

Socio-cognitive mindfulness and academic burnout: A study of international students in an intensive Arabic program

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Abstract

Intensive foreign language programs may place strong psychological demands on students and may increase the risk of academic burnout. Mindfulness has often been examined as a learner resource associated with lower distress, but less is known about how specific socio-cognitive patterns of attention and engagement relate to burnout in intensive Arabic learning in higher education. This study examined the relationships between three socio-cognitive mindfulness facets, unmindful disengagement, novelty producing, and novelty seeking, and four burnout dimensions, academic efficacy, cynicism, disengagement, and exhaustion. Participants were 176 international scholarship students enrolled in a two-year intensive Arabic program at a Saudi public university. Data were collected using a survey. The model was tested using generalized structured component analysis. The results suggest that novelty seeking was the most consistent correlate of a lower burnout profile. Higher novelty seeking was associated with higher academic efficacy and lower cynicism, disengagement, and exhaustion. Unmindful disengagement showed the opposite pattern. It was linked to higher cynicism, disengagement, and exhaustion, but it was not significantly related to academic efficacy. Novelty producing did not show significant unique associations with any burnout dimension once the other mindfulness facets were included. These findings suggest that students' curiosity and active exploration of Arabic learning opportunities were more consistently associated with burnout dimensions than creative production alone in this sample. These findings identify novelty seeking and unmindful disengagement as concurrent correlates of burnout dimensions in this sample. Longitudinal and instructional research is needed to test whether practices that encourage noticing, exploration, and sustained attention are followed by changes in burnout.

Keywords: Academic burnout, socio-cognitive mindfulness, Arabic as a foreign language, intensive language programs, international students

Introduction

Arabic has become an important language for many international students who plan to study, work, or live in Arabic-speaking countries. In Saudi Arabia, intensive Arabic as a foreign language (AFL) programs bring scholarship students from diverse linguistic and cultural backgrounds into a new academic and social environment. Students are expected to develop Arabic quickly and use it for academic study and daily communication. These programs provide rich learning opportunities, but they may also create strong psychological pressure. Students often face a heavy course load, unfamiliar scripts and sounds, new teaching styles, high-stakes assessment, and the wider demands of adapting to a new society (Alhamami, 2025).

Research on academic stress and psychological well-being in language education needs clear models that explain chronic negative learning experiences. Foreign language learning often includes uncertainty, frequent evaluation, and risk of failure, which may increase vulnerability to distress (Chang et al., 2025). In this context, academic burnout is a useful construct. In higher education, burnout is often defined as a negative psychological syndrome related to chronic academic stress. It commonly includes emotional exhaustion, cynicism, and reduced academic efficacy (Maslach et al., 2001; Li et al., 2024; Liu & Zhong, 2022). Emotional exhaustion refers to deep physical and emotional fatigue. Cynicism refers to detached or indifferent attitudes toward study. Reduced academic efficacy refers to weaker feelings of competence and accomplishment (Derakhshan et al., 2022; Ma, 2024).

In this study, burnout in intensive Arabic classes is conceptualized as a multidimensional experience that reflects learners' daily classroom life. It includes academic efficacy, cynicism, disengagement, and exhaustion. Academic efficacy refers to students' sense of capability and success in learning Arabic. Cynicism refers to loss of interest and doubts about the value of learning Arabic. Disengagement refers to mental and emotional withdrawal, such as doing tasks mechanically or investing less effort (Li, 2022). Exhaustion refers to emotional and physical tiredness linked to continuous learning demands. Together, these dimensions reflect difficulties in managing intensive language learning (Cong et al., 2024; Wu & Xiao, 2025).

Research in English as a foreign or second language suggests that burnout is linked to lower achievement, weaker engagement, and poorer well-being (Cong et al., 2024; Yu et al., 2022). Burnout has also been linked to anxiety, boredom, hopelessness, and less adaptive emotion regulation (Ding & Wang, 2024; Wang et al., 2024). However, most evidence comes from English-focused contexts. Less is known about burnout in intensive Arabic programs. The linguistic distance between Arabic and many students' first languages, the complexity of Arabic script and phonology, and the pace of intensive programs may increase burnout risk (Li et al., 2024; Liu & Zhong, 2022). More evidence is needed on how international students experience burnout in intensive Arabic learning and which psychological resources may be associated with lower burnout.

One possible resource is mindfulness. In educational research, mindfulness is often described as intentional, nonjudgmental awareness of the present moment. It has been linked to better emotion regulation, cognitive functioning, and resilience (Erdemir et al., 2024; Fathi et al., 2025). In language learning research, mindfulness has been associated with lower anxiety, higher achievement, and better adaptation to stress (Waldman & Carmel, 2019; Pawlak et al., 2025). Recent work in the *Australian Journal of Applied Linguistics* also supports this focus. Santosa et al. (2026) found that mindful learning was related to deep learning in an AI-based English as a foreign language context. Ng and Cheung (2025) also showed that emotions such as boredom, stress, emotion regulation, anxiety, and enjoyment are central to online English language education. These studies support the need to examine mindfulness and burnout as part of learner psychology in language education.

At the same time, many studies use meditative or clinical measures of mindfulness. These measures are valuable, but they may not fully capture everyday patterns of mindful and unmindful engagement in classroom learning (Gordani & Sadeghzadeh, 2023; Pawlak et al., 2025). For this reason, the present study adopts the Langerian socio-cognitive perspective of mindfulness. The term socio-cognitive mindfulness is not used here as a new construct created for Arabic language learning. It refers to the perspective developed in Langer's work and operationalized in the Langer Mindfulness Scale (Pirson et al., 2018). In this tradition, mindfulness is not primarily defined as meditation, acceptance, or nonjudgmental awareness. It is defined as an active cognitive orientation that involves noticing novelty, creating new categories, remaining sensitive to context, and considering multiple perspectives (Langer & Moldoveanu, 2000; Pirson et al., 2018). Recent validation studies of the Langer Mindfulness Scale also distinguish Langerian or socio-cognitive mindfulness from meditative mindfulness and support the scale across cultural contexts (Uysal Saraç et al., 2024; Yang et al., 2026).

This distinction is important for intensive Arabic learning. Students in such programs must continually notice unfamiliar scripts, sounds, grammatical patterns, meanings, classroom routines, and cultural uses of language. A Langerian perspective is therefore relevant because it treats mindful learning as active noticing and flexible engagement with changing learning conditions. It also helps distinguish the present study from work on clinical or meditation-based mindfulness. The focus here is not on meditation practice, but on how students notice, explore, create, and remain engaged with Arabic learning opportunities.

The construct overlaps with several related educational constructs, but it is not identical to them. Curiosity is closest to novelty seeking, but the Langer Mindfulness Scale also includes novelty producing and engagement. Cognitive engagement and learner engagement refer more broadly to effort, participation, and investment in learning, whereas socio-cognitive mindfulness focuses more specifically on how learners notice novelty, create new categories, and respond flexibly to classroom situations. Openness to experience is usually treated as a broad personality trait, while Langerian mindfulness is more situation-sensitive and can be expressed in specific learning activities. Adaptive self-regulation involves planning, monitoring, and strategy use, whereas socio-cognitive mindfulness concerns the quality of attention, noticing, and flexible interpretation that may support such regulation.

