

Academic burnout in multicultural pre-service teacher education: a conceptual model

Kriangsak Rattakul¹, Lanlalit Seubpradit²

¹Program of Bachelor Education in Counseling Psychology and Guidance, Faculty of Education, Songkhla Rajabhat University, Songkhla, Thailand

²Program of Bachelor Education in English and Educational Technology, Faculty of Education, Yala Rajabhat University, Yala, Thailand

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ABSTRACT

Academic burnout among pre-service teachers in multicultural contexts is a critical issue that negatively impacts teaching quality, teacher retention, and educational equity. While existing psychological models successfully explain general academic stress, a critical research gap persists regarding how the intersection of standard academic demands and acculturative stress accelerates burnout among minority teacher candidates. To address this gap through an integrative literature review, this article proposes the integrative multicultural burnout framework (IMBF). The IMBF seeks to extend existing burnout literature through three interconnected theoretical propositions: i) treating cultural dissonance as an intersecting academic demand within multicultural learning environments; ii) conceptualizing burnout as a recursive resource-depletion process consistent with the conservation of resources (COR) “loss spiral” perspective; and iii) recognizing institutional intercultural competency as a contextual factor that may moderate these relationships. Ultimately, this framework generates testable propositions for future empirical research and highlights specific practical implications for teacher education policy, notably advocating for culturally responsive practicum evaluation rubrics and proactive mental health training programs.

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Corresponding Author:

Kriangsak Rattakul

Program of Bachelor Education in Counseling Psychology and Guidance, Faculty of Education

Songkhla Rajabhat University

160, Building 68, Khao Rup Chang Subdistrict, Mueang District, Songkhla 90000, Thailand

Email: kriangsak.ra@skru.ac.th

1. INTRODUCTION

Academic burnout characterized by emotional exhaustion, cynicism toward one's studies, and a diminished sense of academic efficacy remains a pervasive psychological syndrome that undermines the preparation and retention of university students globally [1]–[5]. The vulnerability to this syndrome is particularly acute among pre-service teachers. These candidates occupy a distinct, liminal space in higher education; they must navigate a rigorous dual landscape of intensive academic coursework and high-stakes practical training. Consequently, they often internalize the anticipatory stress of systemic teacher burnout prior to officially entering the professional workforce [6], [7]. In the long run, this early-onset burnout not only threatens their current academic performance but also significantly impacts their long-term professional retention, exacerbating the ongoing global teacher shortage crisis.

The dominant psychological framework for understanding this phenomenon in both occupational and academic settings has traditionally been the job demands-resources (JD-R) model [8]. Originally conceptualized by Demerouti *et al.* [8], the JD-R model posits that burnout is fundamentally the result of an imbalance between high academic, or job “demands” and low institutional “resources”. In educational contexts, this is frequently utilized alongside Hobfoll’s conservation of resources (COR) theory [9], which suggests that psychological stress occurs when an individual’s fundamental drive to obtain and protect their resources is threatened. What is well-established in the current literature is that the integration of JD-R and COR theory robustly explains how high academic workloads coupled with a lack of institutional support led to psychological exhaustion [10]–[12]. While recent regional studies, such as Ratanasiripong *et al.* [13], have empirically demonstrated that academic and occupational workloads significantly predict burnout among Thai educators, these prevailing models have yet to fully consider “acculturative stress” a crucial variable in specific, highly diverse areas such as the Thai deep south.

Despite these foundational insights, a significant theoretical gap persists in contemporary educational psychology. Specifically, there is a lack of comprehensive understanding regarding how burnout manifests and accelerates among pre-service teachers operating within structurally complex “multicultural contexts”. Current models predominantly define “demands” through the lens of dominant-culture educational metrics, such as assignment deadlines and grading pressures. Consequently, what is critically missing is a framework that captures the invisible, chronic acculturative demands placed on minority students navigating these complex multicultural environments. By neglecting these intersectional elements, traditional paradigms risk misdiagnosing the root causes of distress among diverse candidate populations.

As educational environments rapidly globalize, pre-service teachers worldwide such as immigrant educators integrating into Western institutions, indigenous populations navigating national educational systems, or regional minority students adapting to mainstream curricula increasingly face intricate acculturation dynamics. To operationalize this global phenomenon into a precise, analyzable conceptual framework, this paper utilizes the five southern border provinces of Thailand as a notable, illustrative boundary case. This specific geographical and cultural region exemplifies a complex intersection of ethnoreligious diversity, multilingualism, and historical socio-political complexity [14]–[16]. Pre-service teachers operating in such highly diverse, often conflict-affected regions face a unique psychological “double bind”. They must master rigorous national pedagogical standards while simultaneously negotiating their complex cultural identities, managing potential systemic marginalization, and overcoming distinct regional language barriers during their teaching practicum [17]–[19].

