

Mindsets about Research in ELT: A Scoping Review of Theories, and Implications for Teacher Development

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Abstract

Teachers' mindsets toward research act as a catalyst for professional development in English language teaching. While there were theories of mindset in language teaching and case studies into educational research practices, the field lacks a comprehensive synthesis of how educators conceptualize research engagement. Addressing this gap, this study aims to both examine mindsets about research, drawing on dual theoretical lenses including the mindset theory and the teacher-research nexus, and demonstrate emerging trends in this field, such as participatory action research and influential factors on research productivity and engagement. The 14 peer-reviewed papers (11 empirical studies on trends and 3 theoretical works) were sourced from academic databases like Google Scholar and Scopus (2016 - 2025), employing a snowball sampling with keywords "mindset toward research", "research practice", and "research engagement" in the TESOL context. After a thematic analysis, the data were categorized into three themes: 1) Fundamental theoretical changes in educational psychology; 2) Synthesizing the "Mindset toward research" via the Teacher-Research Nexus; 3) Micro-level from pedagogical Interventions and Macro-Structural Constraints. The analysis revealed the role of growth mindsets in sustaining research engagement, uncovered critical mediators of research implementation, and offered guidance for teacher educators and administrators in fostering inquiry cultures.

Keywords mindset, research engagement, teacher-researcher nexus, teacher development

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INTRODUCTION

In the current era of globalization (Kamali et al., 2024), the dominance of the English language places increasing demands on language educators to demonstrate high pedagogical efficacy (Hoang, 2020). As the necessity for English proficiency grows, this shows expectations for teachers to facilitate successful language acquisition through sophisticated teaching methodologies. Consequently, the field of Language Teacher Education (LTE) is undergoing a historical shift from a paradigm of mere "training" to one of holistic "development" (Kamali et al., 2024). This shift necessitates that programs provide an environment conducive to overall growth as the demands placed on teachers become increasingly complex (Darling-Hammond et al., 2017). For students pursuing higher education and seeking to enhance their praxis, engaging in research into their own teaching offers a valuable avenue for professional development (Edwards et al., 2017), linking their

professional identities to transnational and multilingual contexts. To emphasize a shift from training to development, this requires greater emphasis on research engagement (Borg, 2010). Supporting this, Seidel and Shavelson (2007) showed that the components of the research process allow postgraduate students to inhabit the role of the researcher, enhancing both their competencies and their awareness of how inquiry informs English teaching practices.

To fully understand the existing issue, there is a pressing need for longitudinal studies that map the relationship between cognition, practice, and learning outcomes over time (Borg, 2010). Moving the focus from a conceptual ideal to a sustainable professional practice (Dao et al., 2022) requires more than just administrative support or methodological training emphasized by previous studies (Nguyen et al., 2016; Truong et al., 2025). It requires a specific cognitive orientation (Nguyen et al., 2022), necessitating a shift from the external structures of the nexus to the internal construct of mindset (Kamali et al., 2024). As a result, this review aims to examine the existing studies on not only educational research engagement but also cognitive factors and other attributes. By analysing four related theories and eight recent empirical studies published between 2016 and 2025, the review seeks to identify insights that may support further studies on the mindset toward research in building a more coherent and contextually grounded understanding of teacher mindset toward research engagement through the research question:

1. What are the theoretical insights in the intersection of Mindset theory with Complex dynamic system theory and research engagement?
2. What are the implications of current studies on research engagement in TESOL professional development?

LITERATURE REVIEW

The relation between teaching and doing research has been a concern in early studies (Brew, 2001; Healey & Jenkins, 2009; Hattie & Marsh, 1996). Despite the traditional view separating the two elements into different fields in the English language teaching context, the unity of research and teaching is based on the common pursuit of knowledge by teachers and students, with an increasing role. Hattie and Marsh (1996) outlined a model of positive and negative relationships between teaching and research. This historical point supports the argument for a “teacher-researcher nexus” where roles are mutually reinforcing with both positive and negative ones. Then, Brew (2001) posits that teachers are active decision-makers whose beliefs are deeply rooted in their own apprenticeship of observation as learners. This illustrates the early acknowledgement of the teacher-research nexus, which lasts until the current research concerns (Farrell, 2018; Nguyen et al., 2022; Seidel & Shavelson, 2007; Yermekbayeva et al., 2024).

