observations, semi-structured interviews, and document analysis and were analyzed using reflexive thematic analysis. The findings reveal that the relationship between IRE and SEL is characterized by continuous epistemological and pedagogical negotiation rather than complete alignment. Religious values remain the dominant framework shaping emotional expression, classroom interaction, and instructional practices, positioning SEL as a complementary rather than autonomous educational approach. Institutional culture, transmissive pedagogy, and ritual-oriented instruction further constrain opportunities for reflective dialogue and authentic socio-emotional development. This study contributes to the literature by proposing the concepts of asymmetrical integration of IRE-SEL and regulated emotionality in religious pedagogy, demonstrating that the implementation of SEL is inherently shaped by religious and cultural contexts. The findings offer practical insights for developing context-sensitive educational policies, curriculum design, and teacher professional development within faith-based schools.

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INTRODUCTION

The increasing complexity of language education has shifted scholarly attention from purely linguistic competence toward the psychological dimensions that shape learning experiences. Contemporary perspectives emphasize that successful language learning is influenced not only by cognitive ability but also by learners' emotions, beliefs, motivation, and self-regulatory capacity (Graham, 2022; Katsantonis & McLellan, 2023; Teng & Pan, 2024). This transformation has encouraged educators to reconsider instructional practices by recognizing learners as active agents whose psychological states continuously interact with classroom environments (Bae et al., 2025; Kostopoulos et al., 2025; Singh, 2023). At the same time, the rapid expansion of digital technologies has fundamentally changed how students access information, regulate learning, and cope with academic challenges. Artificial intelligence (AI), online learning platforms, and collaborative digital resources have become integral components of educational practice, particularly in higher education. Although these technological developments offer unprecedented learning opportunities, they also introduce new psychological demands that may either facilitate or hinder students' engagement depending on individual and contextual factors (Hensley et al., 2022; Sharma, 2024). Consequently,

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understanding students' psychological experiences has become an essential prerequisite for designing language instruction that is academically effective while simultaneously supporting learners' emotional well-being.

The importance of psychological factors becomes even more evident in foreign language education, where students are frequently required to negotiate unfamiliar linguistic systems while managing emotional and cognitive pressures. Research consistently demonstrates that motivation, self-efficacy, learning enjoyment, and emotional regulation positively influence language achievement, whereas anxiety, cognitive overload, and low confidence often impede learning progress (Ma, 2022). These challenges become more pronounced when learners encounter interdisciplinary courses that combine language studies with abstract psychological theories (Graesser et al., 2022; Zhang & Zhang, 2025). Rather than focusing exclusively on language proficiency, such courses require students to interpret complex conceptual frameworks originating from different academic traditions. This condition frequently generates uncertainty, particularly among students whose previous educational experiences have emphasized religious or linguistic knowledge instead of behavioral sciences (Southworth, 2022; Steć & Kulik, 2021). Moreover, the increasing reliance on digital learning environments further intensifies these demands by requiring students to independently manage information, attention, and learning strategies. Therefore, examining how students experience these multiple psychological transitions represents an increasingly important area of inquiry within contemporary language education.

These issues are particularly relevant in Arabic language education, where linguistic complexity intersects with distinctive cultural, religious, and educational contexts. Unlike many foreign language programs, Arabic learning in Islamic higher education often integrates linguistic competence with religious knowledge, creating a unique instructional environment that differs substantially from general language education (Muthoifin & Elbanna, 2026; Rosikh et al., 2025). Students are therefore expected not only to master Arabic language skills but also to understand educational and psychological concepts that explain how language learning occurs. For many learners, especially those educated within traditional Islamic boarding school environments, this transition introduces conceptual challenges because psychological terminology and theoretical perspectives are relatively unfamiliar (Alkouatli, 2023; Ngoc & Kim Khanh, 2024). Simultaneously, contemporary students increasingly rely on digital resources, including AI-assisted learning applications, online scholarly materials, and peer-based collaborative platforms to bridge these conceptual gaps. These adaptive behaviors illustrate that language learning is no longer confined to classroom interactions but extends into broader digital learning ecosystems that shape students' cognitive and emotional development (Li & Lan, 2022). Accordingly, investigating the lived experiences of female students in the Psychology of Arabic Language Learning course provides an important opportunity to understand how psychological adaptation, learner agency, and technological engagement interact within the distinctive context of Islamic higher education.