However, existing conceptual models addressing pre-service teacher burnout remain fundamentally constrained when applied to these specific populations. The critical limitation in current educational psychology paradigms is the failure to theoretically operationalize how the intersectionality of generic academic demands and specific multicultural stressors create a distinctly compounded cognitive vulnerability [20], [21]. To address this significant theoretical shortcoming, this article moves beyond descriptive synthesis to construct the integrative multicultural burnout framework (IMBF). The primary theoretical contribution of this research explicitly lies in structurally defining cultural dissonance not merely as background noise, but as a primary, quantifiable demand that exponentially amplifies cognitive load. This innovative approach essentially shifts the analytical focus from individual deficit to systemic multicultural pressure. To provide clear direction and strengthen the justification for this framework, the present study is guided by the following core research questions:

- How do general academic demands and acculturative stressors intersect to compound the cognitive load of pre-service teachers?
- In what ways do cognitive appraisals mediate the relationship between intersectional stressors and maladaptive coping behaviors?
- To what extent does institutional intercultural competency serve as a systemic moderator against academic burnout?
- How does the onset of emotional exhaustion initiate a reciprocal “loss spiral” that depletes future cognitive resources?

The IMBF contributes theoretically to the JD-R literature by positioning acculturative stress as an intersecting demand that may intensify existing academic pressures within multicultural educational settings. The framework further integrates the COR “loss spiral” perspective to account for the potentially recursive relationship between cultural and academic resource depletion over time. Through the articulation of reciprocal feedback pathways and contextually grounded scenarios, the present study proposes four propositions intended to guide future longitudinal inquiry. In this respect, the framework may serve as a useful conceptual reference for both empirical burnout research and culturally responsive teacher education policy development.

2. THEORETICAL APPROACHES AND LITERATURE REVIEW

To address the complex phenomenon of academic burnout in multicultural contexts, this study employs an integrative literature review approach. This specific methodology is utilized because it enables the critical synthesis of diverse theoretical perspectives spanning educational psychology, sociology, and pedagogy to construct a cohesive, newly adapted conceptual model. A critical examination of this integrated literature reveals that the current understanding of pre-service teacher burnout is fundamentally constrained by three main theoretical shortcomings. These critical flaws include the blending of different stress typologies, an over-reliance on one-way causal models, and the unclear definition of supportive contextual factors.

2.1. Intersectionality theory and the JD-R theoretical gap

Within the dominant JD-R paradigm, burnout is typically triggered by continuous exposure to high academic demands [22]–[25]. However, recent empirical studies frequently make critical errors of blending standard “academic stress” with complex “acculturative stress” as if they are an identical experience. To resolve this problematic overlap, our theoretical framework is firmly anchored in intersectionality theory. Originally conceptualized by Crenshaw [26] to explain overlapping social identities and systemic discrimination, intersectionality within educational psychology suggests that different forms of stress do not merely add up; they multiply and substantially compound one another. Standard academic stress generally revolves around task completion, whereas acculturative stress significantly threatens a student's self-concept and cultural identity [27], [28]. By treating these stresses as separate and isolated variables, traditional JD-R models obscure the substantial, compounded cognitive load imposed by multicultural isolation [29], [30]. To explicitly address this gap, this study proposes an original theoretical bridge where intersectionality is used to quantify the hidden cognitive load of cultural dissonance, a variable traditionally left in the margins of educational psychology.

2.2. The limitations of unidirectional cognitive-behavioral models

Current burnout frameworks also predominantly rely on simple, unidirectional (one-way) pathways to explain student behavior. Existing research clearly demonstrates that cognitive resources, specifically metacognitive awareness and academic self-efficacy, serve as vital internal buffers that help students adopt positive coping strategies [31]–[34]. When these internal resources are depleted, students often resort to maladaptive behaviors like academic procrastination and self-handicapping, which directly increase the probability of burnout [35], [36]. While this linear progression is a common viewpoint, it significantly oversimplifies human psychology because burnout is not merely an endpoint. An integrative model must account for reciprocal determinism, meaning that burnout acts within a continuous, destructive loop. Specifically, the psychological outcome of burnout negatively impacts a student's cognitive appraisal for future tasks, creating a self-fulfilling prophecy of academic failure [37]–[41]. By acknowledging this cyclical degradation, researchers can better understand why standard, short-term educational interventions frequently fail to produce lasting improvements.