Research-Based Learning (RBL) is mentioned as an environment to foster a culture of innovation and operationalize this nexus: authentic scientific inquiry is prioritized via Research-Based Learning (RBL) (Yermekbayeva et al., 2024). By situating learning within actual practice, educators can critically analyse their pedagogical techniques against their personal experiences and theoretical knowledge. Grounded in constructivist philosophy, RBL integrates problem-solving, cooperative learning, and inquiry-based discovery. This approach fosters a scientific mindset characterized by evidence-based reasoning and integrity. As outlined by Seidel and Shavelson (2007), the components of the research process allow postgraduate students to inhabit the role of the researcher, enhancing both their competencies and their awareness of how inquiry informs English teaching

practices. Likewise, Borg (2010) conceptualizes teacher research as “systematic, public inquiry” intended to improve professional practice, with a critical distinction drawn between engagement in research (doing it) and engagement with research (reading it).

Despite evolving views on professional development, significant limitations remain within traditional models. A dissonance often exists between academic preparation and professional reality. In terms of engagement in research, in actual English teaching practices, after graduating from universities, graduate students often enter educational contexts without official and academic support to address the immediate teaching challenges they face (Nguyen et al., 2022). The same issue happens when mentioning engagement with research, when teachers or graduate students read and apply research products into their teaching context. Farrell (2018) noted that graduates and course completers in language teaching methodology or assessment may struggle to apply the theoretical or idealized recommendations for teaching to their actual teaching contexts. Furthermore, contextual factors - such as rigid syllabi and examination pressures - often lead to an incongruence between a teacher’s pedagogical beliefs and their actual classroom behaviours (Borg, 2013). This argues that completing methodology courses does not guarantee that novice teachers can successfully translate idealized recommendations into specific contexts (Farrell, 2018).

METHODOLOGY

Data Sources

A systematic review is conducted to synthesize evidence from previous studies to find out the breadth and depth of literature available on a specific topic, identifying key concepts, theories, and evidence gaps (Peters et al., 2020). They are particularly effective for clarifying definitions or examining how research is conducted within emerging or complex fields where evidence may be extensive or heterogeneous (Peters et al., 2021).

To conduct the present review, the authors follow the JBI guidance, beginning with a predefined a priori protocol to ensure transparency and prevent bias (Peters et al., 2020). While specific search strings vary by topic, the strategy should be comprehensive enough to capture both published and gray literature, often requiring an iterative process where new terms are discovered and incorporated as the review progresses (Peters et al., 2021). In this review, sources were accessed through a systematic retrieval of scholarly, reliable databases and specific ASEAN-targeted repositories in education, using Boolean search strings for scope and relevance (Cooper et al., 2019).

The quality of these searches is significantly enhanced when authors must adhere to the PRISMA Extension for Scoping Reviews (PRISMA-ScR) reporting standards (Peters et al., 2021). To strengthen the contextual specificity of the review, there are three inclusion criteria applied: (1) Studies must focus on research engagement in the language teaching context, pedagogical design, and teacher education; (2) Publications must appear in Scopus-indexed journals or Web of science; (3) Selected publications have sufficiently detailed abstracts or full-text papers to allow for reliable extraction of the main thematic and methodological information.

Data Analysis

The current study deployed a thematic analysis method (Naeem et al., 2023), which differs from earlier models (Braun & Clarke, 2006). The thematic analysis method, developed from thematic analysis, showed a six-step process with outcomes focusing on conceptual model development (Naeem et al., 2023), while the models of Braun and Clarke merely focus on naming the themes. With the six-step process, the new model stresses keyword selection, conceptual interpretation, and model development. In the current study, due to the lack of an original definition for the research mindset or the theory specified for the mindset toward research, we need not only the results of the existing studies but also the conceptualization based on these studies. Therefore, using a thematic analysis method is an appropriate decision. The complete process includes six stages beginning with familiarization with the qualitative data, initial code generation, accumulation of related themes, review of the found themes, title putting the themes, and finally, presentation of data.

Fourteen studies were coded inductively, informed by theoretical work on research in language teaching and mindset theory. We followed six steps of the thematic analysis method (Naeem et al., 2023), starting by reading and diving into the content to generate initial codes. The themes were identified and revised many times before being used to conceptualize the three domains. Checking for consistency and inter-coder reliability was conducted, and then the processed data were grouped into three domains:

- (1) The theoretical shift in mindset
- (2) Synthesizing the “mindset toward research” via the teacher-research nexus
- (3) Micro level from pedagogical interventions and macro-structural constraints

FINDINGS

The concept of a “mindset toward research” was situated at the intersection of educational psychology and applied linguistics. The analysis of the selected studies reveals a significant theoretical change. In terms of mindset, the findings showed a shift from static trait-based models toward a dynamic, process-oriented, and contextual system. This is also a redefinition of teacher-research engagement from an academic imposition to an integral component of professional practices. Then, empirical studies focused on the current state of research engagement also show a paradox between the positive outcomes at the micro level by applying pedagogical intervention with the structural constraints at the macro level. The following findings are organized into three primary thematic domains: the theoretical shift in mindset; synthesizing the “mindset toward research” via the teacher-research nexus; and micro-level from pedagogical interventions and macro-structural constraints.