Building on the Langer Mindfulness Scale, the study focuses on three classroom-oriented facets adapted to Arabic learning: novelty seeking, novelty producing, and unmindful disengagement. Novelty seeking refers to curiosity and active investigation, such as exploring Arabic and its cultures, welcoming complex topics, and searching for new ways to learn and practice. Novelty producing refers to generating new ideas, making useful contributions, and creating strategies for improving Arabic skills. The original LMS also includes an engagement dimension. In the present adaptation, the engagement items were negatively worded and referred to overlooking classmates' learning strategies, avoiding challenging conversations, and missing opportunities to practice Arabic. For this reason, this facet is labeled unmindful disengagement in this study. This label clarifies that the construct reflects low mindful engagement with Arabic learning opportunities, not a separate positive mindfulness dimension.

These facets may relate to burnout in different ways. Students who approach Arabic with curiosity and creativity may feel more competent and find learning more meaningful. They may also search for alternative strategies when difficulties arise, which may support academic efficacy and lower exhaustion (Fathi et al., 2025; Gao, 2024). In contrast, students who avoid challenge, overlook change, and miss practice opportunities may experience classes as repetitive and disconnected from their goals. This pattern may be associated with higher cynicism, disengagement, and exhaustion (Hosseini et al., 2024; Wang et al., 2024).

Despite these possible links, research connecting burnout and socio-cognitive mindfulness in intensive language programs remains limited, especially in AFL settings. Existing studies have often examined mindfulness with anxiety, boredom, grit, resilience, and achievement in English as a foreign language contexts, and often in non-intensive programs (Babanoğlu & Atalmış, 2025; Fan et al., 2024). Fewer studies use measures tailored to classroom processes and to how learners engage with the target language, peers, and teachers. This creates a need for context-sensitive research that captures both the risks of intensive language learning and the possible role of mindful engagement.

The Arabic-learning context is relevant to the model, but it is treated here as a learning context rather than as a set of separately measured predictors. Intensive Arabic programs often require students to manage unfamiliar scripts, sounds, grammar, registers, classroom routines, assessment demands, and adjustment to a new academic and social environment. These conditions may make active noticing and flexible engagement especially important. Novelty seeking may help learners approach unfamiliar Arabic forms and cultural meanings as objects of inquiry. Novelty producing may support the creation of personal strategies for practicing Arabic in and beyond class. In contrast, unmindful disengagement may become problematic when students avoid difficult interaction, stop noticing changes in course materials, or miss opportunities to use Arabic. Thus, the Arabic context helps explain why these socio-cognitive mindfulness facets are relevant to burnout, even though the study does not test script, phonology, diglossia, or scholarship conditions as separate variables.

To address this need, the present study examines the relationships between burnout and socio-cognitive mindfulness among international scholarship students in a two-year intensive Arabic program at a Saudi public university. Burnout is examined through academic efficacy, cynicism, disengagement, and exhaustion. Socio-cognitive mindfulness is examined through novelty seeking, novelty producing, and unmindful disengagement. Using a cross-sectional survey and generalized structured component analysis, the study examines how different ways of engaging with Arabic learning opportunities relate to students' feelings of competence, distance from learning, and fatigue.

The structural model was specified from theory and prior research rather than from a search for the strongest statistical fit. This distinction is important because, in structural equation modeling (SEM), the main aim is to test a theoretically specified model, not simply to identify a model with stronger fit statistics. As Kline (2023) notes, SEM should be used to test theory, and models may remain useful when they show where theoretical expectations are supported only partly by the data. For this reason, the present study treats the model as a theory-driven test of relations among closely related psychological dimensions, while interpreting the findings cautiously where the evidence indicates overlap or model strain.

Conceptual Framework

This study proposes a conceptual framework that examines associations between socio-cognitive mindfulness and academic burnout in intensive Arabic learning. Socio-cognitive mindfulness is modeled through three facets: novelty seeking, novelty producing, and unmindful disengagement. These facets are expected to be associated with four burnout dimensions: academic efficacy, cynicism, disengagement, and exhaustion. The framework assumes that mindful engagement may be linked to stronger competence beliefs and more meaningful learning experiences. It also assumes that unmindful disengagement may be associated with weaker engagement with learning opportunities and higher cynicism, disengagement, and exhaustion. By examining the three mindfulness facets together, the framework aims to describe a more specific pattern of associations between mindful engagement and burnout experiences in

intensive Arabic programs. The proposed associations among the three socio-cognitive mindfulness facets and the four academic burnout dimensions are summarized in Figure 1.

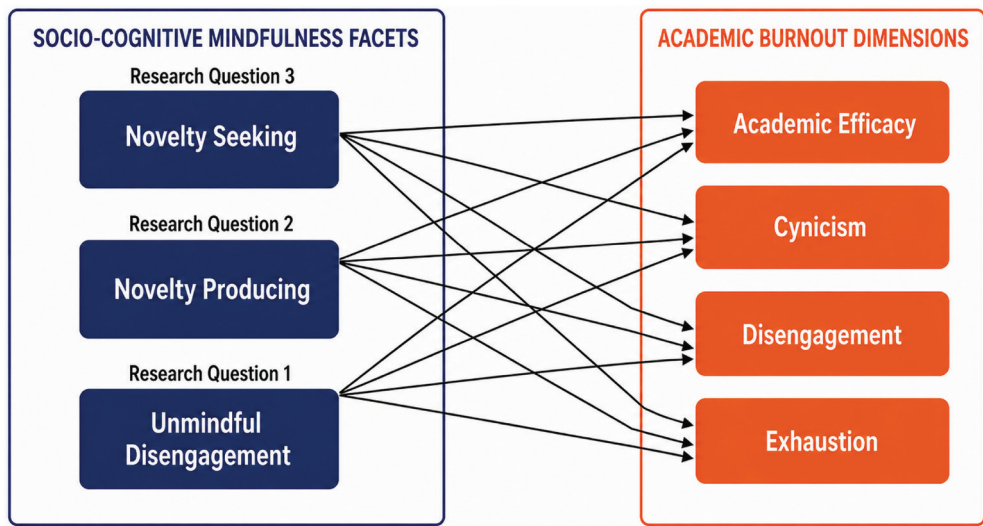


Figure 1. Conceptual framework of associations between socio-cognitive mindfulness facets and academic burnout dimensions in intensive AFL classes

Research Questions and Hypotheses

The study addressed three research questions. First, to what extent is unmindful disengagement associated with academic efficacy, cynicism, disengagement, and exhaustion in intensive Arabic classes? Second, to what extent is novelty producing associated with these four burnout dimensions? Third, to what extent is novelty seeking associated with these four burnout dimensions?

Based on socio-cognitive mindfulness theory and burnout research, unmindful disengagement was expected to be negatively associated with academic efficacy and positively associated with cynicism, disengagement, and exhaustion. In contrast, novelty producing and novelty seeking were expected to be positively associated with academic efficacy and negatively associated with cynicism, disengagement, and exhaustion.

