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5th CELTI

Conference on English
Language Teaching

Understanding and Alleviating Anxiety and Motivation Relations in Second Language Acquisition

Author:
Erizar

Affiliation:
STAIN Teungku Dirundeng Meulaboh,
Aceh, Indonesia

Corresponding email:
erizar@staindirundeng.ac.id

DOI:
<https://doi.org/10.24090/celti.2025.1336>

Pages:
1-12

Abstract: This paper explores a comprehensive theoretical analysis of the interrelation of anxiety and motivation in second language learning processes. The researcher proposes the Affective-Cognitive Mediation Framework (ACMF) and offers an explanation of the previously disjointed concepts by arguing that both anxiety and motivation function as processes within a system that operates over multiple time scales rather than a singular, fixed, and defined entity. Drawing from Dynamic Systems Theory, sociocultural theory, and some branches of educational psychology, our framework reveals four primary mediating mechanisms: attention control, identity change, emotion evaluation, and social identification. Unlike traditional models that treat anxiety fundamentally as an inertial element of motivation, the ACMF describes certain anxiety forms that may, under specific conditions, serve as catalysts for motivational redirection. This approach provides an explanation for the contradictory evidence across the literature and forecast outcomes such as differences in individual responses to challenges in language learning based on their emotions. The researcher argues further that this framework explains the lack of productivity in many studies by providing hypotheses about the value of well-defined interventions and changes in the theory guiding pedagogy. Moreover, this study contributes to the existing literature by providing a clear conceptual framework that integrates what is already known and offers novel insights into the emotional aspects of second language acquisition.

Keywords: *anxiety; motivation; second language acquisition; affective-cognitive mediation*

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Introduction

Second language acquisition (SLA) illustrates the intricate blend of cognitive, social and affective processes which interweave in very complex ways and challenge traditional configurations of learning. Among several factors that affect the success a language learner can achieve, anxiety and motivation have surfaced as two critical affective factors that in a significant way determine the performance and persistence of the learner (Dörnyei & Ryan, 2015; Dewaele & MacIntyre, 2014). For all the studies that have tried to understand these constructs for so long, it seems that their interrelationship is quite incomplete as some studies appear to have more complex relations among the constructs than previously theorized (Teimouri et al., 2019).

Anxiety has often been compartmentalized within the paradigms of negative emotional responses rooted within language learning and thus has been seen solely as a drawback for learning (Horwitz et al., 1986; MacIntyre & Gardner, 1994). It is deeply rooted within one's ability to process cognitive functions and in most cases curtails motivation. With this understanding, however, one is left with the challenging task of addressing the range of cases where anxiety serves as a lever to enhance performance or motivation (Oxford, 2017). It is the same with motivation where it has been captured by static trait-based approaches as they are forgetting to consider anxiety as a dynamic element of these frameworks (Dörnyei & Ushioda, 2021).

This paper proposes the Affective-Cognitive Mediation Framework (ACMF) as a comprehensive theoretical model that reexamines the interrelation between anxiety and motivation within the context of second language acquisition. The ACMF framework depicts anxiety and motivation as associating processes rather than fixed phenomena which operate within a complex dynamic system on different timescales. This framework draws on Dynamic Systems Theory (Larsen-Freeman, 2015), sociocultural theory (Swain et al., 2015) and educational psychology (Pekrun & Linnenbrink-Garcia, 2014) to identify four primary attention control, identity change, emotion evaluation, and social identification as focus mediating mechanisms of the interplay between anxiety and motivation.

Providing an explanation for the contradictions in SLA research constructs a core gap which the ACMF fills. It articulates why certain anxiety may redirect motivation instead of diminishing it—showing how inhibitory forces can, in some contexts, trigger adaptive responses. This reframing sheds light on the varied responses individual learners have despite being presented with the same language learning difficulties, and why attempts to reduce anxiety or enhance motivation, in isolation, often lead to unpredictable outcomes.