Mindset Viewed under Dual Lens: Mindset Theory and Teacher-Research Nexus

Theme 1: The theoretical shift in mindset - from static traits to dynamic systems through the lens of complex dynamic system theory (CDST)

The first point begins with tracing the theoretical evolution of mindset theory. The construct of mindset has undergone a profound theoretical evolution over the last two decades. The first point begins with tracing the theoretical evolution of mindset theory. The foundational scholarship, grounded in Dweck’s (2006) dichotomy, originally conceptualized mindset as a relatively stable set of beliefs regarding the malleability of human competence. The analysis identifies Dweck (2006) as

the predecessor of the field, establishing the influential dominance of fixed versus growth mindsets. This binary framework - categorizing individuals as possessing either fixed or growth mindsets - was instrumental in explaining motivational patterns, wherein individuals are categorized based on their belief in the malleability of human competence. However, a dominant theme emerging from recent scholarship is the problematization of this static model. The review reveals that while Dweck's (2006) model provided necessary initial concepts, subsequent research has challenged its individualistic and binary assumptions. The selected studies indicate a consensus shift toward reframing mindset not as a fixed internal attribute possessed by an individual, but as a dynamic psychological orientation. The introduction of Complex Dynamic Systems Theory (CDST) as an explanatory mechanism is crucial here. The review highlights Larsen-Freeman (1997) as the initiator of this paradigm shift in language development, challenging linear models of mastery in favour of a process of becoming. The relevance of this to the current study is profound: if language development is non-linear and emergent, the psychological mechanisms supporting it - specifically, mindset - must also be viewed through a non-linear lens.

The evolution appears at the convergence of the two theories. Based on the initial Mindset theory of de Ruiter and Thomaes (2023), which explored mindset as a continuous, dynamic process through the lens of Complex dynamic system theory (Larsen-Freeman, 1997), serving as an update to the current model for this field. In this model, de Ruiter and Thomaes (2023) introduced the concept of mindsets as “attractor states” of psychological components that are not rigid traits but are pulled toward stability through iterative social interactions. The concept of “attractor states” (de Ruiter & Thomaes, 2023) offers a sophisticated resolution to the stability-plasticity dilemma. It explains why mindsets can appear stable (fixed) while remaining fundamentally open to change. This finding suggests that interventions aimed at fostering a mindset toward research cannot simply rely on “teaching” growth mindset beliefs but alter the existing patterns in the environmental system to create new attractor states. This rejects linear cause-and-effect models in favour of a systemic view where development is shaped by feedback and participation in communities of practice. Similarly, the literature establishes that mindsets are enacted rather than possessed, emerging through continuous interaction with social, institutional, and cultural environments.

Stelma and Kostoulas (2024) operationalized CDST in the ELT context by establishing CDST as the theoretical frame. They identified specific frameworks for operationalizing these abstract concepts within English Language Teaching (ELT). Their work moves beyond abstract modelling to offer a practical heuristic that frames the classroom as an interconnected system. The thematic analysis of Stelma and Kostoulas (2024) reveals four “dynamical properties” that constitute the pillars of a mindset toward research in the classroom, including historicity, adaptiveness, nonlinearity, and emergence. Firstly, historicity (normative activity) refers to the influence of past conventions, established practices, and authoritative methods that shape current actions and interpretations. Adaptiveness (contingent activity) denotes the capacity to respond spontaneously and flexibly to shifting variables, such as changing emotional states, contextual demands, or situational constraints. Nonlinearity (creative activity) involves the rejection of rigid causal logic, instead recognizing and valuing unexpected discoveries, dynamic meaning-making processes, and practices. Emergence (purposeful activity) highlights the critical ability to set and revise goals while actively engaging with real-time opportunities and unfolding conditions during the activity itself.

Theme 2: Synthesizing the “Mindset toward research” via the teacher-research nexus

After redefining mindset (mentioned above), the next thematic cluster addresses the intersection of mindset psychology and professional research engagement, relying heavily on Borg (2010) to define the “Teacher-Research Nexus.” The results distinguish between engagement with research (consumption) and engagement in research (production). Borg (2010) notes that while “systematic, public inquiry” is the ideal, it remains a minority activity due to institutional barriers and the aforementioned technicist orientations. While the latter is considered ideal for professional growth, it remains a minority activity due to institutional barriers and technicist orientations that view research as external to teaching. Bridging this gap requires the emergence of a mindset toward research, an integrated system that transcends the mere willingness to conduct inquiry.