2.3. The ambiguity of contextual moderators

Finally, studies relying on social learning theory often fail to clearly define crucial environmental and contextual variables. While the general buffering and protective effects of social support are well-documented [42]–[44], concepts like “intercultural competency” are frequently left vague or mistakenly treated as a personal, internal characteristic of the individual student [45]–[47]. To build a fair, systemic model that avoids blaming the vulnerable student, this study explicitly redefines intercultural competency as an institutional contextual resource. Structurally, this institutional competency is demonstrated by the active presence of culturally responsive university curricula, diversity-focused mentoring by faculty, and inclusive campus policies actively implemented by the administrative program. This structural definition allows for a precise, measurable understanding of how macro-level institutional environments directly moderate and alleviate micro-level student distress.

3. METHOD

To substantiate the theoretical gaps identified in current linear paradigms, an integrative literature review methodology was systematically employed rather than a traditional narrative review. This specific approach was chosen because it allows for the synthesis of diverse empirical and theoretical literature, providing a rigorous foundation for new conceptual development. By integrating findings across cross-disciplinary studies, this method directly supports the creation of our proposed IMBF. The entire chronological process of identifying, screening, and selecting the relevant literature is visually summarized in Figure 1. This visual and systematic mapping ensures that the foundations of our conceptual model are transparent, objective, and fully reproducible by future scholars.

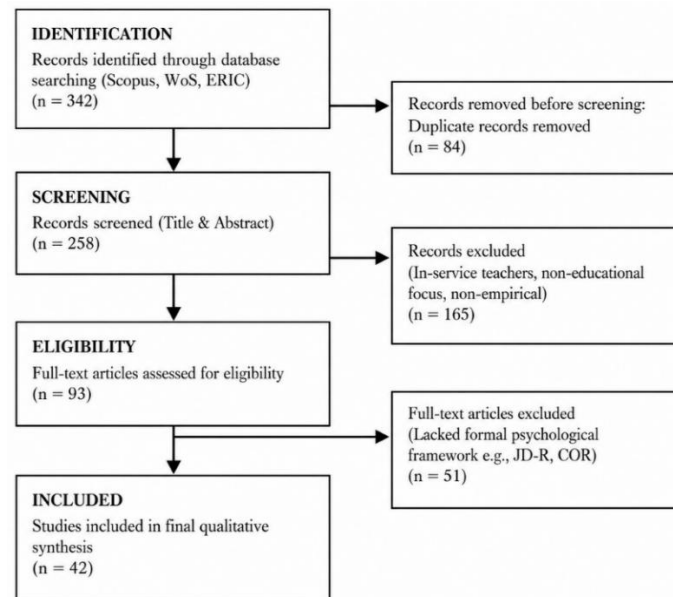


Figure 1. PRISMA flow diagram detailing the systematic literature screening process

3.1. Search strategy and PRISMA-inspired screening flow

The literature search was systematically conducted across three primary academic databases: Scopus, Web of Science (WoS), and ERIC, ensuring a high degree of methodological replicability. The database search was executed between January 15 and February 20, 2024, focusing strictly on peer-reviewed journal articles published between 2019 and 2024 to capture the most contemporary educational psychology trends. The systematic search strings utilized specific Boolean operators to isolate relevant contexts: ("academic burnout" OR "emotional exhaustion" OR "student burnout") AND ("pre-service teachers" OR "student teachers") AND ("multicultural" OR "acculturative stress" OR "diversity"). This strict parameter design was explicitly established to minimize initial selection bias and ensure a highly targeted literature pool. Consequently, this search protocol effectively filtered out generalized stress studies that lacked the necessary cultural specificity.

To ensure methodological transparency and rigor, the study utilized a PRISMA-inspired screening protocol. The initial database query yielded a total of 342 records, which was reduced to 258 articles after the removal of 84 duplicates. During the title and abstract screening, 165 articles were excluded based on strict inclusion/exclusion criteria: they focused entirely on in-service teachers or student populations outside of the teacher education context. Subsequently, during the full-text eligibility stage, 51 articles were excluded because they lacked a formal psychological framework (JD-R, COR, and cognitive behavioral therapy (CBT)) to explicitly measure the burnout construct. Ultimately, 42 highly relevant studies were successfully identified and included in the final qualitative synthesis. This final sample size (n=42) is considered highly representative because it successfully achieved theoretical data saturation specifically at the precise intersection of pre-service teacher education and multicultural stress. By rigorously filtering out generalized, out-of-context burnout studies, this highly targeted sample ensures that the resulting conceptual framework is built exclusively upon robust, context-specific empirical evidence.