Moreover, this framework has critical pedagogical implications because it proposes more finely tuned interventions that account for the complex interplay between affective and cognitive processes. Understanding that anxiety is not always harmful and that motivation is not a constant allows for more appropriate instructional strategies to be developed that actually use emotional responses effectively while addressing concern for their negative impact.

This study fills a gap in the literature by bringing together previously disconnected theories and empirical evidence into a single cohesive framework. It not only integrates what is known concerning anxiety and motivation in SLA, but it also sheds new light on the interactions between these affective phenomena and cognitive processes that influence language learning patterns. Subsequent sections will elaborate on the ACMF's theoretical underpinnings, outline its main elements, review the evidence in its support, and explore the implications of the framework for research and practice in second language education.

Research Method

This research uses an integrative literature review approach to understand the intricate connection between anxiety and motivation in the context of second language acquisition (SLA). Unlike empirical research that involves the collection of primary data, this library literature approach constructs a Narrative Literature Review by synthesizing theoretical and empirical studies in light of the proposed Affective-Cognitive Mediation Framework (ACMF). The reason an integrative review is appropriate is that it provides a complete assessment of differing theories and incorporates findings from multi-method studies, while also identifying trends, contradictions, gaps, and lapses in the body of

existing literature. Most importantly, this approach rationally affords the construction of new frameworks that are not confined to particular studies (Torraco, 2005).

To maintain precision and order in selecting literature, a multi-step search strategy was designed. Appropriate literature was collected from major academic databases including ERIC, PsycINFO, Web of Science, LLBA (Linguistics and Language Behavior Abstracts), and Google Scholar. The search was limited to the years 1986 (Horwitz et al.'s seminal study on language anxiety) to 2024. Search terms included "second language acquisition," "foreign language learning," "anxiety," "motivation," "affect," "emotion," "dynamic systems," and "cognitive processing" alongside the previously mentioned terms. Additional relevant sources were found by tracking citations and searching through reference lists of seminal works.

Multiple inclusion criteria governed selection of the studies. Only peer-reviewed journal articles, scholarly books, and book chapters were included. These works had to feature either anxiety or motivation in relation to SLA, or the intersection of both and include them as mediating variables. Additionally, the sources with dynamic systems theory and other theoretical perspectives dual sources also included were empirical works reporting available intervening variables refiners pedagogical action aimed at affective variables in teaching the second language.

The analysis was carried out as a multilayered synthesis. To begin with, anxiety and motivation related constructs were identified and categorized using conceptual mapping across different strands of research. Then came a chronological analysis which traced the evolution of the theoretical approaches to mark paradigm shifts and emerging trends. Areas of consensus and divergence within particular theories were also explored using comparative analysis. In the end, composite cross-disciplinary integration was done, blending contributions from educational psychology, neuroscience, sociolinguistics, and SLA research to better explain the cognitive and affective interplay.

The iterative theory building approach was used to develop the Affect-cognitive mediation framework (ACMF). Coactive mechanisms drawn from prior studies such as attention control, identity investment, and emotion regulation were used to devise potential mediating mechanisms, acting as the framework's foundational block. The next step was framework elaboration, wherein key constituents and their interrelations were specified. Model testing was conducted next, determining explanatory power by assessing how model outcomes addressed the conflicting findings from more recent research (Boudreau et al., 2018; Teimouri et al., 2019). Coherence and theoretical strength enhancement revisions were conducted as the final step. Practical classroom scenarios were examined afterward to showcase the framework's pedagogical applicability.

In order to guarantee methodological rigor and validity, a number of quality assurance steps were undertaken. Source triangulation was employed to collect data from different theoretical and disciplinary sources. The inclusion criteria focused on capturing a wide range of studies with different designs, cultural contexts, and participant demographics. Each study that was included underwent a critical assessment of its methodological quality. Theoretical sensitivity was kept by having regard to the constitutive assumptions of the source materials, while reflexivity acknowledged the impact of the researchers' theoretical biases on the interpretation.