Within the field of English Language Teaching (ELT), research is not conceptualised merely as academic production but as a form of professional practice. Borg (2010) defines teacher research as “systematic, public inquiry” oriented toward improving teaching and learning. A critical distinction is made between engagement with research (as a consumer of knowledge) and engagement in research (as a producer of knowledge), with the latter requiring substantially different cognitive, motivational, and identity-related resources. The Teacher-Researcher Nexus frames research not as external to teaching but as integral to reflective and evidence-informed practice. However, Borg (2010) also notes that research engagement remains a minority activity among teachers, constrained by institutional pressures, technicist orientations, and limited structural support. Bridging the gap between theory and practice thus requires a reconceptualization of research not as a product but as a developmental process embedded within professional life.

Synthesising psychological models of mindset with this professional conception of research leads to the emergence of the construct of mindset toward research. A study (Nguyen et al., 2022) further demonstrated that an inquiry-motivated mindset enables teachers to frame classroom challenges as researchable problems, fostering systematic reflection and evidence-based decision-making. From this perspective, a mindset toward research can be conceptualised as an integrated system comprising cognitive components (beliefs about knowledge, learning, and inquiry) and behavioural components (engagement in systematic investigation, perseverance, and public dissemination). It represents not merely the willingness to conduct research, but a way of seeing professional practice through a research-oriented lens. On the other hand, Mendoza and Yan (2025), still rooted in the long-term history of the mindset theories mentioned above, provide the measurement bridge for this synthesis. Their development of the Growth Practices Scale (GPS) addresses the connection between beliefs and achievement. Their findings indicate that mindset is comprised of integrated cognition (beliefs) and behaviour (practices), manifesting specifically through effort-based learning practices like proactive coping.

From Scaffolding to Agency: Studies in Specific Contexts

Despite a long-term relationship of research and teaching (Hattie & Marsh, 1996), previous studies mostly focused on external factors to fostering research productivity, facilitating teachers’ perception toward research, or the significance of research in language teaching and professional development. Instead of reviewing from a global issue to the local context, we propose another lens to look at this field, which starts from a personal level to a structural view. The synthesis of recent studies reveals a distinction between the micro-level successes of pedagogical interventions in

fostering a research mindset and the macro-level structural barriers that may hinder research productivity. The following sections discuss these two issues.

Theme 3: Micro level from pedagogical interventions and macro-structural constraints

Micro level with positive outcomes. At the micro level, the review showed positive results when pedagogical interventions can support research engagement (Dao et al., 2022) and nurture a research mindset with recorded outcomes (Nguyen et al., 2022; Truong et al., 2025).

A significant portion of the reviewed literature focuses on bridging the “research-practice divide” through systematic pedagogical frameworks. Dao et al. (2022) and Nguyen et al. (2022) demonstrated that fostering research engagement among TESOL teacher-learners requires more than theoretical instruction; it necessitates a transition from research consumers to producers, aligning with the two concepts of engagement with or in research mentioned above. The theme starts with the Research Engagement Procedure (REP), a six-stage model investigated by Dao et al. (2022), which utilizes Vygotskian scaffolding and dialogic consultancy (Johnson, 2015) to mediate this transition. The results indicate that expert mediation is critical in helping learners overcome research-related anxiety. Through this scaffolded approach, students navigate the Zone of Proximal Development (ZPD), moving from reading and using research to active inquiry. This suggests that transformative agency is not a latent trait but an emergent property of supported professional practice. The transition from consuming to conducting goes through a developing phase, when teachers’ mindset toward research is formed and nurtured. Demonstrating this phase and complementing the REP framework, Nguyen et al. (2022) highlight the concept of the inquiry-motivated mindset. Their longitudinal findings suggest that firsthand experience in open-inquiry mini-research projects allows teachers to perceive research through the lens of a researcher. This cognitive growth is vital for adopting a researcher position, which serves as a psychological buffer against the perceived difficulty of academic inquiry. Later, Truong et al. (2025) identified that this mindset is often nurtured within communities of practice. Their study on English studies majors illustrates that collaborative research teams co-construct knowledge through facilitating leadership rather than authoritative hierarchies. By employing asynchronous tools and collaborative problem-solving (ColPS), student-led teams create socially motivated environments that resolve conflicts and foster a shared repertoire of research skills.

However, the potential mentioned above for individuals’ mindset toward research development does not stand alone but emerges within a situational context (de Ruiter & Thomaes, 2023) in a continuous and dynamic process. Further, Mendoza and Yan (2025) clarified the role of context and its interdependence with socializer, curriculum, instruction, and culture, to translate someone’s incremental beliefs into meaningful achievement gain. In this case, the transformation from micro-level interventions to macro-structure is still in the long run. Despite the documented success of micro-level interventions, the scoping review identifies a pervasive disconnect between individuals’ mindsets toward research and institutional research productivity.

