OPEN ACCESS

Conceptual Foundations in Language Research

Conceptual Foundations in Language Research, 1, 260102 (2026)
https://doi.org/10.65553/CFLR.260102

Metacognitive Agency in Language Learning: A Dynamic, Distributed, and Language-Anchored Framework

Lawrence Jun Zhang*

University of Auckland, New Zealand

Abstract

Metacognition is widely accepted as central to language learning, and yet the field still tends to treat it as a stable, individual, domain-general attribute measured by self-report. This position paper argues that this view is theoretically incomplete. Drawing on educational psychology, self-regulated learning (SRL) research, and recent syntheses of metacognition in language teaching, it proposes the Metacognitive Agency Framework for Language Learning (MAF-LL). The framework rests on five propositions. Metacognition in language learning has a tripartite core of knowledge, experience, and skills. It is dynamic, with trait-like and state-like layers. It is agentive, shaped by identity, positioning, and imagined and practised communities. It is anchored in linguistic and modal demands. It is distributed across teachers, peers, and technologies, including generative artificial intelligence (AI). The paper sets out theoretical implications for definition and measurement, practical implications for instruction, assessment, and teacher education, and a research agenda.

Keywords: metacognition; language learning; metacognitive agency; self-regulated learning; distributed regulation

Submission date: October 22, 2026; Revision date: November 6, 2026; Online: November 13, 2026

Copyright ©2026
The authors

(corresponding author: lj.zhang@auckland.ac.nz)

GLODAL

Introduction

I am honored to be taking up the role of Editor-in-Chief of *Metacognition and Learning*. I have worked in this domain for several decades, beginning with studies of how English-as-a-foreign-language (EFL) learners understand reading and listening, and continuing through collaborations with doctoral students, notably Sophie Lin Teng (L. Teng & Zhang, 2016, 2018, 2022), Qiyu Sun (Sun, Zhang, & Carter, 2024), Chenghui Chen (Chen & Zhang, 2025), Meilu Liu (Liu, Zhang, & Biebricher, 2026), Linze Ou (Ou & Zhang, 2026), Mingzhe Wang (Wang & Zhang, 2026), Kaixuan Wang (Wang, Zhang, & Cooper, 2024, 2025), Ting Ma (Ma et al., 2025), Xiaoqi Wang (Wang, Zhang, & Zhang, 2026), Li Francoise Yang (Yang et al., 2023), Jianhua Zhang (Zhang & Zhang, 2025), Weiwei Zhang (Zhang et al. 2026), and colleagues such as Mark Feng Teng (F. Teng & Zhang, 2021, 2024, 2025), Donglan Zhang (Zhang & Zhang, 2018, 2026), Jalil Fathi (Zhang & Fathi, 2025), Javad Zare (Zare et al., 2026), Ye Zhu (Zhang et al., 2026), among others. The collaborative work extended that agenda into self-regulation, writing, motivation, and digital learning. This seems an appropriate occasion to take stock of where metacognition research in language learning stands and to argue where it should go.

The foundations are secure. Flavell (1979) distinguished metacognitive knowledge, experiences, and strategies. Wenden (1998) carried the idea into language learning through person, task, and strategy knowledge, and Anderson (2002) described how learners prepare, select, monitor, orchestrate, and evaluate strategies. Recent book-length treatments now span listening (Vandergrift & Goh, 2012), self-regulated learning strategies in second language (L2) writing (L. Teng, 2022), and the pedagogy of metacognition across reading, writing, listening, and vocabulary (Goh & Vandergrift, 2022; F. Teng, 2025a). Learners with greater metacognitive awareness tend to read, listen, and write more effectively (Zhang, 2001, 2008; Zhang & Goh, 2006; Zhang & Zhang, 2019, 2026), and metacognitive instruction can improve outcomes (L. Teng & Zhang, 2020; Zhang, 2016a, 2016b; Zhang et al., 2016; Zhang & Zhang, 2013).