3.2. Data analysis and thematic synthesis

Following the final selection of the 42 articles, a rigorous deductive thematic synthesis was employed to extract meaningful patterns. Data extraction and coding were systematically structured based on predefined categories directly derived from the JD-R model and the COR theory. Specifically, the analysis strictly focused on identifying three core elements: i) prevalent academic demands placed on pre-service teachers; ii) the operationalization of acculturative stress; and iii) the cognitive and behavioral mediators linking these demands to eventual burnout. To ensure strict methodological replicability, the data extraction followed a systematic three-step coding process. First, open coding was applied to extract raw qualitative and quantitative findings regarding student stressors from the selected articles. Second, axial coding categorized these initial codes into broader theoretical domains directly guided by the foundational JD-R and COR models. Finally, selective coding was utilized to systematically establish the reciprocal interrelationships

between these categories, which directly informed the structural architecture of the proposed IMBF. To ensure maximum replicability, the analysis followed a double-blind coding protocol where two independent researchers categorized the data, resolving any minor discrepancies through structured consensus discussions.

4. RESULTS

The systematic review of the 42 included studies revealed significant trends and critical gaps in how educational psychology currently models pre-service teacher burnout. The extracted data were synthesized into three overarching descriptive themes. These themes collectively highlight the structural limitations of applying universal burnout models to culturally diverse student populations.

4.1. Theme 1: the dominance of standard academic demands in JD-R applications

The primary finding from the reviewed literature is that existing models predominantly define academic “demands” through generic, dominant-culture structural metrics. For instance, studies frequently cite practicum workloads, formal evaluation pressures, and classroom management challenges as the primary catalysts for emotional exhaustion [10], [22], [48]. Consequently, the data shows that these models consistently treat the pre-service teacher population as a culturally homogenous group, entirely omitting the unique, hidden burdens of minority status or linguistic barriers [49].

4.2. Theme 2: the siloing of acculturative stress

A critical finding across the literature is that when acculturative stress is addressed, it is overwhelmingly treated in isolation rather than as an intersecting academic demand. Research focusing on international or minority students effectively documents the heavy psychological toll of cultural dissonance, perceived systemic bias, and identity negotiation [23], [28]. However, these cultural variables are rarely integrated directly into the high-stakes academic environments that pre-service teachers face daily, obscuring the compounding cognitive load that occurs during practicum training [29], [50]. This isolated approach (“siloing”) obscures the intense, compounding cognitive load that occurs when a student must simultaneously manage academic rigor and cultural marginalization. Consequently, it highlights a critical limitation in current research and proves that an integrated, intersectional approach is required to properly support diverse educators.

4.3. Theme 3: unidirectional trajectories of cognitive appraisal and coping

The review also found a strong, problematic reliance on simple, linear cognitive-behavioral pathways to explain student distress. Existing empirical models robustly support the idea that diminished metacognitive awareness and low academic self-efficacy act as primary mediators leading to maladaptive coping strategies, such as procrastination and task avoidance [30], [33], [35]. Nevertheless, many of these studies evaluate educational interventions at a single point in time, potentially conceptualizing burnout as a relatively static outcome rather than a dynamic process involving the gradual depletion of students’ cognitive resources over time [9], [37], [51].

5. DISCUSSION

The results of this integrative review emphasize that academic burnout in multicultural contexts cannot be accurately understood through traditional, additive psychological models. While previous studies have successfully utilized the JD-R model to predict exhaustion based on general curriculum difficulty, this approach misdiagnoses the root causes of distress in minority candidates by ignoring their unique cultural dissonance. Bridging the gap between sociological identity research and psychological burnout models is therefore essential for capturing the true, compounded burden placed on these diverse educators.

Furthermore, the prevalence of unidirectional models highlights a critical methodological gap in how educational psychology currently evaluates student resilience. The specific theoretical novelty derived from these findings lies in shifting the analytical focus from a linear burnout endpoint to a dynamic “loss spiral”, where emotional exhaustion actively and continuously degrades a student’s future cognitive resources. To properly address the chronic nature of burnout, future research frameworks must strictly incorporate these cyclical feedback mechanisms rather than relying on cross-sectional observations.

These theoretical insights translate directly into urgent practical applications for teacher education programs globally. By acknowledging the intersectional cognitive load, institutions can move away from generic stress-management seminars and instead develop highly targeted, culturally responsive interventions. Specifically, university administrators are strongly encouraged to reform practicum evaluation rubrics to explicitly separate language proficiency from pedagogical content knowledge, thereby protecting the most vulnerable student populations from systemic evaluation biases.