Generally, Henry et al. (2020) utilized logistic regression to identify predictors of productivity, finding that PhD qualifications and satisfaction with income are significant. Interestingly, their results show that academics who perceive supervision as a burden are more productive, likely due to joint outputs with students. However, this type of productivity is often offset by heavy teaching

workloads. Consistent with these findings, in 2016, Nguyen et al. reported that in Vietnamese regional universities, academics face up to 900 teaching hours per year, incentivizing extra teaching over research to supplement low salaries. Focusing on affordances, barriers, and motivations contributing to the engagement in research activity by academics at the research-oriented university in Vietnam (Nguyen et al., 2016), this study explored institutional constraints. The themes centre on remuneration mechanisms, library resources, and academic identity. Qualitative data from 19 academics from various ranks and disciplines at a Vietnamese regional university reveal that while 70% of staff do not publish, they are aware of research importance but are hindered by heavy teaching loads.

This is echoed in the Cambodian context. Across Heng's current studies, there is a coherent and longitudinal account of how research is conceived, constrained, and unevenly practiced within Cambodian higher education. In his 2022 article, Heng et al. (2022) examined Cambodian academics' conceptions of research and the research-teaching nexus. The study reveals a pronounced discursive gap between institutional discourse and lived academic practice. Particularly, while most participants expressed a belief that research and teaching are complementary, a substantial proportion uncritically equated routine class preparation with research activity, reflecting limited conceptual engagement with knowledge production. Structural realities further undermined research engagement: approximately 40% of participants had never published, citing low salaries, heavy teaching loads, and pressing survival needs that compelled them to prioritize supplementary income over scholarly work. Research, although symbolically valued, was thus marginalized in practice, illuminating how material precarity shapes academic cognition and behaviour in peripheral contexts.

Building on these micro-level insights, Heng's (2024) case study situated academic research engagement within Cambodia's broader post-Khmer Rouge higher education landscape. The study highlights systemic challenges, including fragmented governance, severe skill shortages, and weak research cultures. With only 8.74% of academic staff holding doctoral degrees, research is often perceived as "optional" rather than integral to academic identity. Nonetheless, Heng identifies tentative progress through World Bank-funded Higher Education Improvement Projects, which have introduced competitive grants and stimulated fragile interest in research. Yet this progress remains constrained by limited academic freedom, as scholars avoid politically or socially sensitive topics, underscoring how historical legacies and governance structures continue to shape what research is thinkable and doable. Beyond empirical diagnosis, Heng's (2025) work adopted a reform-oriented perspective, synthesizing decades of policy reports and scholarly literature to propose structural solutions to improve research quality. This narrative review identifies extreme governance fragmentation as a fundamental barrier to coherent quality assurance and research development. Heng argues for differentiating institutions into teaching- and research-oriented streams to enable more strategic funding and capacity building, while also critiquing the "inflation" of underqualified PhD holders produced by diploma politics and weak postgraduate training.

DISCUSSION

In terms of a theoretical shift in mindset, the reported findings, firstly, raise a voice on the necessity of complexity. The shift identified in the results represents a fundamental theoretical change in educational psychology. Shifting away from the trait-based models of Dweck (2006), the field

acknowledges that mindset is not an isolated variable but a product of context. This aligns with the broader paradigm shift toward process-oriented accounts of mindset identified in the review. Then, the work of Stelma and Kostoulas (2024) provided the theoretical points in this domain. The literature synthesizes four pillars, including historicity, adaptiveness, nonlinearity, and emergence (Stelma & Kostoulas, 2024). This illustrates the requirement for a teacher-researcher to balance the existing structural factors (historicity) with contingent adjustments (adaptiveness) and creative shortcuts (nonlinearity) to reach a certain goal (emergence). The demonstration of these four pillars provides an understanding of how a mindset toward research functions in a situational context. So, the important point is that, by redefining within this theory, Stelma and Kostoulas (2024) considered agency not as a possession to have agency but as an enactment by doing agency. The distinction is also crucial for the discussion of research engagement, which suggests that a mindset toward research does not separate theory and practices but manages the tension between them. This also challenges the “technicist orientations” often found in ELT (Borg, 2010), suggesting that valid knowledge generation, especially research, occurs in the real-time interaction of these forces, rather than solely in controlled, pre-planned experiments. It posits that research outcomes are situation-specific. Finally, the synthesis of these findings suggests that the mindset toward research is the resolution to the tension between the demands of teaching and the demands of research. Borg (2010) mentioned a process where theory and practice mutually inform one another. The mindset toward research is the psychological mechanism that enables this dialectic. It suggests that research engagement is the behavioural manifestation of a “growth mindset” in a professional context (Mendoza & Yan, 2025). Therefore, as a growth mindset in students leads to perseverance in learning (Dweck, 2006), a mindset toward research in teachers leads to persistence in inquiry.