While this methodology is robust in some aspects, it is not without its weaknesses. This secondary form of research relies heavily on the existence and quality of literature published. Further, assessing the synthesis of results through divergent methodological lenses may present some incoherency issues.

Furthermore, although the ACMF offers a model grounded in theory, it is lacking in empirical support and thus remains an open question for future research conducted in the field. Also, the reviewed studies may possess some form of cultural or linguistic bias which cannot be contested without new primary data.

Nonetheless, the integrative literature review methodology provides a robust basis for theory building in SLA research. This study proposes a novel framework for the capturing and portrayal of anxiety and motivation which contributes to the evolving literature on the anxiety-motivation relationship and prepares the ground for subsequent empirical investigation and pedagogical inquiry.

Results & Discussion

1. Synthesis of Theoretical Perspectives on Anxiety and Motivation

Integrative reviews have pointed out four axial theoretical paths that mold anxiety and motivation in second language acquisition (SLA). Each path offers a distinct contribution towards the construction of Affective-Cognitive Mediation Framework (ACMF).

a. Evolution of Anxiety Constructs in SLA

In the context of Second Language Acquisition (SLA), the construct of anxiety has definitely transformed over time. The earliest studies seemed to view language anxiety through the lens of a unidimensional negative force, as in the classic work of Horwitz, Horwitz, and Cope (1986). More recently, however, some researchers have begun to stress its multifarious and even somewhat facilitative properties (Dewaele & MacIntyre, 2014). For example, MacIntyre and Gardner (1994) as well as Tobias (1986) associated anxiety with a number of phases of cognitive functioning, namely, input, processing, and output, which suggest that anxiety has an impact on various stages of the language acquisition process. More recently, dynamic approaches have described anxiety as being embedded in a developed emotion system that is sensitive to contexts and thus adaptable to some degree to other emotions (Oxford, 2017; Dewaele, 2017). Research on positive psychology, more recently with the introduction of Foreign Language Enjoyment (FLE), has further argued that the scope of discussion can be broadened because anxiety is, in fact, able to coexist with some positive emotions (Dewaele & MacIntyre, 2014; Oxford, 2016). These shifts explained some theoretical foundations to the ACMF's primary assertion that anxiety is a construct that is best understood in dialectical terms, in which it is dynamically and contextually mediated.

b. Motivational Frameworks and Their Intersection with Affect

In SLA, the landscape of motivational theories has, alongside the work on the anxiety construct, progressively integrated the influence of affective factors. The Socio-Educational Model (Gardner, 1985; Gardner & MacIntyre, 1993) regarded anxiety primarily as a negative predictor of integrative and instrumental motivation. The importance of autonomy and intrinsic motivation, as well as anxiety's role in undermining the fulfillment of basic psychological needs, was later introduced by Self-Determination Theory (Noels et al., 2000; Ryan & Deci, 2017). The L2 Motivational Self System (Dörnyei, 2009; Teimouri, 2017) placed stronger emphasis on identity and self-discrepancy, positing that anxiety stems from a gap between a learner's current and ideal L2 selves. In addition, the theory of Directed Motivational Currents advanced that anxiety can act as a motivational inhibitor or energizer, depending on its relation to goal-oriented behavior

(Dörnyei et al., 2016; Ibrahim, 2016). The most recent paradigm—Complex Dynamic Systems Theory—understands motivation as emergent and contextually bound, with anxiety functioning as a co-adapting attractor within the motivational system (Larsen-Freeman, 2015; Dörnyei et al., 2015). These considerations highlight the need for a model like the ACMF, which attempts to portray, with a clear structure, the complex interdependence between anxiety and motivation and the interactional processes that are animating and changing them, dynamically and bidirectionally.

c. Mediating Mechanisms Between Anxiety and Motivation

As was the focus of this study, the mediators that were found included both the cognitive and affective and how anxiety and motivation influence each other in diverse ways. ACMF, introduced in Figure 1, illustrates the bidirectional relationship of these constructs along with the mechanisms that interact with them.