Although research on the psychological dimension of language learning has expanded considerably over the past decade, much of the existing literature has concentrated on broad constructs such as motivation, foreign language anxiety, engagement, self-efficacy, and learner well-being. Positive psychology has emerged as one of the dominant paradigms in second language acquisition (SLA), emphasizing that positive emotional experiences can strengthen persistence, academic achievement, and language competence (Aliyeva, 2025). Recent studies have further demonstrated that learning enjoyment, emotional resilience, and self-regulated learning contribute significantly to sustainable language development (Huang, 2022; Namaziandost et al., 2025). In parallel, educational researchers have increasingly advocated differentiated instruction to accommodate students' diverse psychological characteristics and learning preferences (Goyibova et al., 2025; Lopez et al., 2021). Within teacher education, integrating psychological perspectives into instructional practice has also been shown to enhance classroom engagement and instructional effectiveness (Bardach et al., 2022; Chan et al., 2023). Despite these important advances, the majority of previous studies have examined psychological variables independently, with limited attention to how learners simultaneously interpret, negotiate, and adapt to unfamiliar disciplinary knowledge. As a result, the complexity of students' lived experiences during interdisciplinary language learning remains insufficiently understood.

Another dominant stream of research has focused on technology-mediated language learning, particularly following the rapid expansion of online education during and after the COVID-19 pandemic. Previous investigations have extensively explored students' perceptions of online learning environments, digital learning satisfaction, instructional delivery, and technology acceptance across higher education settings (Tan et al., 2021; Yunusa & Umar, 2021). More recently, scholars have begun examining how digital resources influence learner autonomy and engagement, highlighting the growing importance of technology in supporting language education (Mohammadi Zenouzagh et al., 2023; Mohebbi, 2024). Nevertheless, these studies remain largely oriented toward technical, pedagogical, or behavioral outcomes rather than the deeper psychological meanings that students construct while interacting with complex academic content. Even studies addressing digital resilience rarely investigate how students interpret unfamiliar psychological concepts within culturally specific educational contexts. Furthermore, the emerging use of artificial intelligence in higher education has predominantly been examined from perspectives of learning efficiency, productivity, or instructional innovation, leaving its psychological function in students' learning adaptation relatively unexplored (Gkintoni et al., 2025). Consequently, the existing literature provides only a partial understanding of how technological resources become integrated into learners' emotional, cognitive, and reflective processes during language learning.

Against this background, several important research gaps remain evident. First, empirical evidence concerning the psychology of Arabic language learning is still considerably less developed than research on English or other widely studied foreign languages, despite the distinctive sociocultural characteristics of Arabic education within Islamic higher education institutions. Second, previous investigations have generally emphasized measurable psychological constructs while paying comparatively little attention to students' lived experiences and the subjective meanings they assign to interdisciplinary learning situations. Third, few studies have explored how female students negotiate the transition from traditional Arabic language instruction to the study of educational psychology, particularly within Islamic boarding school-based academic environments (Altinyelken, 2022). Finally, although artificial intelligence has become increasingly embedded in students' independent learning practices, its role as a psychological resource that supports conceptual understanding, emotional adaptation, and learner agency has not been adequately conceptualized in existing scholarship. Addressing these gaps is essential for developing a more comprehensive understanding of Arabic language learning that extends beyond linguistic achievement to encompass learners' psychological adaptation, contextual meaning-making, and technology-supported resilience within contemporary Islamic higher education.

Against the foregoing background, this study aims to explore the lived experiences of female undergraduate students enrolled in the Psychology of Arabic Language Learning course at STAI Ali bin Abi Thalib Surabaya through a qualitative phenomenological approach. Rather than measuring isolated psychological variables, this research seeks to uncover how students perceive, interpret, and respond to the emotional, cognitive, and instructional challenges encountered throughout the learning process. Particular attention is devoted to understanding how learners adapt to unfamiliar psychological concepts, construct meaningful learning experiences, and employ various coping strategies within an Islamic higher education context. Furthermore, the study examines how digital resources, particularly artificial intelligence (AI), are integrated into students' self-directed learning practices to facilitate conceptual understanding and reduce learning-related anxiety (Al-atrash et al., 2026; Lin, 2024). By capturing these subjective experiences, this research offers a richer perspective on language learning psychology that extends beyond observable academic performance and encompasses the processes through which learners negotiate meaning, develop resilience, and exercise agency in increasingly technology-rich educational environments.