In terms of research engagement, across all these studies, a consistent pattern emerges is that research engagement can be shaped less by individual motivation, combined with situational context like historically entrenched structures, material constraints, and policy incoherence (Heng, 2024). In this way, there is a necessity for the conditions under which research can be moved toward sustained and meaningful engagement. Along with Nguyen et al. (2016), the mentioned findings call for future research that combines mixed methods, national-level surveys, and comparative analyses with neighbouring systems such as Thailand and Vietnam, as well as for locally grounded and internationally supported reforms that bridge the knowledge divide and empower academics to participate more fully in research. A key takeaway also focuses on standard teaching hours or workload. Secondly, these results also highlight a gap in knowledge production between the North and South, from the micro to the macro level. While programs in Australia effectively use REP to foster engagement (Dao et al., 2022), Cambodian and Vietnamese institutions struggle with fragmented governance and skill mismatches (Heng, 2025; Nguyen et al., 2016). Ultimately, the evidence suggests that while a mindset towards research can be fostered through dialogic consultancy and scaffolding, it is also easily hindered by structural constraints, as mindset is not a static feature but a psychological component.

CONCLUSION AND PEDAGOGICAL IMPLICATIONS

This scoping review set out to conceptualize the notion of a mindset toward research by synthesizing insights from educational psychology and higher education research engagement literature. The findings collectively demonstrate a decisive shift away from static, trait-based understandings of mindset toward a dynamic, ecological, and process-oriented conception grounded in Complex

Dynamic Systems Theory (CDST). Across the reviewed studies, mindset is no longer treated as an individual possession but as an emergent orientation enacted through ongoing interaction with social, institutional, and material contexts. This theoretical shift reframes research engagement from an externally imposed academic requirement into a form of situated professional practice, inseparable from teaching, identity, and agency. Synthesizing mindset theory with Complex Dynamic Systems Theory (CDST) reframes mindsets as attractor states shaped by feedback, participation, and context, resolving tensions between stability and change. This explains why research orientations may appear stable but remain inherently malleable. In ELT, CDST is operationalized through four elements: historicity, adaptiveness, nonlinearity, and emergence. This illustrates that a mindset toward research functions through the dynamic management of pedagogical tensions rather than linear causality.

Integrating this perspective with the teacher-research nexus positions research engagement as the behavioural enactment of a mindset toward research, requiring cognitive reframing, identity repositioning, and sustained agency.

However, evidence from Vietnam and Cambodia shows that micro-level development of mindset toward research is frequently undermined by structural constraints such as heavy teaching loads, low remuneration, and fragmented governance, resulting in the rhetorical endorsement but practical marginalization of research.

Taken together, the findings suggest that a mindset toward research is a necessary but insufficient condition for sustainable research engagement. While dialogic scaffolding and pedagogical design can foster inquiry-oriented identities, such mindsets remain fragile when unsupported by institutional reform. Therefore, the study points to an urgent need for multi-level alignment: pedagogical innovation must be accompanied by workload reform, coherent governance, equitable funding, and protected research time. Because of the scope limitation, this review is just addressed to relevant and accessible papers from Google Scholar, and then, checked with the Scopus index. Future research, therefore, should adopt not only a systematic review to gather sufficient literature review but also mixed-methods and comparative designs to examine how mindsets toward research interact with institutional ecologies over time. Ultimately, empowering teachers and academics to engage meaningfully in research requires not only cultivating the right mindset but also transforming the conditions under which that mindset can endure and flourish.

REFERENCES

- Cooper, H., Hedges, L. V., & Valentine, J. C. (2019). *The handbook of research synthesis and meta-analysis*. Russell Sage Foundation.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Borg, S. (2013). *Teacher research in language teaching: A critical analysis*. Cambridge University Press.
- Borg, S. (2010). Language teacher research engagement. *Language Teaching*, 43(4), 391-429. <https://doi.org/10.1017/S0261444810000170>
- Brew, A. (2001). Conceptions of research: A phenomenographic study. *Studies in Higher Education*, 26(3), 271-285. <https://doi.org/10.1080/03075070120076255>