Literature Review

Foreign language learning burnout is often described as a negative state that develops under chronic learning demands and is commonly linked to exhaustion, cynicism, and reduced efficacy (Maslach et al., 2001; Li et al., 2024). In intensive Arabic classes, burnout may be especially relevant because students face rapid learning goals, frequent evaluation, and sustained language demands. Socio-cognitive mindfulness offers a useful lens because it emphasizes noticing change, exploring novelty, and staying open to new perspectives (Pirson et al., 2018). This view helps explain how classroom engagement patterns may relate to burnout in intensive language learning.

Unmindful Disengagement and Burnout

Unmindful disengagement reflects an unmindful pattern of learning. Students with this pattern may overlook learning opportunities, avoid demanding conversations, and miss changes

in materials or practice options. This may limit attention control and reduce self-regulation in class (Taghavi-Nejad et al., 2024). When students respond to challenge through avoidance, they may have fewer mastery experiences and weaker confidence in their ability to handle learning demands (Waldman & Carmel, 2019). Avoidance may also be associated with greater worry during evaluation, weaker perceived accomplishment, and higher burnout risk (Lin, 2025).

This pattern may also relate to the negative dimensions of burnout. When students avoid challenge and stop noticing value in learning tasks, the learning process may feel less meaningful. This may support emotional distancing and cynicism (Wang et al., 2024). Low mindfulness may also relate to mental drift, lower effort, and weaker engagement, especially when learning tasks become repetitive or demanding (Lyu, 2025; Yu et al., 2022). In addition, students who rely on avoidance may experience stronger strain because they face learning demands with fewer adaptive regulation strategies. In language learning settings, anxiety and other negative emotions often show positive links with exhaustion and burnout (Ding & Wang, 2024). For these reasons, unmindful disengagement was expected to be negatively associated with academic efficacy and positively associated with cynicism, disengagement, and exhaustion.

Novelty Producing and Burnout

Novelty producing refers to students' tendency to generate new ideas, contribute in original ways, and develop strategies for improving language skills. This pattern reflects active engagement and cognitive flexibility, which may support adaptation under pressure (Pirson et al., 2018). Producing novelty may also increase learners' sense of agency in class. When students create strategies and contribute actively, they may experience more task success. These experiences may support confidence in coping with academic demands (Zhang et al., 2026). Creative involvement may also be linked to sustained interest and emotional investment in learning, which may reduce detached attitudes (Derakhshan et al., 2022).

Novelty producing may also be relevant to disengagement and exhaustion. Active contribution requires attention and participation, so it is inconsistent with withdrawal from classroom processes (Wu & Zeng, 2024). If students can generate useful strategies, they may manage demands more efficiently and experience less stress load in demanding learning conditions (Erdemir et al., 2024). For these reasons, novelty producing was expected to be positively associated with academic efficacy and negatively associated with cynicism, disengagement, and exhaustion. At the same time, novelty producing may overlap with novelty seeking because learners who search for new language patterns may also create new responses and strategies. This overlap makes it important to examine its unique association with burnout after accounting for other mindfulness facets.

Novelty producing is conceptually related to novelty seeking, but the two facets are not identical. Novelty seeking is mainly exploratory and input-oriented. It reflects curiosity, investigation, and interest in discovering new features of Arabic. Novelty producing is more generative and output-oriented. It reflects learners' attempts to create new ideas, make useful contributions, and develop personal strategies for using and improving Arabic. For this reason, novelty producing was expected to have a possible unique association with burnout after novelty seeking was included. A learner may be curious about Arabic but still have limited opportunities or confidence to produce new ideas in class. Conversely, a learner who actively creates strategies and contributes to classroom work may experience stronger agency and competence, which could be associated with lower burnout. At the same time, because novelty seeking and novelty producing are closely related in the Langerian framework, their unique effects should be interpreted cautiously when both are entered into the same structural model.

Novelty Seeking and Burnout

Novelty seeking reflects curiosity and an active desire to explore new aspects of the language and its cultures. It includes welcoming complex topics and trying to understand how language rules work. This pattern may support intrinsic interest and sustained effort in demanding learning contexts (Hosseini et al., 2024). Curious learners may be more willing to persist, experiment, and learn from feedback, which may strengthen confidence in learning tasks (Pham Thi & Duong, 2024). Curiosity may also help students keep finding value in tasks and reduce the sense that learning is meaningless (Song, 2024).

Novelty seeking may also be associated with lower withdrawal from learning. When learners actively search for new ways to learn and practice, they may be less likely to disengage from classroom activity (Fan et al., 2024). Mindfulness is also linked to better stress management, and curiosity may support more adaptive coping when students face difficulty (Yang & Li, 2025). For these reasons, novelty seeking was expected to be positively associated with academic efficacy and negatively associated with cynicism, disengagement, and exhaustion.

Research Gaps and Study Contribution

Research on foreign language learning burnout has expanded, but key gaps remain. First, most studies focus on English as a foreign language settings. Evidence from intensive Arabic programs in higher education is still limited, although these programs involve fast-paced learning and a new script for many learners (Liu & Zhong, 2022). Second, many studies treat mindfulness and burnout in broad terms. Fewer studies test how specific mindfulness patterns relate to specific burnout dimensions. This limits understanding of which classroom behaviors may matter most for academic efficacy, cynicism, disengagement, and exhaustion (Gao, 2024). Third, socio-cognitive mindfulness, as defined in the Langer tradition, is less common in language learning research than meditative approaches (Pirson et al., 2018). Its classroom-relevant facets may fit intensive language learning well, but they remain underused in burnout research in Arabic learning settings.

The present study addresses these gaps by examining a framework in which unmindful disengagement, novelty producing, and novelty seeking are associated with academic efficacy, cynicism, disengagement, and exhaustion among international students in an intensive Arabic program. This design supports a more specific account of how different socio-cognitive mindfulness facets relate to competence beliefs, distancing from learning, and fatigue in higher education language study. The multidimensional framework was retained because it reflected the research questions and theory-based distinctions among the facets, while also allowing for cautious interpretation where dimensions may be empirically close.

Methodology

Context and Participants

This study was conducted in a two-year intensive AFL program at a public university in Saudi Arabia. The study focused on burnout and socio-cognitive mindfulness during Arabic learning in higher education. At the time of data collection, 240 students were enrolled in the program. Of these, 202 completed the questionnaire, giving a response rate of about 84%. The study used a cross-sectional survey design. Data were collected at one point in time from students at different proficiency levels. After data screening, the final analytic sample included 176 students. The program provides full-time Arabic instruction over two academic years. It prepares students to use Arabic for academic and social purposes. Students come from varied linguistic and cultural backgrounds, and Arabic is not their first language. This context is demanding

because students must adjust to a new language, a new academic system, and a new social environment within a short period.