Three problems nonetheless persist. First, there is conceptual inconsistency. Veenman et al. (2006) noted that the importance of metacognition is acknowledged while its conceptualization remains inconsistent, and the language learning literature inherits this problem. Researchers use metacognition, strategy use, self-regulation, language awareness, and metalinguistic awareness with overlapping or divergent meanings (Haukås, 2018; Rose, 2012). Second, there is a static and individualistic bias. Much work captures learners' reported knowledge at one time point, which says little about how metacognition unfolds across tasks, communities, and tools. Third, there is under-specification of what is distinctive about language. In language learning, the medium is also the object of learning, learners work across languages, and learning increasingly involves AI and virtual environments. Finally, how language learners regulate and deploy metacognitive strategies specifically within generative AI (GenAI)-assisted contexts remains insufficiently understood, both theoretically and empirically (F. Teng, 2025b, 2026).

This is a position paper, which synthesizes and critiques the literature and proposes an integrative framework intended to guide theory, measurement, and pedagogy in the domain of metacognition and learning.

Conceptual Framework and Synthesis

The Core: A Tripartite Architecture Reconsidered

Two classic architectures underpin most work in this field. One divides metacognition into knowledge (person, task, strategy) and regulation (planning, monitoring, evaluating), with declarative, procedural, and conditional knowledge as sub-types (Paris et al., 1984; Schraw,

1998). The other treats metacognition as monitoring and control across object and meta levels (Efklides, 2008). F. Teng (2025a) synthesizes these and, with colleagues, models metacognition as an interplay of knowledge, experiences, and skills, with reflection at the center of the planning - monitoring - evaluating cycle (F. Teng et al., 2022). These elements are not independent. Knowledge supplies the basis for experiences such as feelings of difficulty or confidence, and skills are honed as knowledge and experience are applied and reflected upon.

The tripartite core suits language learning because the three elements map onto distinct instructional targets. Knowledge can be taught explicitly, experiences must be surfaced through reflection, and skills require guided practice. Evidence from L2 writing suggests the elements contribute unequally to performance. Metacognitive regulation appears to matter more for writing outcomes than knowledge alone (Teng, 2025a). That finding matches the broader SRL point that knowing a strategy is not the same as deploying it.

Proposition 1 (Core). Metacognition in language learning is a three-part system of knowledge, experiences, and skills, linked by reflection. Its parts have different developmental trajectories and instructional requirements, and researchers should specify which part they study.

The Temporal Dimension: Trait-Like and State-Like Metacognition

The field's most consequential measurement habit is to treat metacognition as a trait. Sato (2022) and Teng (2025a) emphasize that metacognition has both trait-like and state-like elements: habitual tendencies that are relatively stable across tasks, and situated activity that varies with stress, motivation, and perceived difficulty. A learner may plan carefully in a structured writing task and monitor little during an impromptu speaking task. Neither profile is the learner's "true" metacognition.

My earlier work argued that EFL learners' knowledge about reading is better understood as a dynamic metacognitive system, whose person, task, and strategy components interact and reorganize with experience (Zhang, 2010). Longitudinal evidence supports the dynamic view. In primary school EFL learners, metacognitive knowledge, reading proficiency, and writing proficiency develop reciprocally, with initial levels predicting later growth and individual differences widening over time (F. Teng & Zhang, 2021). Such patterns are better described as trajectories than as scores.

This does not make questionnaires obsolete. Validated instruments are indispensable for large-sample work (Zhang & Qin, 2018), and Rose's (2012) critique of strategy measurement is better read as a call for stronger measurement than for abandoning it. The argument is that trait-oriented instruments capture the stable layer and must be paired with designs sensitive to state: think-aloud protocols, stimulated recall, diaries, digital trace data, and repeated sampling.

Proposition 2 (Dynamics). Metacognition in language learning operates on two interacting timescales: A slowly changing trait-like layer and a rapidly changing state-like layer. Theory and measurement should model both, and the transitions between them, rather than collapsing them into a single score.

The Agentive Dimension: Identity, Positioning, and Motivation

The proposition most likely to be contested is that metacognition in language learning is more than cognitive monitoring, because it is bound up with who learners believe they are and what communities they imagine joining. Two strands support this.

The first is the SRL literature, which shows that metacognitive control cannot be separated from

motivational and emotional regulation. For example, L. Teng and Zhang's (2016) validated a multidimensional model of separating cognitive, metacognitive, social-behavioral, and motivational regulation. Their later work showed that motivational regulation influences L2 writing partly through cognitive and metacognitive strategies (L. Teng & Zhang, 2018), and that SRL-based instruction improves writing over time (L. Teng & Zhang, 2020). L. Teng (2022) links motivational beliefs, self-efficacy, and strategy use, and F. Teng (2025a) places self-efficacy, beliefs, and emotions within the metacognitive field, following Haukås's (2018) broad definition of metacognition in language contexts as reflection on knowledge, experiences, emotions, and learning.