d. Cognitive Mediators

Four mediators were identified in the anxiety-motivation relationship pertaining to cognitive mechanisms. Before that, one of the more critical cognitive determinants is attentional control: while high anxiety depletes working memory resources, motivated learners employ different strategies, such as selective attention, that protect attention (Eysenck et al., 2007; Robinson, 2007). In addition, as explained by Oxford, 2017, metacognitive regulation retains motivation amid stress by reframing anxiety as a challenge instead of a threat. Supporting this (Dweck, 2006) suggests that metacognitive training can alleviate the adverse effects of anxiety. Third, goal orientation impacts responses to anxiety: those with mastery goals tend to be more resilient while performance-oriented learners experience greater motivational disruption (Dweck, 2006; Liu & Huang, 2011). Finally, attribution processes concern themselves with motivational outcomes: if one attributes anxiety to controllable and ephemeral forces, motivation is lessened (Weiner, 2010; Williams et al., 2015).

e. Affective Mediators

In addition to cognitive processes, three affective mechanisms were discovered. Emotional resilience, or the capacity to retain self-efficacy in the face of anxiety, is a strong driver of persistent motivation and can be cultivated (Oxford, 2015; Dewaele & MacIntyre, 2019). The co-activation of enjoyment with anxiety also has a moderating impact; counterintuitively, people are able to experience both emotions at the same time, and enjoyment can alleviate the impact of anxiety (Dewaele & MacIntyre, 2014; Boudreau et al., 2018). Finally, social belonging, or the feeling of being part of a caring classroom community, is a protective factor that strengthens motivation even in the presence of high challenge anxiety (Aubrey & Nowlan, 2013; Joe et al., 2017).

2. Contextual Factors Impacting the Relationship of Anxiety and Motivation

a. Instructional Setting

In addition to cognitive processes, three affective mechanisms were discovered. Emotional resilience, or the capacity to retain self-efficacy in the face of anxiety, is a strong driver of persistent motivation and can be cultivated (Oxford, 2015; Dewaele & MacIntyre, 2019). The co-activation of enjoyment with anxiety also has a moderating impact; counterintuitively, people are able to experience both emotions at the same time, and enjoyment can alleviate the impact of anxiety (Dewaele & MacIntyre, 2014; Boudreau et al., 2018). Finally, social belonging, or the feeling of

being part of a caring classroom community, is a protective factor that strengthens motivation even in the presence of high challenge anxiety (Aubrey & Nowlan, 2013; Joe et al., 2017).

b. Individual Difference Variables

As with all other activities, the characteristics of the individual learner affect the interplay between anxiety and motivation. At intermediate proficiency levels, where self-assessment and performance monitoring are particularly intense, this relationship seems to be the most vulnerable (MacIntyre and Gardner, 1994; Liu and Huang, 2011). Age is another distinguishing factor—adult learners appear to be more susceptible to motivational declines associated with anxiety, possibly because of greater self-awareness and concerns about personal identity (Dewaele and MacIntyre, 2014; Pfenninger and Singleton, 2016). The learner's cultural background is also a mediating factor; learners from cultures where perfectionism or 'face-saving' behaviors are normative may suffer more from anxiety and those in turn affect motivation (Woodrow, 2006; Yan and Horwitz, 2008). Finally, it seems that previous language learning experience somewhat neutralizes the effects of anxiety on motivation, enabling multilinguals, who tend to exhibit more effective coping strategies, to maintain greater motivational resilience (Thompson and Lee, 2013; Dewaele, 2013).