Research Design

This study used a cross-sectional correlational survey design. Data were collected once from international students enrolled in a two-year intensive Arabic program at a Saudi public university. This design was appropriate because the study aimed to examine associations between socio-cognitive mindfulness facets and academic burnout dimensions at one point in time. It did not aim to test causal effects, temporal order, or individual change over time. The design was suitable for the present context because it provided a timely snapshot of students' current psychological experiences in an intensive Arabic program. Cross-sectional designs are useful for describing current conditions and examining relationships among variables in a defined population (Dörnyei & Taguchi, 2010). Survey methods are also widely used in language education because they allow researchers to measure psychological constructs that are not directly observable, such as beliefs, motivation, anxiety, engagement, and burnout (Brown, 2001; Dörnyei & Taguchi, 2010). A multi-item questionnaire was therefore appropriate for measuring students' reported mindfulness patterns and burnout experiences in a structured way. The one-time survey was also practical and ethical for this institutional setting. It allowed students from different program levels to participate during the same semester, with limited disruption to instruction. It also reduced participant burden and avoided attrition and repeated-testing effects that may occur in longitudinal designs. However, because the design was cross-sectional and based on self-report data, the model paths should be interpreted as theory-informed associations, not as causal effects. Longitudinal, experimental, observational, or mixed-methods research is needed to examine temporal order and possible causal processes.

Instrument Development and Procedures

The survey was developed through a stepwise process to support conceptual fit, content validity, face validity, linguistic clarity, and contextual appropriateness. Two established instruments were used as the basis for measurement. Burnout was measured using a validated 17-item scale developed for university students in English-medium instruction settings (Alhamami & Alrabai, 2026). Socio-cognitive mindfulness was measured using the Langer Mindfulness Scale (Pirson et al., 2018). The burnout instrument included academic efficacy, cynicism, disengagement, and exhaustion. The Langer Mindfulness Scale included novelty seeking, novelty producing, and engagement. Thus, the constructs and their indicators were based on previously developed and validated measures rather than created for the present study.

The items were contextually adapted to fit AFL. References to general academic experiences or English-medium instruction were replaced with references to Arabic classes, Arabic assignments, classroom activities, and opportunities to use Arabic. These modifications changed the instructional referents while seeking to preserve the theoretical meanings and dimensional structures of the source instruments. In the present adaptation, the negatively worded engagement indicators from the Langer Mindfulness Scale were labeled unmindful disengagement because they referred to limited awareness of and participation in immediate Arabic-learning opportunities.

A bilingual Arabic-English questionnaire was prepared. The first author prepared parallel Arabic and English versions of all items, instructions, and response options. In the online form, the Arabic and English versions were presented together so that students could read both

versions when responding. This bilingual format was used to reduce language barriers and support comprehension among multilingual international students. The purpose was not to measure students' proficiency in Arabic or English, but to help them understand the intended meaning of each item as clearly as possible.

Both language versions used the same six-point Likert scale, ranging from 1, strongly agree or strongly yes, to 6, strongly disagree or strongly no. Two negatively worded novelty-producing indicators were reverse-scored before model estimation using $7 - X$. This transformation aligned their numerical direction with the three positively worded novelty-producing indicators. No other numerical reversals were applied because the negatively worded indicators of cynicism, disengagement, exhaustion, and unmindful disengagement represented the intended negative direction of their respective constructs. After directional alignment, lower scores indicated stronger endorsement of academic efficacy, novelty seeking, and novelty producing. Lower scores on cynicism, disengagement, exhaustion, and unmindful disengagement indicated stronger endorsement of negative or avoidant learning experiences.

To enhance content validity, three master's students in applied linguistics reviewed the questionnaire. They checked the clarity of the items, the appropriateness of the wording, the match between items and intended constructs, the cultural fit of the statements, and the parallel meaning of the Arabic and English versions. Based on their feedback, some items were simplified and some phrases were adjusted to match the language level and learning context of the target population.

To enhance face validity and expert review, the research team then reviewed both language versions for clarity, layout, response flow, cultural appropriateness, and suitability for students from diverse linguistic backgrounds. The second author also reviewed the questionnaire for content coverage, linguistic accuracy, and fit to the AFL context. Any wording concerns were discussed and resolved before data collection.

A brief pilot administration was then conducted with five students from the target program. The pilot checked the online format, completion time, item display, response options, ease of navigation, and technical accessibility. Minor layout and instruction changes were made after this stage. In the final version, items within each construct block were presented in random order to reduce possible order effects and patterned responding.

Data Collection and Ethical Safeguards

Ethical approval was granted by the Research Ethics Committee at King Khalid University (HAPO-06-B-001; approval no. ECM#2025-3101) before data collection began. At the time of data collection, the program admitted only male scholarship students, so all participants were men. Participation was voluntary. Students were informed that they could decline participation or withdraw at any time without any effect on grades or academic standing.

The research team coordinated the online survey with support from course instructors. The survey was completed during scheduled student activity periods to avoid disrupting teaching time. Data collection took place over about two weeks. Different class levels participated in separate sessions to reduce overcrowding and allow time for questions.

At the start of each session, the researcher explained the study focus on burnout and socio-cognitive mindfulness in Arabic learning. Students received a brief overview of the questionnaire and the expected completion time. Confidentiality procedures were also explained. No names or student numbers were collected, and data were stored and analyzed only in aggregate form. Because the cohort was multilingual, the Arabic and English versions were presented together in the same online form so that students could consult both versions while responding.

Instruments

The survey measured burnout and socio-cognitive mindfulness in Arabic learning. All items used the same six-point Likert scale described above. Burnout was measured with 17 adapted items (Alhamami & Alrabai, 2026). Academic efficacy was measured with four items about students' sense of capability and effectiveness in Arabic classes. Academic efficacy was operationalized as a broad perception of capability, effective participation, and learning accomplishment in Arabic classes, consistent with the source burnout instrument (Alhamami & Alrabai, 2026). It was therefore not limited to narrow task-specific confidence. The four indicators were interpreted together as representing students' perceived effectiveness and accomplishment in their Arabic learning experience. Cynicism was measured with four items about reduced interest and doubts about the value of learning Arabic. Disengagement was measured with four items about mental and emotional withdrawal. Exhaustion was measured with five items about emotional and physical fatigue linked to Arabic learning demands.

Socio-cognitive mindfulness was measured with 14 adapted items from the Langer Mindfulness Scale (Pirson et al., 2018). Novelty seeking was measured with five items about curiosity, exploration, and interest in Arabic and related cultures. Novelty producing was measured with five items about generating new ideas, contributions, and strategies in Arabic learning. Unmindful disengagement was measured with four negatively worded items about low awareness and avoidance, such as overlooking classmates' strategies, avoiding thought-provoking conversations, or missing practice opportunities.

Range-Based Data Screening

Responses were screened for unengaged answering using a range index. For each participant, the range was calculated for each scale as the maximum response minus the minimum response across items. A range of zero indicated that the same response option was selected for every item on that scale. This pattern was treated as possible straight-lining.