This study contributes to the growing body of scholarship on language learning psychology in several important ways. Theoretically, it extends the positive psychology perspective in second language acquisition by demonstrating that students' psychological adaptation is shaped not only by individual emotional factors but also by continuous interactions among disciplinary knowledge, sociocultural background, instructional practices, and digital learning environments. The findings further enrich phenomenological research in language education by illuminating how female students actively construct meaning when encountering psychological theories that differ substantially from their previous educational experiences. In addition, the study provides empirical

evidence that artificial intelligence functions not merely as an instructional aid but also as a form of psychological support that enables learners to manage cognitive complexity, strengthen self-directed learning, and sustain academic engagement. From a practical perspective, the findings offer valuable insights for lecturers, curriculum developers, and higher education policymakers seeking to design more responsive Arabic language learning environments that acknowledge students' psychological needs while encouraging responsible technology integration. Ultimately, by connecting learner agency, psychological adaptation, and technological engagement within the distinctive context of Islamic higher education, this research advances a more comprehensive understanding of contemporary Arabic language pedagogy and offers directions for developing learning environments that are academically rigorous, psychologically supportive, and pedagogically sustainable.

METHOD

Research Design

This study employed a qualitative research design using an interpretive phenomenological approach to investigate the lived experiences of female undergraduate students enrolled in the Psychology of Arabic Language Learning course. This methodological approach was selected because the study sought to understand how participants perceived, interpreted, and constructed meaning from their learning experiences rather than to quantify predetermined psychological variables. Phenomenology is particularly appropriate for exploring the essence of human experience by examining participants' reflections, emotions, and interpretations within their natural educational context (Creswell & Poth, 2018; Flick, 2018). The interpretive orientation adopted in this research acknowledges that learning experiences are socially and culturally situated and are continuously shaped through interactions among learners, instructors, instructional practices, and learning environments. Consequently, students' narratives were interpreted not as isolated individual accounts but as contextualized experiences influenced by their educational backgrounds and the institutional culture of Islamic higher education. This approach enabled the researchers to capture the dynamic processes through which participants adapted to unfamiliar psychological concepts, responded to academic challenges, and developed strategies to support their learning. Ultimately, the phenomenological design provided an appropriate framework for revealing the meanings underlying students' psychological experiences and identifying recurring patterns of learner agency, adaptation, and technology-supported learning.

Research Setting

The research was conducted at STAI Ali bin Abi Thalib Surabaya, Indonesia, a private Islamic higher education institution specializing in Arabic language education and Islamic studies. The institution was intentionally selected because it offers the Psychology of Arabic Language Learning course as part of its undergraduate Arabic Language Education curriculum, thereby providing a relevant setting for investigating students' psychological experiences within an interdisciplinary learning environment. The educational context is characterized by the integration of Arabic language instruction with Islamic educational values, creating distinctive academic conditions that differ from those commonly encountered in secular higher education institutions. A considerable proportion of students entering the program have previously studied in Islamic boarding schools (*pesantren*), where classical Arabic studies receive greater emphasis than educational psychology. This educational background creates a unique context in which students encounter unfamiliar psychological theories while maintaining strong linguistic and religious foundations. Data collection was undertaken during the first semester of the 2024/2025 academic year, from September to December 2024. Conducting the study throughout an entire semester enabled the researchers to observe participants' experiences as they evolved over time, allowing psychological adaptation, learning challenges, and coping strategies to be examined within an authentic instructional setting.