The second strand is more recent and more provocative. F. Teng (2025a) proposes that metacognition in language learning rests partly on learners seeking awareness of themselves as agents, with identity, position, and self-reflection promoted to enhance learning. He contrasts learners whose imagined and practised communities align, and who therefore feel little pressure to invest effort, with learners whose imagined community of university life does not match a practiced community resembling school. This takes the observation, long familiar in research on learner autonomy, that learners' metacognitive engagement depends on how they position themselves, and ties it to a contextual account of why metacognitive knowledge sometimes does not become action. A learner may know exactly which strategy would help yet see no community in which that effort would matter.

I would add a cautionary point from my own work in Asian EFL settings. Examination pressure, teacher authority, and collective norms shape how learners monitor and evaluate their learning (Zhang, 2010, 2016b). The relationship between context and metacognitive engagement is therefore not uniform. High-stakes testing can push learners toward strategic effort, and its absence can remove the incentive. Theory should not assume either.

Proposition 3 (Agency). Metacognitive engagement in language learning is mediated by learner agency: Self-efficacy, motivation, identity, and the alignment between imagined and practised communities. Knowledge and skills translate into action only when learners position themselves as agents with reasons to deploy them.

This proposition yields testable claims. It predicts that interventions targeting knowledge alone will show weaker effects among learners with low investment than among engaged learners, and that interventions combining metacognitive and identity-oriented components will outperform either alone.

The Linguistic Dimension: Anchoring in Language-Specific and Modal Demands

Whether metacognition is domain-general or domain-specific has long been debated. Language learning is a particularly informative case, for at least three reasons. First, language is both the medium and the object of learning, so the metacognitive "inner voice," strategy knowledge, and the target of monitoring may all be linguistic, and the language of reflection is itself a variable. Second, metacognition overlaps with, but is distinct from, metalinguistic awareness and language awareness. F. Teng (2025a) notes that declarative metacognitive knowledge about language learning is closely related to metalinguistic awareness, and Haukås (2018) positions metacognition as spanning reflection on language, language learning, and language teaching. A learner may know a grammatical rule without noticing that comprehension has broken down, and the reverse is also possible. Third, skills differ in how they constrain monitoring. Listening is real-time and ephemeral, whereas writing is revisable and visible. Hacker and colleagues describe writing as applied metacognition (Hacker et al., 2009), and the evidence suggests that regulation (planning, monitoring, evaluating) is especially influential there. In reading, comprehension monitoring has been identified as a

particularly beneficial strategy for EFL readers (Zhang, 2001; Zhang, 2016a). Metacognitive listening pedagogy shows how guided reflection can restructure comprehension processes (Vandergrift & Goh, 2012).

Evidence is unevenly distributed. F. Teng (2025a) covers reading, writing, listening, and vocabulary, and acknowledges that evidence on speaking is comparatively thin. Samples in L2 writing research are heavily drawn from Chinese EFL contexts, which limits generalization across languages and cultures. A theory of metacognition in language learning must therefore state its scope.

Proposition 4 (Anchoring). The content and operation of metacognition in language learning are shaped by the learner's linguistic repertoire, metalinguistic and language awareness, and the modality of the task. General metacognitive skill is necessary but not sufficient, and theory should specify skill-, language-, and proficiency-specific profiles.

The Distributed Dimension: Social, Instructional, and Technological Ecologies

Language learning is social, yet metacognition is often modeled as individual. Efklides (2008) discusses co-regulation as a level of functioning, and the SRL tradition distinguishes self-regulation, co-regulation, and socially shared regulation (Hadwin et al., 2011). Evidence from language classrooms suggests metacognition can be scaffolded and shared. In studies synthesized by F. Teng (2025a), embedding metacognitive instruction in cooperative or collaborative writing outperformed cooperative learning alone and metacognitive instruction alone on writing and metacognitive regulation. Collaborative settings supported by interactive technology were associated with richer co-regulation. These designs treat metacognition as something learners do together before they do it alone.