6. PROPOSAL FOR THE IMBF

Addressing the theoretical gaps identified in the thematic synthesis, this article proposes the IMBF. The core originality of the IMBF transcends traditional linear psychological models by explicitly mapping overlapping latent demands, thereby recognizing that academic and cultural stressors do not exist in isolation. This framework provides a more accurate representation of minority students lived experiences. Furthermore, it completely embeds a dynamic reciprocal feedback loop to explain the continuous degradation of cognitive resources. Ultimately, the IMBF offers a comprehensive, highly actionable blueprint for both researchers and educational policymakers. By operationalizing these complex dynamics, the framework effectively bridges the gap between sociological theory and practical educational psychology.

6.1. Operationalizing the framework: contextual scenarios (vignettes)

To effectively operationalize how the concept of “intersectionality” functions within the IMBF before presenting its theoretical architecture, we offer two specific contextual vignettes. These scenarios are directly based on the Thai Deep South boundary case, which serves as a prime example of a highly diverse educational environment. These vignettes clearly illustrate how severe cultural conflicts actively alter pre-service teachers' internal cognitive processing. Consequently, they provide a concrete demonstration of what we term “The Double Bind,” bridging the gap between abstract psychological theory and observable classroom realities. By grounding the conceptual model in these realistic scenarios, the subsequent theoretical architecture becomes much more tangible and highly applicable for educational practitioners.

6.1.1. Vignette 1: linguistic and cultural dissonance in instruction

In the first scenario, a pre-service teacher whose native language is Pattani Malay and who practices Islam is assigned to a government-run, Thai-medium, Buddhist-majority school outside her home province. While trying to manage the standard academic demand of lesson planning, she must simultaneously translate complex scientific concepts from standard Thai into her native conceptual framework before teaching it back in standard Thai. Furthermore, she consistently feels culturally isolated during lunch breaks and mandatory school ceremonies. The cognitive load required to constantly code-switch and strictly monitor her cultural behavior rapidly depletes her working memory. As a direct outcome, she is left with significantly fewer cognitive resources to focus on pedagogical delivery, accelerating her path toward severe emotional exhaustion. This continuous state of depletion highlights how unacknowledged cultural demands directly sabotage standard academic performance.

6.1.2. Vignette 2: systemic bias in practicum evaluation

In the second scenario, a university supervisor arrives to conduct a high-stakes, formal pedagogical evaluation of a minority pre-service teacher. The teacher successfully delivers a technically accurate and well-prepared lesson plan. However, due to his distinct regional accent and culturally ingrained non-verbal communication style such as avoiding direct eye contact with elders as a sign of respect the supervisor utilizes a standardized, dominant-culture rubric to significantly penalize him. The supervisor incorrectly scores the student low on “communication clarity” and “classroom confidence.” As a result, the student receives a poor grade not due to a lack of academic knowledge, but rather due to an unacknowledged cultural mismatch, which ultimately shatters his academic self-efficacy and accelerates feelings of cynicism. Such systemic evaluation biases actively transform a highly competent teaching candidate into a vulnerable and disengaged student.

6.2. Architecture of the IMBF

The structural architecture of the IMBF is meticulously designed to capture the full trajectory of multicultural academic stress, as shown in Figure 2. It is explicitly organized around four interconnected conceptual components that map the entire burnout process. These core components include the antecedents, the sequential mediators, the contextual moderators, and the crucial reciprocal feedback loop. By breaking the framework down into these distinct but interacting parts, the model provides clear, testable pathways for future empirical validation. Each component serves a specific diagnostic purpose, enabling researchers to pinpoint exactly where institutional interventions are most critically needed.

Antecedents: the intersectional double bind unlike traditional educational models that treat stressors as simply additive, the IMBF explicitly models its Antecedents as heavily overlapping constructs. General academic stressors (such as practicum workloads and formal evaluation pressures) fundamentally intersect with severe acculturative stressors (including language barriers, systemic bias, and cultural dissonance). Together, they form a uniquely compounded intersectional cognitive load, which this framework terms “The Double Bind.” This intersection is critical to understand, as the simultaneous demand to meet rigorous pedagogical standards while actively navigating constant identity threats exponentially drains a student's

cognitive reserves compared to experiencing either stressor in isolation. Therefore, evaluating these diverse stressors independently fails to capture the true psychological burden placed on minority candidates.