For the burnout scale, 18 participants showed a range of zero and were removed. For the mindfulness scale, eight participants showed a range of zero and were removed. Any participant who met the zero-range criterion on either scale was excluded from all later analyses. After screening, the analytic sample was reduced from 202 to 176 participants.

Data Analysis in SmartPLS 4

After screening, the cleaned dataset was imported into SmartPLS 4 for structural modeling (Ringle et al., 2024). The analysis used GSCA, a component-based approach to SEM (Hwang & Takane, 2014). The four burnout dimensions and three socio-cognitive mindfulness facets were specified as reflective constructs measured by their indicators.

The analysis examined indicator loadings, internal consistency, convergent validity, discriminant validity, collinearity, global model fit, and structural path estimates. Statistical significance was assessed using bootstrapping, which provided standard errors and confidence intervals. The analysis was guided by the aim of testing a theory-driven model within one coherent component-based framework. This approach is consistent with Kline's (2023) view that SEM should begin from theory and that model choices should remain conceptually grounded. Accordingly, the model was retained as the primary theory-based specification, while empirical weaknesses are discussed transparently in the Results and Limitations sections.

Results

All analyses were conducted on the cleaned dataset of 176 students after removing cases with a zero response range on the burnout and socio-cognitive mindfulness scales, as described in the Methodology section.

Measurement Model

The measurement model was assessed for indicator reliability, internal consistency, convergent validity, discriminant validity, collinearity, and global model fit.

We first examined the outer loadings of the original five-indicator novelty-producing construct. The two negatively worded indicators were reverse-scored using $7 - X$ before their measurement performance was evaluated. After reverse scoring, the loading for “I generate few new ideas for my Arabic language assignments” was $-.35$, while the loading for “I do not consider myself an original thinker when completing my Arabic assignments” was $.06$. Thus, correcting the numerical direction of the items did not improve their absolute loading magnitudes. One indicator remained negatively related to the intended construct, and the other remained close to zero. Both indicators were therefore removed after evaluation in their correctly scored form. The final measurement and structural model was then rerun using the three retained novelty-producing indicators. Because the final indicator composition was the same as in the previously reported final model, the final reliability estimates, validity evidence, fit indices, structural coefficients, significance decisions, and substantive conclusions remained unchanged. Nevertheless, removing the two indicators narrowed the content coverage of novelty producing. Results concerning this construct should therefore be interpreted cautiously.

After deleting these two items, the outer loadings were acceptable. Loadings ranged from 0.81 to 0.86 for academic efficacy, 0.66 to 0.87 for cynicism, 0.72 to 0.85 for disengagement, and 0.69 to 0.84 for exhaustion. For the socio-cognitive mindfulness facets, loadings ranged from 0.64 to 0.83 for unmindful disengagement, 0.85 to 0.88 for novelty producing, and 0.81 to 0.93 for novelty seeking. All values exceeded the commonly used threshold of 0.60 , which suggests acceptable indicator reliability. Outer weights were also positive and of reasonable size across constructs, suggesting that each retained indicator contributed to its construct score.

Descriptive means were calculated from the indicators retained in the final model. Lower values indicated stronger agreement with the retained item statements. Academic efficacy showed relatively strong endorsement ($M = 2.49$, $SD = 1.42$). Novelty producing ($M = 2.26$, $SD = 1.22$) and novelty seeking ($M = 2.16$, $SD = 1.33$) also showed relatively strong endorsement. These values suggest stronger agreement with competence, curiosity, and active engagement statements. In contrast, cynicism ($M = 4.35$, $SD = 1.59$), disengagement ($M = 4.31$, $SD = 1.47$), and exhaustion ($M = 4.18$, $SD = 1.46$) showed weaker endorsement, suggesting lower agreement with burnout-related experiences. Unmindful disengagement showed a midpoint pattern ($M = 3.49$, $SD = 1.44$), suggesting mixed responses to avoidant or unmindful classroom behaviors.

Internal consistency and convergent validity were assessed using Cronbach's alpha, composite reliability (ρ_c), and AVE. The results are reported in Table 1. For the burnout constructs, Cronbach's alpha ranged from 0.81 to 0.86 , composite reliability ranged from 0.87 to 0.90 , and AVE ranged from 0.63 to 0.68 . For the mindfulness constructs, Cronbach's alpha ranged from 0.76 to 0.93 , composite reliability ranged from 0.84 to 0.95 , and AVE ranged from 0.58 to 0.78 . All reliability values exceeded 0.70 , and all AVE values exceeded 0.50 , suggesting adequate internal consistency and convergent validity.

Table 1. *Internal consistency and convergent validity*

Construct	Cronbach's alpha	Composite reliability (rho_c)	AVE
Academic efficacy	0.84	0.89	0.68
Cynicism	0.82	0.88	0.65
Disengagement	0.81	0.87	0.63
Exhaustion	0.86	0.90	0.64
Unmindful disengagement	0.76	0.84	0.58
Novelty producing	0.83	0.90	0.75
Novelty seeking	0.93	0.95	0.78

Discriminant validity was examined at the item and construct levels. At the item level, the cross-loading pattern supported separation because each indicator loaded more strongly on its intended construct than on any other construct. The gap between each item's main loading and its highest cross-loading ranged from about 0.08 to 0.56. The smallest gaps occurred between conceptually close pairs, especially among burnout facets and between novelty producing and novelty seeking.

At the construct level, discriminant validity was assessed following Rönkkö and Cho (2022), who recommend interpreting latent correlations through confidence intervals. We examined two-tailed 95% bootstrap confidence intervals from 10,000 bootstrap resamples. Upper confidence limits below .80 indicate no problem, values between .80 and .90 indicate a marginal problem, values between .90 and 1.00 indicate a moderate problem, and correlations not empirically distinguishable from 1.00 indicate a severe problem.

The results showed no severe or moderate discriminant validity problem for any construct pair. Most pairs fell in the no-problem range, including academic efficacy with cynicism, 95% CI [−.57, −.31], academic efficacy with disengagement, 95% CI [−.47, −.19], academic efficacy with exhaustion, 95% CI [−.54, −.28], unmindful disengagement with cynicism, 95% CI [.19, .48], novelty producing with academic efficacy, 95% CI [.41, .68], and novelty seeking with academic efficacy, 95% CI [.48, .73]. Several theoretically related pairs fell in the marginal range: disengagement with cynicism, 95% CI [.73, .86], exhaustion with cynicism, 95% CI [.74, .87], exhaustion with disengagement, 95% CI [.78, .88], and novelty seeking with novelty producing, 95% CI [.77, .89].

Because all intervals remained below 1.00 in absolute value, the constructs were empirically distinguishable in this sample. However, the marginal intervals show that several dimensions were closely related. This overlap should be interpreted as part of the model, not as a reason to collapse the constructs. Novelty seeking and novelty producing are both facets of Langerian socio-cognitive mindfulness, so shared variance is theoretically expected. Their marginal confidence interval, 95% CI [.77, .89], and their VIF values of 3.39 indicate meaningful overlap but not severe redundancy. This overlap helps explain why novelty producing did not show significant unique associations after novelty seeking was included in the same model. Therefore, the non-significant novelty-producing paths should be interpreted as limited incremental association in this model, not as evidence that novelty producing is unimportant.