- Dao, P., Nguyen, M. X. N. C., Iwashita, N., & Spinelli, F. (2022). A dialogic approach to fostering TESOL teacher-learners' research engagement: Insights from a 'learning-to-research' procedure. *TESOL Quarterly*, 56(2), 775-787. <https://doi.org/10.1002/tesq.3127>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning policy institute.
- de Ruiter, N. M. P., & Thomaes, S. (2023). A process model of mindsets: Conceptualizing mindsets of ability as dynamic and socially situated. *Psychological Review*, 130(5), 1326-1338. <https://doi.org/10.1037/rev0000425>
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random house.
- Edwards, C., McLinden, M., Cooper, S., Hewertson, H., Kelly, E., Sands, D., & Stokes, A. (2017). *Cultivating student expectations of a research-informed curriculum: Developing and promoting pedagogic resonance in the undergraduate student learning pathway*. In *Developing the Higher Education Curriculum Research-based Education in Practice*, Edited by Brent Carnell and Dilly Fung.
- Farrell, T. S. (2018). Reflective practice for language teachers. In J. I. Lontas (Ed.), *The TESOL encyclopedia of English language teaching* (pp. 1-6). John Wiley & Sons.
- Hattie, J., & Marsh, H. W. (1996). The Relationship Between Research and Teaching: A Meta-Analysis. *Review of Educational Research*, 66(4), 507-542. <https://doi.org/10.3102/00346543066004507>
- Healey, M. and A. Jenkins (2009). *Developing Undergraduate Research and Inquiry*. York: Higher Education Academy
- Heng, K. (2024). Challenges and developments in university research in Cambodia: A case study of two universities. *Higher Education*, 87(6), 1593-1613. <https://doi.org/10.1007/s10734-023-01080-2>
- Heng, K. (2025). Improving quality and promoting research in Cambodian higher education: Challenges and directions for reform. *Cambodian Journal of Educational Research*. <https://doi.org/10.62037/cjer.2025.05.02.03>
- Heng, K., Hamid, M. O., & Khan, A. (2022). Academics' conceptions of research and the research-teaching nexus: Insights from Cambodia. *International Journal of Educational Development*, 90, 1-11. <https://doi.org/10.1016/j.ijedudev.2022.102569>
- Henry, C., Ghani, N. A. M., Hamid, U. M. A., & Bakar, A. N. (2020). Factors contributing towards research productivity in higher education. *International Journal of Evaluation and Research in Education*, 9(1), 203-211. <https://doi.org/10.11591/ijere.v9i1.20420>
- Hoang, V. V. (2020). The roles and status of English in present-day Vietnam: A socio-cultural analysis. *VNU Journal of Foreign Studies*, 36(1). <https://doi.org/10.25073/2525-2445/vnufs.4495>
- Johnson, K. E. (2015). Reclaiming the relevance of L2 teacher education. *The Modern Language Journal*, 99, 515-528. <https://doi.org/10.1111/modl.12242>
- Kamali, J., Freeman, D., Larsen-Freeman, D., Norton, B., & Farrell, T. S. C. (2024). Editorial: Language teacher education research - key trends, challenges, and questions. *Language Teacher Education Research*, 1, 1-16. <https://doi.org/10.32038/lter.2024.01.01>
- Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18(2), 141-165. <https://doi.org/10.1093/applin/18.2.141>
- Mendoza, N. B., & Yan, Z. (2025). From beliefs to behaviors: Conceptualizing and assessing students' practices that reflect a growth mindset. *Social Psychology of Education*, 28, 73. <https://doi.org/10.1007/s11218-025-10032-w>

- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International journal of qualitative methods*, 22. <https://doi.org/10.1177/16094069231205789>
- Nguyen, M. X. N. C., Dao, P., & Iwashita, N. (2022). Nurturing teachers' research mindset in an inquiry-based language teacher education course. *The Modern Language Journal*, 106(3), 599-616. <https://doi.org/10.1111/modl.12795>
- Nguyen, Q., Klopper, C., & Smith, C. (2016). Affordances, barriers, and motivations: engagement in research activity by academics at the research-oriented university in Vietnam. *Open Review of Educational Research*, 3(1), 68-84. <https://doi.org/10.1080/23265507.2016.1170627>
- Peters, M. D. J., Marnie, C., Colquhoun, H., Garritty, C. M., Hempel, S., Horsley, T., Langlois, E. V., Lillie, E., O'Brien, K. K., Tunçalp, Ö., Wilson, M. G., Zarin, W., & Tricco, A. C. (2021). Scoping reviews: reinforcing and advancing the methodology and application. *Systematic reviews*, 10(1), 263. <https://doi.org/10.1186/s13643-021-01821-3>
- Peters, M. D. J., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBI evidence synthesis*, 18(10), 2119-2126. <https://doi.org/10.11124/JBIES-20-00167>
- Truong, P. T., Ton, L. B. N., Vo, N. N. Y., Nguyen, N. K. D., & Tran, T. D. (2025). Exploring English studies majors' interactions in collaborative research teams as communities of practice. *Educational Process: International Journal*, 18, e2025424. <https://doi.org/10.22521/edupij.2025.18.424>
- Seidel, T., & Shavelson, R. J. (2007). Teaching effectiveness research in the past decade: The role of theory and research design in disentangling meta-analysis results. *Review of educational research*, 77(4), 454-499. <https://doi.org/10.3102/0034654307310317>
- Stelma, J., & Kostoulas, A. (2024). Revisiting complex dynamic systems theory: Empowering language teachers and teaching. *TESOL Journal*, 15(3). <https://doi.org/10.1002/tesj.790>
- Yermekbayeva, G., Kuzembayeva, G., Maydangalieva, Z., & Goncharenko, O. (2024). Implementing Research-Based Learning in Kazakhstan's Pre-Service Teacher Education. *Journal of Social Studies Education Research*, 15(4), 316-337