Teachers are a further node. F. Teng (2025a) stresses that teachers need metacognitive awareness of their own pedagogy, as well as the capacity to model and scaffold metacognition. He identifies teachers' under-preparedness for this as a barrier, echoing calls for centering metacognition in teacher education (Haukås, 2018; Zhang & Zhang, 2018). Instruction can gradually transfer responsibility for selecting, applying, monitoring, and evaluating strategies from teacher to student, following sequences that move from declarative to procedural to conditional knowledge.

Technology has become a third node. F. Teng (2025a) notes that instruction could be delivered by humans, artificial agents, or both, and F. Teng (2024) outlines how metacognitive awareness and autonomy reinforce each other in virtual reality gaming. Generative AI intensifies this. It can scaffold planning, provide immediate feedback, and model alternatives, but it can also invite learners to offload monitoring and evaluation (F. Teng, 2024). The critical theoretical question is whether a given AI interaction supports the internalization of metacognitive functions, as good scaffolding does, or substitutes for them. A new metacognitive skill also emerges: Monitoring and evaluating the tool, that is, judging when to trust, question, or revise machine-generated language. Learners with weaker metacognitive skills may be least equipped to do so, a possible Matthew effect that warrants empirical testing.

Proposition 5 (Distribution). Monitoring and control in language learning are distributed across learners, peers, teachers, and technologies. Development involves the progressive internalization of these functions, and effective design determines whether distributed supports build or replace learners' own metacognition.

Summary of the Framework

Table 1 summarizes MAF-LL. The framework does not replace Flavell's architecture or its SRL

counterparts. It specifies the conditions under which that architecture operates in language learning: over time (P2), through the learner's sense of agency (P3), through the particular demands of language (P4), and across people and tools (P5).

Table 1. *The Metacognitive Agency Framework for Language Learning (MAF-LL).*

Proposition	Core claim	Primary implication
1. Core	Knowledge, experiences, skills linked by reflection	Specify which component is studied
2. Dynamics	Trait-like and state-like layers	Combine questionnaires with process and longitudinal designs
3. Agency	Mediated by efficacy, motivation, identity, community alignment	Pair metacognitive and agency-supporting interventions
4. Anchoring	Shaped by language, metalinguistic awareness, modality	Study by skill, language, and proficiency
5. Distribution	Shared across peers, teachers, tools	Design for internalization, not substitution

Theoretical and Practical Implications

Theoretical Implications

Definition. Researchers should state which component they study (knowledge, experiences, skills, or the wider regulatory system) and how it relates to metalinguistic awareness, language awareness, and self-regulation. Following Haukås (2018), the construct is best understood as reflection across language, learning, and teaching, but the field needs boundaries so that findings can accumulate (Zhang & Zhang, 2019).

Questions. Whether high achievers have greater metacognitive awareness has been answered repeatedly. More productive questions include these. Under what conditions does metacognitive knowledge translate into control? How do state-like and trait-like layers interact? How does the alignment of imagined and practised communities moderate metacognitive engagement? How does AI redistribute metacognitive labor?

Methods. MAF-LL calls for pluralism: multilevel and longitudinal modeling, intensive sampling, mixed methods pairing self-report with behavioral and trace data, and cross-cultural comparison. Existing validation work (L. Teng & Zhang, 2016; F. Teng, 2020; Zhang & Qin, 2018) offers a model of psychometric rigor, but its samples should be broadened. F. Teng (2025a) also cautions that correlational findings linking metacognition and proficiency need experimental testing before causal claims are made.

Integration. The framework invites dialogue with research on judgments of learning and calibration, sociocultural theory's account of mediation and internalization, and complexity theory.

Practical Implications

Instruction. Metacognitive instruction should be sustained and embedded rather than delivered as one-off strategy training. It should include teacher modeling, guided practice,

reflection, and gradual release of responsibility. Sequencing from declarative to procedural to conditional knowledge is plausible, and F. Teng (2025a) notes that declarative knowledge typically develops faster than procedural or conditional knowledge, so time should be allocated accordingly. Pairing metacognitive instruction with collaborative tasks appears particularly promising (F. Teng, 2025a).

Agency-supportive pedagogy. Teachers should help learners articulate goals, positions, and the communities they want to join, so that metacognitive strategies have a purpose. In contexts where learners feel little pressure, this may matter more than additional strategy instruction.