Participants

The study population comprised all undergraduate students enrolled in the Psychology of Arabic Language Learning course during the 2024/2025 academic year. Participants were recruited through purposive sampling because the research required individuals who possessed direct experience of the investigated phenomenon and were capable of providing rich and reflective

accounts of their learning experiences. To ensure the relevance and depth of the collected data, participants were required to meet several inclusion criteria. Eligible students had to be actively enrolled in the course throughout the semester, attend at least 80% of scheduled classes, complete the principal learning activities and course assignments, and voluntarily agree to participate in interviews and classroom observations. Students who withdrew from the course or declined participation were excluded from the study. Based on these criteria, eighteen fifth-semester female undergraduate students were selected as the primary participants. In addition, one lecturer responsible for teaching the course was included as a key informant to provide complementary perspectives regarding instructional strategies, classroom interactions, and students' learning development. Incorporating both student and lecturer perspectives strengthened source triangulation and enabled a more comprehensive interpretation of the investigated phenomenon. Rather than seeking statistical representativeness, the sampling strategy emphasized information-rich cases capable of generating nuanced insights into students' lived experiences.

Table 1. Research Framework and Procedure

Research Stage	Main Activities	Expected Outcomes
Problem Identification	Identifying the research problem, establishing the research focus, and formulating research questions	Clearly defined research objectives
Literature Exploration	Reviewing contemporary literature on language learning psychology, positive psychology, learner agency, and AI-assisted learning	Conceptual framework and identification of research gaps
Research Design	Selecting the interpretive phenomenological approach and preparing the research protocol	Methodological framework aligned with the research objectives
Research Context and Participant Recruitment	Selecting the research site and recruiting participants using purposive sampling	Information-rich participants representing the investigated phenomenon
Instrument Development	Developing open-ended questionnaires, interview guides, observation protocols, and documentation checklists, followed by expert review	Contextually appropriate and academically sound research instruments
Data Collection	Conducting questionnaires, semi-structured interviews, classroom observations, and document analysis	Comprehensive qualitative evidence from multiple data sources
Data Organization and Analysis	Transcribing interview data, coding responses, developing categories, identifying themes, and interpreting findings through thematic analysis	Systematic identification of recurring themes and experiential patterns
Trustworthiness Procedures	Applying methodological triangulation, source triangulation, member checking, peer debriefing, and maintaining an audit trail	Credible, dependable, confirmable, and transferable findings
Reporting and Interpretation	Synthesizing findings, discussing theoretical and practical implications, and drawing conclusions	Scholarly contribution to Arabic language learning psychology

Research Instruments

Data were collected using four complementary instruments to ensure methodological triangulation and to capture participants' experiences from multiple perspectives. First, an open-

ended questionnaire was administered to all participants to obtain preliminary information regarding their initial perceptions, learning expectations, challenges encountered, and strategies adopted throughout the course. The questionnaire consisted of broad reflective questions designed to encourage participants to describe their experiences in their own words rather than selecting predetermined responses. Second, semi-structured interviews served as the principal source of qualitative data. An interview guide was developed to explore participants' emotional responses, cognitive adaptation, learning difficulties, perceptions of instructional practices, and experiences using digital technologies, including artificial intelligence, to support learning. Third, non-participant classroom observations were conducted throughout the semester using structured observation sheets to document classroom interactions, students' engagement, instructional delivery, and observable behavioral responses during learning activities. Finally, document analysis was employed to complement the primary data by examining course syllabi, lesson plans, student assignments, reflective learning records, and digital learning artifacts. The integration of these four instruments enabled comprehensive exploration of students' lived experiences while strengthening the credibility of the research findings through data triangulation.

Instrument Validity and Trustworthiness

Prior to data collection, all research instruments underwent content validation through expert review involving two senior scholars specializing in qualitative research methodology and Arabic language education. The reviewers evaluated the relevance, clarity, coherence, and appropriateness of each instrument in relation to the research objectives, resulting in several revisions to improve wording, sequencing, and question alignment. A pilot implementation involving three students outside the research sample was subsequently conducted to examine the clarity of interview questions and questionnaire prompts. Because this study adopted a qualitative design, trustworthiness was established by applying the criteria proposed by Lincoln and Guba, encompassing credibility, transferability, dependability, and confirmability. Credibility was enhanced through methodological triangulation, source triangulation, prolonged engagement in the research setting, and member checking, allowing participants to verify the accuracy of interpreted findings. Transferability was supported by providing detailed descriptions of the research context, participant characteristics, and learning environment. Dependability was maintained through comprehensive documentation of research procedures and an audit trail that recorded methodological decisions throughout the investigation. Confirmability was strengthened through peer debriefing, reflexive field notes, and systematic documentation to ensure that interpretations remained grounded in the empirical data rather than the researchers' assumptions.