Unmindful disengagement and burnout disengagement were also treated as related but distinct constructs. Unmindful disengagement refers to low mindful attention to immediate

Arabic learning opportunities, such as not noticing classmates’ strategies, avoiding challenging conversations, and missing practice opportunities. Burnout disengagement refers to broader academic withdrawal, such as talking negatively about learning, doing tasks mechanically, feeling disconnected from learning, and feeling disgusted with learning tasks. Their association was positive but modest, $r = .29$, 95% CI [.15, .42], and the confidence interval remained well below the .80 threshold used to identify a discriminant-validity concern. This supports the view that the two constructs were related but not redundant (Alhamami & Alrabai, 2026; Pirson et al., 2018; Rönkkö & Cho, 2022).

Model fit was evaluated using the GSCA indices produced by SmartPLS 4. For the estimated model, SRMR was 0.14, while the saturated-model SRMR was 0.07. FIT was 0.58, AFIT was 0.57, FITs was 0.20, and FITm was 0.67. These values indicate a mixed fit profile. The estimated-model SRMR suggests notable residual misfit, so the model should not be described as having strong or excellent global fit. However, SRMR should not be used as the only basis for judging model adequacy in GSCA. Hwang and Takane (2014) note that conventional GFI and SRMR cutoffs from factor-based SEM may not transfer directly to GSCA. Therefore, SRMR was interpreted as one source of model-fit evidence rather than as a single rejection rule. The other GSCA indices provide complementary information. FIT and AFIT indicate the proportion of variance accounted for by the combined model, while FITm and FITs distinguish the measurement and structural parts of the model. In this study, FITm = 0.67 suggests that the measurement part of the model performed more favorably, whereas FITs = 0.20 indicates weaker structural fit. Taken together, the model should be viewed as theoretically useful but empirically limited. The structural results should therefore be interpreted as patterned, theory-informed, and provisional associations rather than confirmation of a fully settled model.

Structural Model

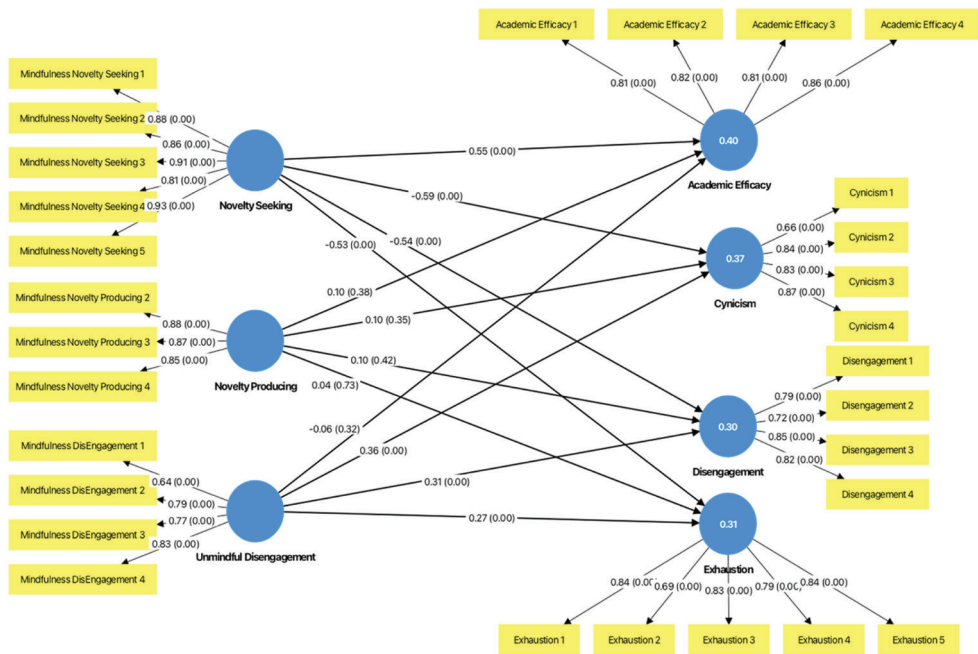


Figure 2. Structural model diagram with item loadings, standardized paths, *p* values, and *R*² for burnout outcomes in intensive AFL classes.
Note. *R*² values are reported in the figure.

The structural associations between the three socio-cognitive mindfulness facets and the four burnout dimensions were tested using generalized structured component analysis with 10,000 bootstrap resamples. The standardized coefficients, test statistics, and p values are reported in Table 2 and illustrated in Figure 2. Unmindful disengagement showed a small, non-significant association with academic efficacy, but it was positively and significantly related to cynicism, disengagement, and exhaustion. Novelty producing did not show significant associations with any burnout dimension once the other socio-cognitive mindfulness facets were included. In contrast, novelty seeking showed the most consistent association pattern. It was positively associated with academic efficacy and negatively associated with cynicism, disengagement, and exhaustion, as shown in Table 2 and Figure 2.

Table 2. *Structural associations between socio-cognitive mindfulness facets and burnout dimensions*

Path	O	M	SD	T stat	Sig.
Unmindful disengagement -> Academic efficacy	−0.06	−0.06	0.06	1.00	0.32
Unmindful disengagement -> Cynicism	0.36	0.36	0.07	5.33	0.001
Unmindful disengagement -> Disengagement	0.31	0.32	0.06	4.81	0.001
Unmindful disengagement -> Exhaustion	0.27	0.27	0.07	3.95	0.001
Novelty producing -> Academic efficacy	0.10	0.10	0.11	0.87	0.38
Novelty producing -> Cynicism	0.10	0.11	0.11	0.93	0.35
Novelty producing -> Disengagement	0.10	0.11	0.12	0.80	0.42
Novelty producing -> Exhaustion	0.04	0.05	0.12	0.34	0.73
Novelty seeking -> Academic efficacy	0.55	0.55	0.11	5.06	0.001
Novelty seeking -> Cynicism	−0.59	−0.60	0.10	5.83	0.001
Novelty seeking -> Disengagement	−0.54	−0.56	0.12	4.59	0.001
Novelty seeking -> Exhaustion	−0.53	−0.54	0.11	4.70	0.001

Discussion

This study examined how socio-cognitive mindfulness relates to burnout in Arabic learning in higher education. The model included three mindfulness facets, unmindful disengagement, novelty producing, and novelty seeking. It also included four burnout dimensions, academic efficacy, cynicism, disengagement, and exhaustion. The results suggest that these mindfulness facets do not operate in the same way. They also suggest that curiosity-based engagement may be a key correlate of a lower burnout profile in intensive Arabic learning.

The descriptive results provide brief context for the hypothesis tests. Because all constructs used the same six-point response scale and were interpreted using the same interval-width criteria, the mean patterns can be read as a general snapshot of learners’ typical agreement with positive versus negative classroom experiences. Overall, students tended to endorse competence-related statements more than burnout-related statements, while still showing noticeable individual variation. For socio-cognitive mindfulness, learners tended to endorse curiosity and

exploration more than unmindful withdrawal. This pattern aligns with the theoretical framework, which expects novelty seeking to function as an adaptive orientation linked to higher academic efficacy and lower burnout, and expects unmindful disengagement to function as a risk orientation linked to higher cynicism, disengagement, and exhaustion (Maslach et al., 2001; Pirson et al., 2018; Li et al., 2024).