Assessment. Assessment should combine questionnaires with process-oriented evidence such as reflective journals, think-alouds, and portfolios with self-evaluation. Feedback should develop learners' evaluative capacity, and recent work on metacognition-based feedback literacy points in this direction (F. Teng, 2025a).

Teacher education. Programs should develop teachers' own metacognitive awareness, as well as their capacity to foster it, and should include critical, ethical use of AI tools.

Technology. AI-supported tasks should require learners to predict, justify, evaluate, and revise, for example by critiquing AI-generated feedback, so that learners remain in the metacognitive driver's seat.

Equity. Opportunities for guided reflection should be provided widely rather than leaving them to learners who already have them.

Conclusion

This paper has argued that metacognition in language learning is best understood as a tripartite core of knowledge, experiences, and skills that is dynamic across timescales, mediated by agency, anchored in linguistic and modal demands, and distributed across people and technologies. The primary contribution is conceptual: five testable propositions and a shared vocabulary that can organize research, tighten definitions, and guide pedagogy.

Several directions follow. Longitudinal and intensive-sampling studies should model trait-state dynamics. Studies of agency should test whether interventions that combine metacognitive and identity-oriented components outperform either alone. Work beyond Chinese EFL samples, and on speaking and vocabulary, is needed to test the framework's scope. Experimental research should establish when AI supports and when it supplants metacognition. Finally, collaboration among applied linguists, educational psychologists, and learning scientists will be essential. As the incoming Editor-in-Chief of *Metacognition and Learning*, I look forward to receiving submissions that take up these questions through theory, rigorous empirical work, or careful integration. I also hope this position paper can lead to more discussions in the new journal: Conceptual Foundations in Language Research.

References

Anderson, N. J. (2002). *The role of metacognition in second language teaching and learning*. ERIC Clearinghouse on Languages and Linguistics.

Chen, C.H., & Zhang, L. J. (2025). Development and validation of a scale for metacognitive regulation of interactive metadiscourse strategies in L2 argumentative writing. *Metacognition and Learning, 20,* 30. https://doi.org/10.1007/s11409-025-09435-z

Efklides, A. (2008). Metacognition: Defining its facets and levels of functioning in relation to self-regulation and co-regulation. *European Psychologist, 13*(4), 277–287. https://doi.org/10.1027/1016-9040.13.4.277

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist, 34*(10), 906–911. https://doi.org/10.1037/0003-066X.34.10.906

Goh, C. C. M., & Vandergrift, L. (2022). *Teaching and learning second language listening: Metacognition in action* (2nd ed.). Routledge.

Hacker, D. J., Keener, M. C., & Kircher, J. C. (2009). Writing is applied metacognition. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of metacognition in education* (pp. 154–172). Routledge.

Hadwin, A. F., Järvelä, S., & Miller, M. (2011). Self-regulated, co-regulated, and socially shared regulation of learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 65–84). Routledge.

Haukås, Å. (2018). Metacognition in language learning and teaching: An overview. In Å. Haukås, C. Bjørke, & M. Dypedahl (Eds.), *Metacognition in language learning and teaching* (pp. 11–30). Routledge.

Liu, M. L., & Zhang, L. J. (2026). The effects of metacognitive strategy instruction in collaborative digital multimodal composing on students' writing development. I*nnovation in Language Learning and Teaching*. https://doi.org/10.1080/17501229.2026.2695226

Liu, M., Zhang, L. J., & Biebricher, C. (2026). Exploring ESL learners' peer interactions in GenAI-supported collaborative multimodal PowerPoint composing. *Written Communication, 43*(4), 1121-1158. https://doi.org/10.1177/07410883261461544

Ma, T., Zhang, L. J., & Parr, J. M. (2025). Developing and validating instruments for measuring English-as-a-second/foreign-language (L2) learners' metaphor awareness. *Language Awareness, 34*(1), 195-230. https://doi.org/10.1080/09658416.2024.2401333

Ou, L., & Zhang, L. J. (2026). Development and validation of a writing self-assessment practice questionnaire for self-regulated learning. *Metacognition and Learning, 21,* 35. https://doi.org/10.1007/s11409-026-09484-y

Paris, S. G., Cross, D. R., & Lipson, M. Y. (1984). Informed strategies for learning: A program to improve children's reading awareness and comprehension. *Journal of Educational Psychology, 76*(6), 1239–1252. https://doi.org/10.1037/0022-0663.76.6.1239

Rose, H. (2012). Reconceptualizing strategic learning in the face of self-regulation: Throwing language learning strategies out with the bathwater. *Applied Linguistics, 33*(1), 92–98. https://doi.org/10.1093/applin/amr045

Sato, M. (2022). Metacognition. In S. Li, P. Hiver, & M. Papi (Eds.), *The Routledge handbook of second language acquisition and individual differences* (pp. 95–110). Routledge.

Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science, 26*(1–2), 113–125. https://doi.org/10.1023/A:1003044231033

Sun, Q., Zhang, L.J., & Carter, S. (2024). English as a foreign language learners' metacognitive experiences and writing development: Unravelling the process of learning EFL writing. *Learning and Individual Differences, 115*, 102540. https://dx.doi.org/10.1016/j.lindif.2024.102540

Teng, L. S. (2022). *Self-regulated learning and second language writing: Fostering strategic language learners*. Springer

Teng, L. S., & Zhang, L. J. (2016). A questionnaire-based validation of multidimensional models of self-regulated learning strategies. *The Modern Language Journal, 100*(3), 674–701. https://doi.org/10.1111/modl.12339

Teng, L. S., & Zhang, L. J. (2018). Effects of motivational regulation strategies on writing performance: A mediation model of self-regulated learning of writing in English as a second/foreign language. *Metacognition and Learning, 13,* 213–240. https://doi.org/10.1007/s11409-017-9171-4

Teng, L. S., & Zhang, L. J. (2020). Empowering learners in the second/foreign language classroom: Can self-regulated learning strategies-based writing instruction make a difference? *Journal of Second Language Writing, 48,* 100701. https://doi.org/10.1016/j.jslw.2019.100701

Teng, L. S., & Zhang, L. J. (2022). Can self-regulation be transferred to second/foreign language learning and teaching? Current status, controversies, and future directions. *Applied Linguistics, 43*(3), 587-595. https://doi.org/10.1093/applin/amab032

Teng, M. F. (2020). The role of metacognitive knowledge and regulation in mediating university EFL learners' writing performance. *Innovation in Language Learning and Teaching, 14,* 436-450. https://doi.org/10.1080/17501229.2019.1615493

Teng, M. F. (2024). "ChatGPT is the companion, not enemies": EFL learners' perceptions and experiences in using ChatGPT for feedback in writing. *Computers and Education: Artificial Intelligence, 7,* 100270. https://doi.org/10.1016/j.caeai.2024.100270

Teng, M. F. (2025a). *Metacognition in language teaching*. Cambridge University Press.

Teng, M. F. (2025b). Understanding EFL student writers' metacognitive awareness in utilizing ChatGPT. *System, 135,* 103848. https://doi.org/10.1016/j.system.2025.103848

Teng, M. F. (2026). Metacognition in using GenAI for language teaching and learning. *Emerging Educational Technologies, 1*(1). https://doi.org/10.65553/EET.260101

Teng, M. F., & Zhang, L. J. (2021). Development of children's metacognitive knowledge, and reading and writing proficiency in English as a foreign language: Longitudinal data using multilevel models. *British Journal of Educational Psychology, 91*(4), 1202–1230. https://doi.org/10.1111/bjep.12413

Teng, M. F., Qin, C., & Wang, C. (2022). Validation of metacognitive academic writing strategies and the predictive effects on academic writing performance in a foreign language context. *Metacognition and Learning, 17,* 167–190. https://doi.org/10.1007/s11409-021-09278-4

Teng, M. F., & Zhang, L. J. (2024). Assessing self-regulated writing strategies, working memory, L2 proficiency level, and multimedia writing performance. *Language Awareness, 33*(3), 570-596. https://doi.org/10.1080/09658416.2023.2300269

Teng, M. F., & Zhang, L. J. (2025). Development of metacognitive knowledge and. morphological awareness: A longitudinal study of ethnic minority multilingual young learners in China. *Journal of Multilingual and Multicultural Development, 46*(10), 3274-3290. https://doi.org/10.1080/01434632.2022.2052301

Vandergrift, L., & Goh, C. C. M. (2012). *Teaching and learning second language listening: Metacognition in action*. Routledge.