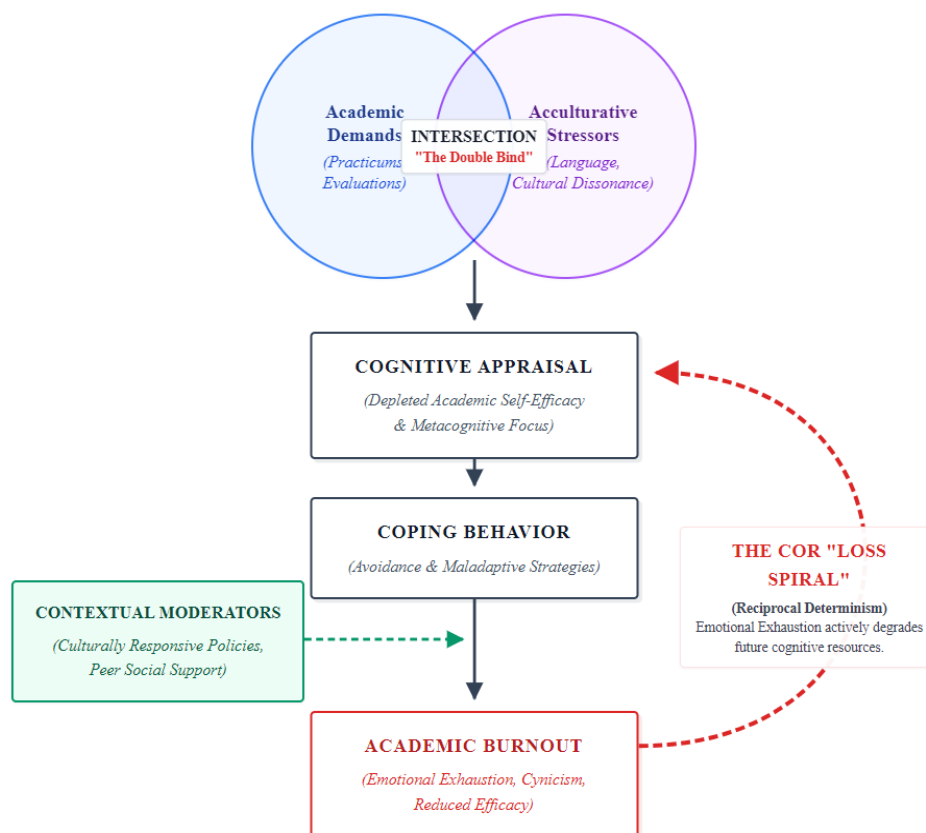


Figure 2. The IMBF: a dynamic model of intersectional stressors and the COR loss spiral

Sequential mediators: cognitive appraisal and coping behavior once triggered, this severe intersectional demand directly enters the Sequential Mediators phase, beginning precisely with cognitive appraisal. The distinct identity threat inherent in chronic acculturative stress commands a substantial high cognitive load. This massive mental burden directly and rapidly depletes a pre-service teacher's academic self-efficacy and metacognitive focus. Consequently, this impaired internal cognitive state dictates the secondary mediator, which is the student's observable coping behavior. Students suffering from depleted resources are significantly more likely to abandon adaptive, problem-focused strategies and instead default to maladaptive behaviors, such as task avoidance or severe academic procrastination, serving as an automatic psychological mechanism to conserve their remaining mental energy. This behavioral shift is not an indicator of low motivation, but rather a desperate attempt to manage severe cognitive overload.

Contextual moderators: systemic buffers crucially, the linear pathway from maladaptive coping behaviors to the outcome of academic burnout is not absolute. This trajectory is actively intercepted by contextual moderators, which are firmly rooted in social learning theory. Macro-level institutional intercultural competency demonstrated through culturally responsive curricula and unbiased evaluation policies alongside micro-level peer support networks act as vital external systemic buffers. When a vulnerable student's internal cognitive resources fail, these robust external structural supports can effectively intervene. Ultimately, they play a preventative role, stopping temporary maladaptive behaviors from permanently crystallizing into a full-syndrome clinical burnout diagnosis. By intentionally strengthening these institutional buffers, universities can successfully protect their most vulnerable teacher candidates.

The outcome and reciprocal feedback loop: the COR loss spiral the ultimate conceptual core of the IMBF is the direct, structural application of the COR theory via a reciprocal feedback loop. The framework formally posits that academic burnout characterized by emotional exhaustion, cynicism, and severely reduced efficacy is not merely a static, final endpoint. Rather, burnout acts as a dynamic, active catalyst that physically and psychologically degrades the student's baseline cognitive architecture for any future tasks.