RESULTS AND DISCUSSION

Results

The research, conducted during the odd semester of 2024, successfully uncovers the essence of the phenomenological experiences of female undergraduate students enrolled in the Psychology of Arabic Language Learning course. Through a triangulation process integrating open-ended questionnaires, in-depth interviews, classroom observations, and documentary analysis, systematic patterns emerged, illustrating the dynamics of adaptation, learning barriers, and coping strategies adopted by the participants.

Affective Responses: Between Enthusiasm and Academic Anxiety

Data from the open-ended questionnaires and interviews revealed a polarization of emotional responses and initial impressions when the students first engaged with this course. Some students demonstrated positive affect and felt familiar with the instructional material, viewing it as a cognitive bridge to their prior education. This is reflected in the statement of one informant: "I am very happy, Alhamdulillah. It makes me feel like I am back in high school because this lesson is categorized as a general course." (INF-04) On the other hand, a deeper perspective emerged from informants who perceived the course as a novel space that challenged their intellect. The instructor's success in connecting theoretical psychological concepts with real-world case studies in the

classroom significantly bolstered learning enthusiasm. The characteristics of this experience were explicitly described by another informant:

"My first impression of attending the Psychology of Arabic Language Learning lectures was highly interesting and challenging... it opened new horizons and motivated me to study deeper." (INF-11) Nonetheless, academic anxiety was still identified, particularly among students from an exclusive pesantren (Islamic boarding school) background who lacked exposure to modern social sciences. Based on observation notes, this anxiety manifested as passivity during the initial weeks of the semester. However, this affective barrier was gradually mitigated through the communicative and inclusive instructional approach of the course instructor (INF-19).

Adaptation Dynamics and Learning Agency

Entering the orientation phase, the students' level of adaptability displayed variations in autonomy influenced by intrinsic motivation. Students with a high interest in psycholinguistic dimensions tended to navigate the transition period more smoothly, viewing the course material as an expansion of their intellectual horizons. "Alhamdulillah, I was able to adapt easily... I feel that my insights have broadened regarding psychological science in particular." (INF-02) Conversely, for another group of participants, this adaptation process was experienced as an intense cognitive challenge. They had to contend with a paradigmatic leap from practical-mechanistic language learning to conceptual psychological analysis. This difficulty was captured in the following account:

"The adaptation phase in attending the Psychology of Arabic Language Learning lectures was quite challenging. Initially, I needed to familiarize myself with psychological terms that were new to me and an instructional pace that I found rather fast." (INF-15) Interestingly, this challenge did not cause the students to surrender. Documentary evidence in the form of assignment portfolios and student journals confirmed independent efforts to assimilate new terminology. This phenomenon demonstrates strong learning agency, wherein students proactively converted cognitive load into a catalyst for self-regulation.

Identification of Learning Challenges

Based on the synthesis of data from classroom observation sheets and questionnaire confirmations, three crucial and interconnected clusters of obstacles were identified during the semester:

- **Digital Space Distractions (Online Learning):** The primary external barrier stemmed from a lack of focus when lectures were shifted to an online mode. The limitations of physical interaction triggered a decline in students' short-term attention spans.
- **Linguistic-Conceptual Complexity:** Students experienced difficulties in digesting specialized psychological terms derived from Latin or Western terminology, which felt foreign within the tradition of pure Arabic literature.
- **Instructional Acceleration:** The pace of material delivery by the instructor in several sessions was deemed too rapid. Consequently, the students' working memory capacity was overwhelmed when attempting to absorb deep concepts during face-to-face sessions.