Veenman, M. V. J., Van Hout-Wolters, B. H. A. M., & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition and Learning, 1*(1), 3–14. https://doi.org/10.1007/s11409-006-6893-0

Wang, K., Zhang, L. J., & Cooper, M. (2024). Metacognitive instruction for improving the effectiveness of collaborative writing for EFL learners' writing development. *Asia Pacific Education Researcher*. https://doi.org/10.1007/s40299-024-00886-7

Wang, K., Zhang, L. J., Cooper, M. (2025). Taking stock of metacognitive strategies and collaborative writing for EFL learners' writing development. *Journal of Second Language Writing, 68,* 101211. https://doi.org/10.1016/j.jslw.2025.101211

Wang, M., & Zhang, L. J. (2026). Can grit be perceived and regulated? A mixed-methods exploration of English learners' metacognitive awareness of grit and its impact on achievement and self-efficacy. *Language Teaching Research,* 405049. https://doi.org/10.1177/13621688251405049

Wang, X., Zhang, L. J., & Zhang, Y. (2026). Generative artificial intelligence-supported self-regulated learning (GenAI-SRL) in L2 writing: Scale development, validation, and short-form construction. *Metacognition and Learning, 21,* 33. https://doi.org/10.1007/s11409-026-09481-1

Wenden, A. (1998). Metacognitive knowledge and language learning. *Applied Linguistics, 19*(4), 515–537. https://doi.org/10.1093/applin/19.4.515

Yang, L. F., Zhang, L. J., & Dixon, H. R. (2023). Understanding the impact of teacher feedback on EFL students' use of self-regulated writing strategies. *Journal of Second Language Writing, 60,*101015. https://doi.org/10.1016/j.jslw.2023.101015

Zare, J., Aqajani Delavar, K., Derakhshan, A., & Zhang, L. J. (2026). From strategy awareness to engagement: Self-regulated learning strategies-based writing instruction in L2 essay development. *Language Teaching Research*. https://doi.org/10.1177/13621688261449335

Zare, J., Derakhshan, A., & Zhang, L. J. (2025). Investigating the relationship between metastrategy use and task engagement in an EFL context: A structural equation modeling approach. *Innovation in Language Learning and Teaching, 19*(2), 105-121. https://doi.org/10.1080/17501229.2024.2337710

Zhang, D., & Goh, C. C. M. (2006). Strategy knowledge and perceived strategy use: Singaporean students' awareness of listening and speaking strategies. *Language Awareness, 15*(3), 199–219. https://doi.org/10.2167/la342.0

Zhang, D., & Zhang, L. J. (2019). Metacognition and self-regulated learning (SRL) in second/foreign language teaching. In X. Gao (Ed.), *Second handbook of English language teaching* (pp. 883–897). Springer Nature. https://doi.org/10.1007/978-3-030-02899-2_47

Zhang, J., & Zhang, L. J. (2025). Unraveling the nexus among achievement goals, self-efficacy, and motivation regulation and their joint effects on L2 student writers' writing achievement: A person-based approach. *Metacognition and Learning, 20*(29), 1-27. https://doi.org/10.1007/s11409-025-09434-0

Zhang, L. J. (2001). Awareness in reading: EFL students' metacognitive knowledge of reading strategies in an immersion context. *Language Awareness, 10*(4), 268–288. https://doi.org/10.1080/09658410108667039

Zhang, L. J. (2008). Constructivist pedagogy in strategic reading instruction: exploring pathways to learner development in the English as a second language (ESL) classroom. *Instructional Science, 36,* 89–116. https://doi.org/10.1007/s11251-007-9025-6

Zhang, L. J. (2010). A dynamic metacognitive systems account of Chinese university students' knowledge about EFL reading. *TESOL Quarterly, 44*(2), 320–353. https://doi.org/10.5054/tq.2010.223352

Zhang, L. J. (2016a). Teaching reading and viewing to L2 learners. In W. Renandya & H. Widodo (Eds.), English language teaching today (pp. 127-141). Springer Nature. https://doi.org/10.1007/978-3-319-38834-2_10

Zhang, L. J. (2016b). A dynamic metacognitive systems perspective on language learner autonomy. In R. Barnard & J. Li (Eds.), *Language learner autonomy: Teachers' beliefs and practices in East Asian contexts* (pp. 150-166). IDP Education.