Burnout is often described as a syndrome that includes exhaustion, cynical attitudes, and reduced efficacy under chronic academic demands (Maslach et al., 2001). In language learning, recent work also treats burnout as multidimensional and linked to engagement, self-beliefs, and negative emotions (Li et al., 2024). In the present results, novelty seeking showed consistent associations with all burnout dimensions, while unmindful disengagement showed positive associations mainly with the negative burnout facets. This pattern fits the view that burnout is associated with how learners interpret demands and manage attention and emotion (Liu & Zhong, 2022).

A useful point in this study is that the outcomes were separated into four dimensions rather than a single burnout score. This matters because the same facet may relate differently to competence beliefs than to fatigue or negative attitudes. Prior work in English as a foreign language settings also suggests that efficacy and exhaustion can show different predictors and different change patterns (Ding & Wang, 2024). The present findings extend this logic to intensive Arabic learning.

The four-dimensional burnout specification was retained because it followed the source instrument and the dimension-specific research questions established before analysis. Cynicism, disengagement, and exhaustion are theoretically related components of burnout, so meaningful correlations among them are expected. However, the confidence intervals remained below 1.00, indicating conceptual proximity rather than empirical identity in this sample (Rönkkö & Cho, 2022). Combining these dimensions would remove distinctions among negative attitudes, psychological withdrawal, fatigue, and academic accomplishment. It would also change the substantive question from examining dimension-specific associations to estimating a broad overall burnout construct. The proposed model was therefore retained as the theory-based specification, while the observed overlap and mixed fit evidence were reported transparently (Hwang & Takane, 2014; Kline, 2023).

Novelty seeking was the strongest correlate in the model. It was positively related to academic efficacy and negatively related to cynicism, disengagement, and exhaustion. This pattern suggests that learners who actively explore Arabic and welcome intellectual challenge reported a more adaptive burnout profile. In socio-cognitive mindfulness theory, novelty seeking reflects openness to new information and flexible attention to change (Pirson et al., 2018). In a demanding language context, this orientation may be linked to interpreting difficulty as part of learning rather than as a threat. It may also be associated with more adaptive emotion regulation during setbacks. However, because the design was cross-sectional, these links should be understood as associations rather than evidence of change or causal influence.

This interpretation is consistent with research linking mindfulness to better well-being and language outcomes, often through improved emotion regulation and attention control (Yang & Li, 2025). It also aligns with studies showing that mindfulness is negatively related to language learning burnout and related distress in English as a foreign language contexts (Gao, 2024). However, the interpretation should remain cautious because novelty seeking is the curiosity-oriented facet of Langerian mindfulness. It is not a generic curiosity, motivation, or engagement scale. It is one of the established facets of the Langer Mindfulness Scale and was analyzed here as part of the socio-cognitive mindfulness framework. At the same time, its item content naturally includes interest, exploration, and active noticing. This overlap is theoretically

expected because the Langerian view defines mindfulness partly through openness to novelty and flexible attention. It also matters because motivation and positive emotions tend to support persistence in high-demand learning contexts (Ma, 2024). Therefore, the strong novelty-seeking pattern is best interpreted as showing that the exploratory facet of socio-cognitive mindfulness was the most consistent correlate of burnout dimensions in this sample.

Unmindful disengagement was associated with higher cynicism, higher disengagement, and higher exhaustion, while its link with academic efficacy was small and not significant. The item content indicates low awareness and avoidance in class, such as not noticing learning strategies, avoiding demanding conversations, and missing new learning opportunities. This pattern suggests that “tuning out” is closely tied to negative attitudes and fatigue, but it may not immediately lower perceived competence. One plausible explanation is that some learners can still feel capable of completing tasks, while also feeling emotionally detached or tired. This can happen in structured intensive programs where routines and external requirements support task completion even when engagement decreases.

This result is consistent with research linking burnout to withdrawal, negative attitudes, and maladaptive emotion regulation (Li et al., 2024; Yu et al., 2022). In the present study, unmindful disengagement was a concurrent correlate of cynicism, burnout disengagement, and exhaustion. It should not be interpreted as an early warning sign because all variables were measured at the same time. Students experiencing lower burnout may have greater capacity for attention and classroom participation. Conversely, exhaustion, cynicism, or withdrawal may contribute to later avoidance and reduced awareness. Longitudinal evidence is needed to examine the temporal order of these relationships.

Novelty producing did not show significant unique links with any burnout dimension after the other mindfulness facets were included. This result should be interpreted in relation to the discriminant-validity and collinearity findings. Novelty producing and novelty seeking were closely related, as shown by the marginal discriminant-validity interval and the VIF value of 3.39. Thus, the coefficient for novelty producing reflects what remains after its shared variance with novelty seeking has been accounted for. The result does not show that novelty producing is theoretically unimportant. Rather, it suggests that novelty producing did not add much unique explanatory value beyond novelty seeking in this sample. This is informative because it shows that the exploratory aspect of socio-cognitive mindfulness was more consistently associated with burnout than the generative aspect. The interpretation is also limited by the removal of two novelty-producing items, which narrowed the construct’s content coverage. For these reasons, the novelty-producing findings should be treated as provisional and tested again in other Arabic learning contexts.

The findings generate possible directions for future instructional research rather than evidence for established interventions. Longitudinal or experimental studies could examine whether activities involving investigation, comparison, active noticing, and guided exploration are followed by changes in burnout dimensions. For example, future studies could test tasks that ask learners to identify patterns in Arabic forms, compare meanings across contexts, or examine changes in texts and classroom interaction. Research could also test whether support for attention and participation is followed by changes in cynicism, withdrawal, or exhaustion. Until such evidence is available, these practices should be treated as theoretically informed hypotheses rather than interventions validated by the present study.

Several limitations should guide the interpretation of the findings. First, the study used a cross-sectional design. It is also possible that students with lower burnout reported greater novelty seeking and exploration, rather than novelty seeking reducing burnout. Future studies should use longitudinal designs to examine whether mindfulness patterns are associated

with later changes in burnout, or whether burnout shapes later classroom engagement. Second, the mixed GSCA fit profile is another limitation because the estimated-model SRMR indicated residual misfit and FITs suggested weaker structural fit. Therefore, the structural paths should be interpreted as provisional associations and tested again in future samples. Third, the sample included only male scholarship students. This reflected the gender-segregated structure of Saudi higher education and the fact that the selected program admitted only men at the time of data collection. The findings may not transfer directly to female learners or mixed-gender Arabic programs. Future research should test the model with female students and with more diverse institutional samples. Fourth, the study relied on self-report data. It did not include performance-based indicators of Arabic progress, such as course grades, proficiency test scores, placement movement, or teacher-rated progress. Thus, the findings describe perceived mindfulness and burnout, but they do not show how these variables relate to actual Arabic development. Future studies should combine self-report measures with performance or teacher-rated indicators. Fifth, the measurement results showed overlap between novelty seeking and novelty producing. Although the constructs were empirically distinguishable, the marginal discriminant-validity interval and VIF values suggest shared variance. In addition, two novelty-producing items were removed after the initial analysis. For this reason, findings related to novelty producing should be viewed as provisional. Further studies should refine the novelty-producing items and test the model in other Arabic learning contexts.