Resilience Strategies and Self-Directed Learning

To overcome the three obstacles mentioned above, the undergraduate students at STAI Ali bin Abi Thalib Surabaya demonstrated high academic resilience through the utilization of technology and peer collaboration. The adopted coping strategies were predominantly characterized by autonomous actions outside of formal class hours. A major strategic breakthrough identified was the utilization of artificial intelligence (AI tools) to simplify the operational definitions of complex Latin terms, alongside the autonomous expansion of digital literacy: "Perhaps I need to be more diligent in reading journal articles and papers on psychology outside of class hours." (INF-07)

In addition to independent study, informal small-group discussions in the dormitory or communal spaces served as a catharsis for students who fell behind due to the instructor's rapid teaching pace. Theoretically, these findings indicate that the phenomenological experiences of the students did not stop at passive acceptance of barriers, but rather evolved into self-directed learning. Comprehensive data triangulation proves that the integration of personal student agency and

technology utilization effectively minimized the impact of learning challenges, while concurrently ensuring that the course's targeted learning outcomes were successfully fulfilled.

Discussion

The findings demonstrate that female undergraduate students experienced an initial psychological tension characterized by the coexistence of learning enthusiasm and academic anxiety when entering the Psychology of Arabic Language Learning course. Rather than representing contradictory emotional states, these responses reflect a natural process of cognitive and affective adjustment as learners encountered unfamiliar disciplinary knowledge. Students who perceived psychological concepts as opportunities for intellectual enrichment exhibited greater curiosity and intrinsic motivation, whereas those with predominantly pesantren-based educational backgrounds initially experienced uncertainty due to limited exposure to psychological terminology. This pattern supports the perspective of positive psychology in second language acquisition, which argues that positive and negative emotions frequently coexist and jointly influence learners' engagement, persistence, and academic development rather than functioning as mutually exclusive constructs (Aliyeva, 2025; Graham, 2022). From this perspective, the observed anxiety should not be interpreted merely as a learning obstacle but as an indicator of cognitive disequilibrium that can stimulate deeper conceptual engagement when supported by appropriate pedagogical practices. The gradual reduction of anxiety observed during the learning process therefore suggests that emotional adaptation is closely intertwined with meaningful instructional experiences and learners' evolving perceptions of academic competence.

These findings are broadly consistent with previous studies emphasizing that emotions constitute a central mechanism through which language learners regulate motivation, self-efficacy, and learning performance (Graham, 2022; Ma, 2022; Teng & Pan, 2024). However, the present study extends this body of knowledge by illustrating that emotional adaptation in Arabic language education cannot be fully understood without considering the distinctive sociocultural and religious context of Islamic higher education. Unlike many investigations conducted in English language learning environments, participants in this study negotiated not only linguistic complexity but also the transition toward an unfamiliar psychological paradigm embedded within Arabic language pedagogy. Consequently, academic anxiety emerged primarily from conceptual discontinuity rather than communicative apprehension, offering an alternative explanation to the dominant foreign language anxiety literature. This contextual difference suggests that emotional experiences are shaped by learners' prior educational trajectories and disciplinary expectations, reinforcing sociocultural perspectives that regard learning as a process of negotiating meaning within historically situated educational communities (Southworth, 2022; Steć & Kulik, 2021). The findings therefore contribute conceptually by extending positive psychology beyond individual emotional regulation toward a more context-sensitive understanding in which emotional adaptation emerges through continuous interactions among prior educational experiences, disciplinary transition, and supportive instructional environments.

The second major finding reveals that participants did not respond to disciplinary transition passively but instead demonstrated substantial learner agency by actively constructing adaptive learning strategies throughout the course. Although many students initially perceived educational psychology as conceptually distant from their previous Arabic language learning experiences, they gradually transformed this unfamiliarity into opportunities for intellectual growth through independent exploration, reflective learning, and continuous engagement with instructional activities. This finding suggests that successful adaptation was driven not solely by cognitive ability but by learners' willingness to regulate their own learning processes in response to challenging academic circumstances. Such a pattern aligns with the principles of self-regulated learning, which conceptualize learners as proactive individuals capable of monitoring, evaluating, and modifying their learning behaviors to achieve academic goals (Hensley et al., 2022; Huang, 2022). Simultaneously, the findings reinforce contemporary perspectives on learner agency, which emphasize that students are not merely recipients of instructional practices but active participants who shape their own educational experiences through intentional decision-making and reflective action (Bae et al., 2025). Consequently, adaptation in this study should be understood as an iterative

process of meaning-making in which students continuously negotiated between prior knowledge, emerging disciplinary concepts, and evolving learning strategies.