This reciprocal determinism ensures that subsequent academic challenges are met with even fewer internal resources. Consequently, this process perpetuates a continuous and accelerating loss spiral unless the cycle is deliberately and structurally disrupted by the institutional moderators. Without such systemic disruption, the student is inevitably pushed toward complete academic withdrawal and professional attrition.

6.3. Testable theoretical propositions

To effectively translate the conceptual IMBF into an actionable research agenda, it is essential to establish clear pathways for empirical validation. Therefore, the following directional propositions are formulated to actively guide future quantitative and qualitative investigations. These theoretical propositions specifically target the intersecting variables and reciprocal mechanisms unique to multicultural educational environments, which are systematically summarized alongside their measurement strategies in Table 1. The methodological contribution of these propositions lies in providing specific, culturally sensitive statistical pathways such as intersectional moderation and cross-lagged panel models that translate abstract sociological concepts into measurable psychological variables. By following these propositions, researchers can construct robust, culturally aware empirical studies.

Table 1. Construct measurement strategy for the IMBF

Theoretical construct	Conceptual operationalization focuses and strategy
General academic stressors	Operationalized by assessing self-reported pressure regarding practicum workload, evaluation expectations, and institutional deadlines to establish a baseline of generic academic demand.
Acculturative stressors	Must be differentiated from academic stress. Measurement strategies must capture specific perceived ethno-religious discrimination, cultural alienation, and regional language barriers utilizing culturally adapted scales.
Cognitive appraisal	Measured via changes in students' belief in their academic capabilities (self-efficacy) and their ability to regulate their own learning strategies (metacognition) across consecutive academic terms.
Coping behavior	Operationalized by determining the psychometric ratio of adaptive strategies (active problem-solving) versus maladaptive avoidance (behavioral disengagement or denial).
Institutional intercultural competency	Captured at the macro-level using structural indicators (presence of diversity curricula, faculty inclusivity training) and analyzed via multi-level modeling (MLM) to observe systemic, top-down effects.
Academic burnout	Evaluated multidimensionally as an outcome variable, capturing three distinct dimensions: Emotional Exhaustion, Cynicism (depersonalization), and a reduced sense of Academic Efficacy.
Reciprocal feedback loop	Methodological Requirement: Must be measured via longitudinal research designs. Structural equation modeling (SEM) path analysis must test the autoregressive effect to verify resource degradation.

6.3.1. Proposition 1 (differential appraisal of intersectional stressors)

It is proposed that the intersection of acculturative stressors and academic evaluations depletes cognitive resources at a significantly higher and faster rate than general academic stressors alone [52], [53]. Theoretical rationale: general academic stress is typically appraised by students as a manageable challenge that can be overcome with increased effort, study strategies, or effective time management. Conversely, navigating cultural dissonance, linguistic barriers, and systemic bias directly challenges a student's core professional and personal identity, triggering chronic physiological and psychological arousal (often termed allostatic load). Processing these compounded, identity-threatening multicultural pressures demands sustained, high-level psychological capital that is rapidly and disproportionately exhausted compared to standard academic tasks. Empirical testing recommendation: testing this proposition requires moderation analysis within structural equation modeling (SEM), using interaction terms between standardized academic workload scales and validated acculturative stress inventories to statistically observe the compounded variance explained in rapid cognitive depletion. This targeted analytical approach ensures that the distinct effects of cultural marginalization are not mistakenly attributed to general curriculum difficulty.

6.3.2. Proposition 2 (sequential cognitive-behavioral mediation)

Academic self-efficacy and metacognitive awareness are hypothesized to act as primary cognitive mediators that negatively predict maladaptive behavioral coping [54], [55]. Theoretical rationale: grounded in cognitive-behavioral paradigms, pre-service teachers whose psychological resources are severely depleted by multicultural double-binds struggle to accurately appraise their pedagogical capabilities. Under intense intersectional cognitive load, executive functioning in the prefrontal cortex is heavily impaired. Consequently, these students lose the metacognitive capacity to strategize effectively and are significantly more likely to resort to low-effort, maladaptive avoidance behaviors such as self-isolation, deferring practicum planning, or academic procrastination as recently demonstrated by Bytamar *et al.* [56] as a subconscious defense mechanism to conserve their remaining mental energy. Empirical testing recommendation: researchers should employ mediation analysis with bootstrapping techniques to verify these

indirect effects, ensuring that the pathway from intersectional stress to task avoidance is statistically proven to be carried through the depletion of metacognition and self-efficacy. Validating this specific behavioral sequence is critical for designing interventions that target the root cognitive exhaustion rather than merely punishing avoidant behaviors.