To conclude, novelty seeking was concurrently associated with higher academic efficacy and lower cynicism, burnout disengagement, and exhaustion. Unmindful disengagement was concurrently associated with higher levels of the three negative burnout dimensions. These relationships do not establish temporal or causal direction. Lower burnout may support curiosity, attention, and exploration, while burnout may also contribute to avoidance and reduced awareness. Novelty producing showed no significant unique associations after its shared variance with the other mindfulness facets was considered. The findings therefore provide provisional evidence concerning relationships among self-reported psychological constructs in one intensive Arabic program. They do not demonstrate effects on Arabic proficiency, academic achievement, or language development.

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Appendix A

Retained adapted items and item-level psychometric indicators

Construct	Item	Adapted English item	Outer loading	Indicator reliability	t value	p value
Academic Efficacy	AE1	I can effectively overcome the challenges of learning in my Arabic language learning classes.	.81	.66	20.93	< .001
Academic Efficacy	AE2	I contribute effectively to the learning environment in my Arabic language learning classes.	.82	.67	25.13	< .001
Academic Efficacy	AE3	I am learning many interesting things in my Arabic language learning classes.	.81	.66	20.51	< .001
Academic Efficacy	AE4	I can effectively accomplish the learning tasks required in my Arabic language learning classes.	.86	.74	32.53	< .001
Cynicism	CY1	My interest in learning in my Arabic language classes has decreased since they started.	.66	.44	10.12	< .001
Cynicism	CY2	I am less enthusiastic about learning in my Arabic language learning classes now.	.84	.71	26.39	< .001
Cynicism	CY3	I am more skeptical about the benefits of the learning that happens in my Arabic language learning classes.	.83	.69	21.12	< .001
Cynicism	CY4	I doubt the importance of what I am learning in my Arabic language learning classes.	.87	.76	28.65	< .001
Disengagement	DI1	I talk about my learning experience in my Arabic language learning classes in a more negative way now.	.79	.62	17.70	< .001
Disengagement	DI2	Lately, I think less about my learning and do the tasks for my Arabic classes mechanically.	.72	.52	12.62	< .001

(Continued)

Construct	Item	Adapted English item	Outer loading	Indicator reliability	t value	p value
Disengagement	DI3	I feel more disconnected from the learning in my Arabic language learning classes over time.	.85	.72	27.41	< .001
Disengagement	DI4	Sometimes I feel disgusted with the learning tasks from my Arabic language learning classes.	.82	.67	26.07	< .001
Exhaustion	EX1	I feel emotionally and mentally drained from the effort of learning in my Arabic language learning classes.	.84	.71	31.89	< .001
Exhaustion	EX2	I feel exhausted after a day of learning in my Arabic language learning classes.	.69	.48	12.61	< .001
Exhaustion	EX3	I feel tired when I think about another day of learning in my Arabic language learning classes.	.83	.69	23.64	< .001
Exhaustion	EX4	I find the learning process in my Arabic language learning classes to be stressful.	.79	.62	20.70	< .001
Exhaustion	EX5	I feel completely burned out from the demands of learning in my Arabic language learning classes.	.84	.71	27.09	< .001
Unmindful Disengagement	UD1	I seldom notice the learning strategies my classmates use in our Arabic class.	.64	.41	9.78	< .001
Unmindful Disengagement	UD2	I avoid engaging in challenging conversations in my Arabic classes.	.79	.62	16.79	< .001
Unmindful Disengagement	UD3	I am rarely aware of new topics or changes in our Arabic course materials.	.77	.59	18.80	< .001
Unmindful Disengagement	UD4	I am rarely alert to new opportunities for practicing Arabic outside of class.	.83	.69	28.09	< .001
Novelty Producing	NP2	I make many new and helpful contributions during my Arabic classes.	.88	.77	45.01	< .001

(Continued)

Construct	Item	Adapted English item	Outer loading	Indicator reliability	t value	p value
Novelty Producing	NP3	I am very creative in how I use Arabic in my assignments and projects.	.87	.76	31.50	< .001
Novelty Producing	NP4	I find it easy to create new and effective ways to improve my Arabic skills.	.85	.72	28.48	< .001
Novelty Seeking	NS1	I enjoy investigating different aspects of the Arabic language and its culture.	.88	.77	24.88	< .001
Novelty Seeking	NS2	I am very curious about the Arabic language and the cultures associated with it.	.86	.74	19.97	< .001
Novelty Seeking	NS3	I try to find new ways to learn and practice Arabic.	.91	.83	38.78	< .001
Novelty Seeking	NS4	I like to be intellectually challenged by complex topics in my Arabic studies.	.81	.66	18.21	< .001
Novelty Seeking	NS5	I like to figure out how the rules of the Arabic language work.	.93	.86	57.06	< .001

Note. Indicator reliability was calculated by squaring each standardized outer loading. The p values are based on 10,000 bootstrap resamples. Unmindful Disengagement refers to the negatively worded engagement items adapted from the Langer Mindfulness Scale.

Appendix A continued. Construct-level internal consistency and convergent validity

Construct	Cronbach's alpha	Composite reliability, rho_c	Average variance extracted
Academic Efficacy	.84	.89	.68
Cynicism	.82	.88	.65
Disengagement	.81	.87	.63
Exhaustion	.86	.90	.64
Unmindful Disengagement	.76	.84	.58
Novelty Producing	.83	.90	.75
Novelty Seeking	.93	.95	.78

Note. Average variance extracted is abbreviated as AVE in the main text.

Appendix B

Removed novelty-producing items

Construct	Item	Adapted English item	Decision	Reason
Novelty Producing	NP1	I generate few new ideas for my Arabic language assignments.	Removed	Reverse-scored loading = $-.35$; removed after corrected analysis because the indicator remained negative and weak.
Novelty Producing	NP5	I do not consider myself an original thinker when completing my Arabic assignments.	Removed	Reverse-scored loading = $.06$; removed after corrected analysis because the indicator remained close to zero.

Note. The two negatively worded items were reverse-scored using $7 - X$ and restored to the original five-indicator novelty-producing construct before the final item-retention decision was made. Their corrected loadings were $-.35$ and $.06$. Because both indicators remained psychometrically weak, they were removed before the final measurement and structural model was rerun. Their removal improved the empirical coherence of the retained novelty-producing construct but narrowed its content coverage. Findings concerning novelty producing should therefore be interpreted cautiously. Both indicators were adapted from the original novelty-producing facet of the Langer Mindfulness Scale and were not newly created for this study (Pirson et al., 2018).