APPENDIX

Table 1. Summary Table

Themes	Title	Author and year	Methods	Key Findings
Fundamental theoretical change in educational psychology	Chaos/complexity science and second language acquisition	Larsen-Freeman, D. (1997)	Conceptual analogy and theoretical analysis.	Proposes SLA as a complex, nonlinear system characterized by emergence, self-organization, and sensitive dependence on initial conditions
	Mindset: The new psychology of success	Dweck, C. S. (2006)	Laboratory experiments and vignettes	Distinguishes between fixed mindsets (intelligence as

				static) and growth mindsets (intelligence as developable through effort).
	A process model of mindsets: Conceptualizing mindsets of ability as dynamic and socially situated	De Ruiter, N. (2023)	Theoretical model construction drawing from CDST and enactivist perspectives.	Formulates the Process Model of Mindsets (PMM) using CDST to explain how mindsets emerge and stabilize as “attractor states” in social negotiations.
	Revisiting complex dynamic systems theory: Empowering language teachers and teaching	Stelma, J., & Kostoulas, A (2024)	Historical review of CDST’s evolution in TESO	A central finding is that language education must be understood as an interplay between change and stability, with four pillars: historicity, adaptiveness, nonlinearity, and emergence.
Synthesizing the “Research Mindset” via the Teacher-Research Nexus	Language teacher research engagement	Borg, S. (2010)	State-of-the-art literature review	Analyzes teacher engagement <i>in</i> (doing) and <i>with</i> (reading) research, identifying benefits like new ways of seeing/doing and barriers.
	From beliefs to behaviours: Conceptualizing and assessing students’ practices that reflect a growth mindset	Mendoza, N. B., & Yan, Z. (2025).	Mixed-methods: focus groups, expert review, CFA, and Rasch analysis.	Introduces the Integrated Growth Systems Framework (IGSF) and the Growth Practices Scale (GPS) to measure proactive and reflective practices.
Micro level from pedagogical Interventions and Macro-Structural Constraints	Affordances, barriers, and motivations: engagement in research activity by academics at the research-oriented university in Vietnam	Nguyen, Q., Klopper, C., & Smith, C. (2016)	Qualitative: Semi-structured interviews and thematic analysis.	Explores how financial support, teaching load, and policy settings influence research productivity in a transitional Vietnamese university.
	Factors contributing towards research productivity in higher education.	Henry, C., Ghani, N. A. M., Hamid, U. M. A., & Bakar, A. N. (2020)	Quantitative: Logistic Regression Model and stratified random sampling	Identifies personal, environmental, and behavioural factors affecting research productivity, such as age and doctoral qualification.
	Academics’ conceptions of research and the research-teaching nexus: Insights from Cambodia	Heng, K., Hamid, M. O., & Khan, A. (2022)	Qualitative: In-depth semi-structured interviews and inductive coding.	Reveals mixed conceptions of research among Cambodian academics, often equating it with teaching preparation (“lip service” to research).
	A dialogic approach to fostering TESOL teacher-learners’ research engagement: Insights from a ‘learning-to-research’ procedure	Dao, P., Nguyen, M. X. N. C., Iwashita, N., & Spinelli, F. (2022)	Qualitative: Weekly reflections and focus-group interviews.	Examines a Research-Engagement Procedure (REP) that scaffolds teachers into becoming knowledge producers through dialogic talks.
	Nurturing teachers’ research mindset in an inquiry-based language teacher education course.	Nguyen, M. X. N. C., Dao, P., & Iwashita, N. (2022)	Mixed-methods: pre-course questionnaire, reflections, and focus group interviews.	Defines a research mindset as cognition and action; it shows that inquiry-based courses can activate it despite a lack of confidence.
	Challenges and developments in	Heng, K. (2024)	Qualitative case study using semi-structured	Highlights a precarious environment

	university research in Cambodia: A case study of two universities		interviews and thematic analysis.	
	Exploring English studies majors' interactions in collaborative research teams as communities of practice.	Truong, P. T., Ton, L. B. N., Vo, N. N. Y., Nguyen, N. K. D., & Tran, T. D. (2025)	Qualitative: Phenomenological design and semi-structured interviews.	Describes student research teams as goal-oriented learning communities where knowledge is co-constructed through open communication
	Improving quality and promoting research in Cambodian higher education: Challenges and directions for reform	Heng, K. (2025)	Narrative literature review using Google Scholar	identifies governance fragmentation as a primary quality barrier