The present findings also enrich existing scholarship by demonstrating that learner agency within Arabic language education is strongly mediated by the interaction between sociocultural background and interdisciplinary academic transition. Previous studies have consistently reported that learner autonomy and self-regulated learning positively influence engagement and academic achievement in technology-enhanced language education (Mohammadi Zenouzagh et al., 2023; Mohebbi, 2024). Nevertheless, most of these investigations have been conducted in general foreign language contexts where learners primarily adapt to linguistic demands rather than to an entirely new disciplinary paradigm. In contrast, participants in the present study were required to reconcile deeply rooted educational experiences from Islamic boarding schools with psychological theories originating from contemporary educational sciences, creating a more complex process of conceptual negotiation. This distinction indicates that learner agency develops not only through individual motivation but also through learners' capacity to reinterpret previous educational identities while integrating new epistemological perspectives. Such an interpretation is consistent with sociocultural views of learning, which argue that knowledge construction is inseparable from learners' historical, cultural, and institutional contexts (Southworth, 2022; Alkouatli, 2023). Therefore, this study extends the current understanding of learner agency by proposing that agency in Arabic language learning is inherently contextual, emerging through continuous interactions among prior educational experiences, interdisciplinary learning demands, and culturally situated academic environments rather than through autonomous learning behaviors alone.

The third major finding indicates that the learning difficulties experienced by participants were multidimensional, encompassing digital distractions, linguistic-conceptual complexity, and accelerated instructional delivery. These challenges should not be interpreted as isolated instructional problems but rather as interconnected factors that collectively shaped students' psychological adaptation throughout the learning process. The combination of unfamiliar psychological terminology, rapid classroom instruction, and reduced concentration during online learning increased the cognitive demands placed on students, particularly those with limited prior exposure to educational psychology. This finding supports contemporary perspectives that learning effectiveness depends not only on instructional content but also on learners' capacity to process information within the limits of their cognitive resources (Graesser et al., 2022). Recent developments in educational neuroscience and artificial intelligence further argue that cognitive load is dynamic and strongly influenced by instructional design, prior knowledge, and technological support rather than by the inherent complexity of learning materials alone (Gkintoni et al., 2025). Accordingly, the learning challenges identified in this study reflect an interaction between instructional conditions and learners' readiness to integrate unfamiliar disciplinary knowledge, highlighting the importance of designing psychologically responsive learning environments that gradually scaffold conceptual understanding.

These findings both corroborate and extend previous research concerning technology-mediated language learning and interdisciplinary education. Earlier studies have consistently reported that online learning environments may reduce learners' attention, increase cognitive overload, and require greater levels of self-regulation to maintain academic engagement (Hensley et al., 2022; Tan et al., 2021; Yunusa & Umar, 2021). Likewise, studies in language education have demonstrated that complex conceptual content can generate uncertainty when students encounter unfamiliar theoretical frameworks, particularly in digitally mediated instructional settings (Graesser et al., 2022; Zhang & Zhang, 2025). Nevertheless, the present study reveals a distinctive contextual dimension that has received comparatively little attention in previous scholarship. Rather than struggling primarily with language proficiency, participants encountered difficulties in negotiating psychological concepts that differed substantially from the epistemological traditions of their earlier Islamic educational experiences. This suggests that conceptual complexity is socially and culturally constructed, emerging from the interaction between disciplinary transition and learners' educational backgrounds rather than from the intrinsic difficulty of the subject matter itself. Consequently, this study advances the literature by demonstrating that learning challenges in Arabic language education should be understood as context-dependent psychological phenomena requiring instructional approaches that simultaneously address cognitive processing, emotional adaptation,

and epistemological transition. Such an interpretation broadens existing discussions on cognitive load by positioning sociocultural experience as an integral determinant of how learners perceive, interpret, and respond to academic complexity.