Zhang, L. J. (2026). Metacognition in language learning. In H. Nesi & P. Milin (Eds.), *International encyclopedia of language and linguistics* (3rd ed., Vol. 8, pp. 819-824). Elsevier. https://doi.org/10.1016/B978-0-323-95504-1.01111-X

Zhang, L. J., Aryadoust, V., & Zhang, D. (2016). Taking stock of the effects of strategies-based instruction on writing in Chinese and English in Singapore primary classrooms. In R. E. Silver & W. Bokhorst-Heng (Eds.), *Quadrilingual education in Singapore* (pp. 103-126). Springer Nature. https://doi.org/10.1007/978-981-287-967-7_7

Zhang, L. J., & Zhang, D. (2018). Metacognition in TESOL: Theory and practice. *The TESOL encyclopedia of English language teaching* (pp. 682-792). Wiley-Blackwell. https://doi.org/10.1002/9781118784235.eelt0803

Zhang, L. J., & Zhang, D. (2013). Thinking metacognitively about metacognition in second and foreign language learning, teaching, and research: Toward a dynamic metacognitive systems perspective. *Contemporary Foreign Language Studies, 396,* 111-121. https://doi.org/10.3969/j.issn.1674-8921.2013.12.010

Zhang, L. J., & Zhang, D. (2026). Metacognition in learning and teaching ESOL. In H. Nassaji, International TESOL Association, & M. DelliCarpini (Eds.), *The TESOL Encyclopedia of English Language Teaching*. Wiley-Blackwell. https://doi.org/10.1002/9781118784235.eelt0803.pub2

Zhang, L. J., & Fathi, J. (2025). Examining the multifaceted influences of school climate, teacher enthusiasm, and metacognition on work engagement in an EFL context: A mixed-methods approach with digital ethnography. *Metacognition and Learning, 20*(18), 1-30. https://doi.org/10.1007/s11409-025-09423-3

Zhang, L. J., & Qin, T. L. (2018). Validating a questionnaire on EFL writers' metacognitive awareness of writing strategies in multimedia environments. In Å. Haukås, C. Bjørke, & M. Dypedahl (Eds.), *Metacognition in language learning and teaching* (pp. 157–178). Routledge.

Zhang, W., Zhang, L. J., & Zhu, Y. (2026). GenAI-driven formative assessment for. enhancing strategic. competence and oral proficiency. *English for Specific Purposes, 84,* 354-372. https://doi.org/10.1016/j.esp.2026.07.006

Author bio

Lawrence Jun Zhang, PhD, is Professor of Applied Linguistics/TESOL and Associate Dean for the Faculty of Arts and Education, University of Auckland, New Zealand. His major interests are in learner metacognition, L2 reading-writing development, the psychology of language learning and teaching. He is an editorial board member for *Applied Linguistics Review, Australian Review of Applied Linguistics, Metacognition and Learning,* and *RELC Journal,* among others. He was honoured by the TESOL International Association (USA) in 2016 with the award of "50 at 50", acknowledging "50 Outstanding Leaders" in the field of TESOL around the world. In the Stanford Academic Rankings, he has been consecutively listed in the top 2% of Scientists in the World in Linguistics/Applied Linguistics. His research has appeared in *Applied Linguistics, Applied Linguistics Review, Asia Pacific Journal of Education, Asia Pacific Education Researcher, International Journal of Applied Linguistics, Journal of Computer Assisted Language Learning, Journal of Psycholinguistic Research, Modern Language Journal, Metacognition and Learning, Perceptual & Motor Skills, Teaching and Teacher Education, TESOL Quarterly, Assessing Writing, Computers and Education, Computers in Human Behavior, Computer Assisted Language Learning, Discourse Processes, System, Language Teaching Research, Reading and Writing, Reading & Writing Quarterly, Journal of English for Academic Purposes, RELC Journal* and *Journal of Second Language Writing,* among others. He served for 8 years as Co-editor-in-Chief for *System* (Elsevier) and is the incoming Editor-in-Chief for *Metacognition and Learning* (Springer Nature).
Email: lj.zhang@auckland.ac.nz
ORCID: https://orcid.org/0000-0003-1025-1746