3. Contextual Factors Impacting the Relationship of Anxiety and Motivation

a. Integrated Affective-Cognitive Interventions

Interventions aim to enhance motivation and, when accompanied by the proper tools, can address both cognitive and affective aspects simultaneously. For instance, when implemented with anxiety management components, exposure-based methods are less effective than Oxford's strategy training on motivating students (Gkonou & Oxford, 2016; Oxford 2017). Furthermore, anxiety can also be positively transformed into a motivational resource when using positive psychology interventions such as gratitude journaling and flow-inducing activities (Dewaele et al., 2018; Oxford, 2016). Motivational resilience is also achieved through identity-based approaches, relating language learning to meaningful envisioned selves (Dörnyei & Kubanyiova, 2014; Henry & Cliffordson, 2017).

b. Dynamic Assessment and Feedback Practices

In relation to the anxiety-motivation cycle, assessment and feedback practices take on a slightly different approach. Norm-referenced evaluation has been shown to increase the demotivational effects of anxiety, especially when progress-oriented feedback is used (Black & Wiliam, 2018; Gregersen & Horwitz, 2002). In contrast, reflective structures concerning the experience of anxiety encourage the regulation of metacognitive constructs and, thus, motivation (Gkonou et al., 2017; Oxford, 2017). In addition, motivation persistence is aided with autonomy-supportive assessments that allow learners to reclaim their choice and control, eliminating anxiety and fostering motivated persistence (Noels et al., 2019; Ryan & Deci, 2017).

4. Critical Assessment of the ACMF

a. Theoretical Strengths

The ACMF attempts to fill some of the theoretical gaps that exist in SLA research. It incorporates various theories alongside specific mediators and moderators, explaining empirical

discrepancies as well as blending linear and non-linear empirical relationships. Moreover, it addresses pedagogical concerns by informing theories and providing actionable interventions.

b. Limitations and Future Research Directions

The above weaknesses notwithstanding, the ACMF still has gaps. Measurement frameworks currently available do not capture the real-time, dynamic interplay of anxiety and motivation through an idiodynamic lens (Dörnyei & Ryan, 2015). Additionally, the framework requires situational refinement for different contexts of learning (classroom vs. online, formal vs. informal), where the mediating processes might differ (White, 2014; Hiver et al., 2021). The neurobiological aspects regarding the anxiety-motivation interaction gaps still need further research (Schumann, 2004), suggesting interdisciplinary research could provide more substantiation to the framework. Finally, the ACMF requires the analysis of several points in time and multiple developmental stages to further understand the temporal nature of the relationships (Ushioda, 2009; Larsen-Freeman, 2015).

To conclude, this integrative review underscores the intricate and multifaceted relationship between anxiety and motivation in SLA. The Affective-Cognitive Mediation Framework provides an interesting perspective on the relationship by focusing on mediating factors such as cognitive self-management, emotional strength, and environmental supports. While many conceptual frameworks regard anxiety mainly as a debilitating force, this one views it as a multifaceted, dynamic force that, depending on the learner and context, can drain or energize motivation. Future research should focus on testing the ACMF empirically, designing precision treatments, and examining the roles of emerging technologies in mediating avt processes in SLA.

Conclusion

The Affective-Cognitive Mediation Framework (ACMF) has been formulated to address the concern of motivation and anxiety in Second Language Acquisition (SLA) in a more systematic way. Anxiety is reconstructed by the ACMF not as an unchanging negative force, but rather as an emotional experience with effects based on specific mediating processes, contextual factors, and time. It explains how through cognitive and affective processes such as social belonging, metacognitive self-regulation, emotional resilience, and attentional control which mediate the anxiety-motivation relationship, both the debilitating and facilitating roles of anxiety in language learning is recognized. Unlike other theories, the ACMF pays attention to the moderating effect of context in instruction and characteristics of individual learners, thus providing a broader context-sensitive framework. In addition, this approach shifts the focus from generalized anxiety alleviating practices to more targeted and precise strategies. Effective teaching should focus on developing learners' metacognitive skills, on fostering positive emotions while managing anxiety, and on building supportive emotional climate in the classroom. With these approaches, anxiety can be leveraged to enhance engagement and be sustained motivation rather than a hurdle.

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