6.3.3. Proposition 3 (the moderating role of institutional context)

High levels of institutionally embedded intercultural competency and structured social support are expected to significantly attenuate the positive relationship between maladaptive coping behaviors and academic burnout [57]–[59]. Theoretical rationale: inclusive campus policies, culturally responsive supervision, and active peer support networks provide a compensatory systemic safety net. When a minority student's internal cognitive resources inevitably fail under intersectional pressure, a highly supportive external environment can intervene by providing instrumental assistance and alternative coping strategies. This macro-level structural buffering reduces the likelihood that temporary maladaptive coping behaviors will permanently crystallize into full-syndrome, clinical academic burnout. Empirical testing recommendation: multi-level modeling (MLM) is highly recommended for validation, where level 1 represents individual student coping and burnout variance, and level 2 represents the department or institutional-level metrics of intercultural competency, thus capturing the true top-down buffering effect. This methodology formally shifts the analytical burden from individual student resilience to systemic institutional accountability.

6.3.4. Proposition 4 (reciprocal determinism & resource depletion loop)

Expanding upon Hobfoll's COR theory, the IMBF posits that emotional exhaustion at time 1 exerts a significant negative feedback effect directly on subsequent cognitive appraisals at time 2 [13], [56], [60]. Theoretical rationale: burnout operates as a dynamic, degenerative state of severe resource depletion. At a neuro-cognitive level, once severe emotional exhaustion sets in, it physically restricts the prefrontal cortex's capacity for sustained executive functioning and emotional regulation. This inherently lowers the student's self-efficacy for future academic tasks, creating a perpetuating cycle of academic failure and a continuous loss spiral if the cycle is not deliberately disrupted by external interventions. Empirical testing recommendation: to rigorously test this proposition, future empirical studies must utilize robust longitudinal designs, specifically cross-lagged panel models (CLPM) within a SEM framework, assessed across at least three distinct time points (beginning, middle, and end of the practicum year). This multi-wave, autoregressive approach is strictly necessary to isolate the feedback effect and statistically verify that high emotional exhaustion at time 1 significantly predicts lower self-efficacy at time 2, even when controlling for baseline cognitive states. Executing this longitudinal design will definitively transition the IMBF from a conceptual hypothesis to a fully validated diagnostic tool.

7. CONCLUSION

Academic burnout among minority pre-service teachers cannot be accurately captured by linear psychological models, requiring a paradigm shift towards intersectional analysis. The core theoretical novelty of the IMBF lies in conceptualizing standard academic demands and cultural dissonance as an overlapping “Double Bind” that triggers a continuous loss spiral of cognitive resource depletion. By synthesizing existing literature, this study demonstrates that ignoring these distinct acculturative stressors inevitably leads to the misdiagnosis of student distress. To effectively counteract these severe intersectional pressures, teacher education programs must adopt systemic structural reforms rather than merely relying on individual student resilience. Specifically, universities are highly encouraged to proactively implement culturally responsive evaluation rubrics that explicitly separate language proficiency from pedagogical content knowledge, alongside early-stage cognitive-behavioral interventions.

As a conceptual framework derived from prior theoretical and empirical literature, the IMBF remains subject to the limitations inherent in theory-driven synthesis. Accordingly, the reciprocal mechanisms proposed in the model warrant longitudinal empirical investigation to determine whether the hypothesized feedback processes emerge over time within authentic educational settings. Future studies could utilize the four propositions to guide longitudinal modeling approaches, such as CLPM, across multiple academic semesters.

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Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Kriangsak Rattakul	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	
Lanlalit Seubpradit	✓	✓		✓	✓	✓			✓			✓		

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

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P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

DATA AVAILABILITY

Data availability is not applicable to this paper as no new data was created.

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BIOGRAPHIES OF AUTHORS



Kriangsak Rattakul    received his Ph.D. in Counseling Psychology from Burapha University, Thailand, in 2017. He is currently a lecturer in the Counseling Psychology and Guidance Program at the Faculty of Education, Songkhla Rajabhat University, Thailand. His research interests focus on counseling psychology, educational psychology, personality psychology, and multicultural counseling, particularly in the context of Southern Thailand. He has extensive experience in conducting group counseling interventions and research on psychological well-being. He can be contacted at email: kriangsak.ra@skru.ac.th.



Lanlalit Seubpradit    is a lecturer and researcher at the Faculty of Education, Yala Rajabhat University (YRU), Thailand. Her research interests include educational technology, teacher education, and the psychological well-being of pre-service teachers in multicultural contexts. She has been actively involved in projects aimed at improving the academic and professional development of future educators in the southern border provinces of Thailand. She can be contacted at email: lunlalit.s@yru.ac.th.