The final finding demonstrates that participants responded to academic challenges by developing adaptive resilience through self-directed learning, collaborative peer interaction, and the purposeful use of artificial intelligence to facilitate conceptual understanding. Rather than functioning merely as a technological convenience, AI emerged as a psychological resource that reduced uncertainty, clarified unfamiliar terminology, and strengthened learners' confidence when engaging with complex theoretical content. This finding suggests that digital technologies can support not only cognitive performance but also emotional adaptation by enabling students to regulate learning independently and sustain academic engagement despite demanding instructional conditions. Such an interpretation is consistent with recent studies indicating that AI-enhanced learning environments promote learner autonomy, self-regulated learning, and continuous motivation when technology is used as a scaffold for knowledge construction rather than as a substitute for human learning (Lin, 2024; Mohebbi, 2024; Al-atrash et al., 2026). Similarly, research on digital language learning emphasizes that technological resources become educationally meaningful when integrated into learners' cognitive and reflective processes rather than being viewed solely as instruments for improving efficiency (Li & Lan, 2022; Kostopoulos et al., 2025). Nevertheless, the present findings indicate that the psychological value of AI extends beyond instructional support, functioning as a mediating mechanism through which students transform academic uncertainty into opportunities for conceptual exploration and independent meaning-making. This interpretation reinforces the argument that technology-supported resilience should be understood as a dynamic interaction among cognitive regulation, emotional stability, learner agency, and contextual learning rather than as a direct consequence of technology adoption itself.

From a broader theoretical perspective, this study contributes to the international literature by proposing a more integrated understanding of psychological adaptation in Arabic language learning within Islamic higher education. While previous research has predominantly examined psychological variables, learner autonomy, or artificial intelligence as separate constructs (Graham, 2022; Katsantonis & McLellan, 2023; Mohebbi, 2024), the present findings demonstrate that these dimensions operate through a continuous process of reciprocal interaction shaped by sociocultural background, disciplinary transition, and technology-supported learning practices. Consequently, this study extends positive psychology in second language acquisition by illustrating that psychological well-being is not solely determined by positive emotions or motivational beliefs but also by learners' capacity to negotiate unfamiliar academic knowledge within culturally meaningful educational environments. Equally important, the findings expand current conceptualizations of learner agency by demonstrating that agency develops through the integration of reflective learning, collaborative support, and responsible AI utilization rather than through individual autonomy alone. These insights address an important gap in the existing literature, where empirical evidence concerning the psychology of Arabic language learning—particularly among female students in Islamic higher education—remains limited despite the increasing digital transformation of language education. Accordingly, the conceptual perspective advanced in this study positions psychological adaptation as a multidimensional and context-sensitive process emerging from the interaction of emotional experiences, cognitive development, instructional practices, sociocultural contexts, and technological engagement. Beyond its theoretical significance, this framework offers practical implications for curriculum developers and higher education institutions seeking to design Arabic language learning environments that are academically rigorous, psychologically supportive, and pedagogically responsive to the realities of AI-assisted education.

CONCLUSION

This study demonstrates that female undergraduate students' experiences in the Psychology of Arabic Language Learning course are shaped by the continuous interaction of emotional, cognitive, instructional, and technological dimensions within the context of Islamic higher education. Although participants encountered challenges related to unfamiliar psychological terminology, accelerated instructional delivery, and the demands

of digital learning, they responded by developing adaptive learning strategies characterized by self-directed learning, collaborative peer support, and the purposeful use of artificial intelligence to facilitate conceptual understanding. These findings indicate that effective learning extends beyond the transmission of disciplinary knowledge and depends on instructional environments that foster psychological safety, learner agency, and meaningful engagement. The study further contributes to the literature on language learning psychology by illustrating how students actively negotiate new academic concepts through the interplay of prior educational experiences, sociocultural backgrounds, and technology-assisted learning practices. From a practical perspective, the findings highlight the importance of designing psychologically responsive and pedagogically flexible Arabic language instruction that integrates appropriate technological support while accommodating learners' diverse educational backgrounds. Future research is encouraged to expand the participant population across different institutional contexts, include comparative gender perspectives, and employ mixed-methods or longitudinal designs to examine the long-term development of psychological adaptation and the evolving role of artificial intelligence in Arabic language education.

AUTHOR CONTRIBUTIONS STATEMENT

Nur Cholis Agus Santoso Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing Original Draft, Visualization, and Project Administration. Munir Abidin Supervision, Validation, Writing Review & Editing, Interpretation of Findings, and Critical Revision of the Manuscript. All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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