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An Integrative Research Review on Chinese Integrated Writing Assessment Over Two Decades

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Abstract

Purpose: This integrative review mainly documents our team's two decades of research on Chinese integrated writing (IW) assessment based on funded projects. These projects related to IW, led by Xinhua Zhu as the principal investigator, were funded by the General Research Fund (GRF), the Quality Education Fund, the Education and Manpower Bureau/Education Bureau of the Government of the Hong Kong Special Administrative Region, as well as The Hong Kong Polytechnic University. The findings in approximately 40 papers on IW have been published in SSCI-indexed journals.

Design/Approach/Methods: We have employed various methods, including questionnaire surveys, interviews, and eye-tracking experiments, to investigate key issues concerning Chinese IW assessment: the measured construct, factors influencing Chinese IW performance, L1 and L2 IW associations, and related practices. Findings are thematically integrated to develop a systematic account of current

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perspectives in this field and suggest directions for various stakeholders to scaffold de facto IW learning, teaching, and assessment.

Findings: As a multifaceted construct, Chinese IW involves a dynamic integration of independent language skills and source use. Chinese IW task performance is linguistically-based and influenced by psychological and behavioral factors. The cross-linguistic research also revealed L1-L2 IW associations in general performance, subsumed skills, and related psychological factors. Findings greatly informed and improved related teaching, learning, and assessment practices, while significant room for improvement remains to appropriately align these practices with students' writing development.

Originality/Value: Not only offering current perspectives, this review also suggests underexplored issues and methodological implications for researchers, guidance for educators and professionals to develop instructional activities and assessments, and insights for learners to find effective practices for honing their IW skills.

Keywords

Chinese, integrated writing assessment, integrative review

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Introduction

Integrated writing (IW) has been widely acknowledged as a fundamental literacy skill in academic discourse communities, where learners are required to produce written responses after synthesizing and transforming information from multiple sources (Zhu et al., 2021a). Unlike independent tasks that elicit written responses solely based on writers' prior resources and knowledge, integrated tasks require comprehending and using appropriate information from multimodal language resources such as texts, charts, audios, and videos to compose written responses. These tasks are believed to be more reflective of real-life writing practices, in which different language modalities are activated and employed in concert (Gebril & Plakans, 2009; Weigle, 2004). Furthermore, integrated tasks provide all the learners with the same source support, thus partly alleviating content bias and enhancing test fairness. The source materials possibly support learners in language, content, and structure when producing their written texts, thus gaining positive washback (Leki & Carson, 1997; Plakans, 2015; Shin & Ewert, 2015). Given the increased authenticity, fairness, and positive washback, IW tasks have gained increasing popularity during the past decades and have been included as a vital component of international and regional language assessment programs (Knoch & Sitajalabhorn, 2013; Zhu, 2005; Zhu et al., 2016).

To date, a diverse array of task types falls under the umbrella of IW tasks. Reading-to-write tasks emerge as the most commonly used ones in which learners are provided with reading materials to

compose a text according to the task requirements (Knoch & Sitajalabhorn, 2013). Summary and response tasks are two representative variants of reading-to-write tasks. When completing a summary task, learners are asked to summarize the provided reading materials (Yu, 2010). They are also expected to express and argue for their views after comprehending and summarizing these reading materials in response tasks (Grabe & Zhang, 2013). The story continuation writing task, a new variant of reading-to-write tasks, requires students to read an incomplete story and logically and coherently continue writing the story (Wang, 2016). It has been used in college entrance examinations and subsequently adopted in other public and school-based writing assessments in Chinese mainland (Cheng & Qi, 2006; Zhao, 2016). Some IW tasks also involve listening input. This task type is adopted in the writing section of the TOEFL iBT. Test-takers respond to the TOEFL iBT IW task by composing an essay after reading a short passage and listening to a brief lecture (Alderson, 2009). Input materials can also be graphs, diagrams, and/or charts. A typical example of this task type is Writing Task 1 of the International English Language Testing System (IELTS), which requires producing a written response after decoding the graphic input.

Situated in Hong Kong, IW continues to play an essential part in language learning, teaching, and assessment. The traditional Chinese language curriculum and assessment primarily focused on reading, writing, and rote learning of prescribed texts to foster language proficiency in the 20th century (Hong Kong Curriculum Development Council [HKCDC], 2017). When facing the 21st century of booming information, HKCDC and Hong Kong Examinations and Assessment Authority (HKEAA) (2007) highlight the necessity for a much broader and more comprehensive view of Chinese language competence. Consequently, IW tasks were added to the Chinese language curriculum and assessment. Writing instruction in Hong Kong is implemented not merely to fulfil assessment requirements and enhance reasoning skills but also to foser the integrated use of language skills (Li et al., 2020). IW tasks are officially incorporated into the Chinese language assessment system as an essential part of assessing students' source-based writing, authentic communication, and higher-order thinking skills.

In 2007, the HKEAA and the Education and Manpower Bureau (EMB, now the Education Bureau [EDB]) officially commissioned scholars in tertiary institutions to develop assessment standards for Chinese language competence. As a response to this call, Zhu (2005) undertook a project named "A Study of Setting Standards of Chinese Language Assessment in Reading, Writing, and Integrated Skills." The standards produced in this project were adopted in the Hong Kong Certificate of Education Examination (HKCEE) Chinese Language Level Descriptors and Exemplars for Standards-Referenced Assessment (HKEAA, 2005) since 2007. They also served as the basis for designing school-based assessments of Chinese (Zhu, 2014; Zhu et al., 2016). The wide use of these standards has greatly promoted the transformation from a "norm-referenced approach" to a "criterion-referenced approach" in Hong Kong public examinations since 2007.

Later, the HKCEE and Hong Kong Advanced Level Examination (HKALE) were replaced by the Hong Kong Diploma of Secondary Education Examination (HKDSE) in 2012. The fine-tuned standards are still used in HKDSE, with university admission being one of its purposes. The authors undertook an EDB research project titled "Research-Based Development on Merged Standard-Referenced Reporting Standards on Listening and Integrated Language Use in the Hong Kong Diploma of Secondary Education Examination for the Subject of Chinese Language" to address possible overlapping issues between independent listening and IW. The project findings were used to refine level descriptors and testing formats to ensure independent listening and IW tests tapped into different listening skills (Zhu, 2014).

Despite the prevalent use of IW tasks in the L2 testing context, research on some central issues, including construct conceptualization, factors contributing to IW performance, related teaching activities, and assessment task design and validation, is still in its infancy, especially in the L1 testing context. The associations between L1 and L2 IW skills are an even more underexplored area. Researchers and specialists have not reached a consensus on these crucial issues and are still working to seek further development (Barkaoui et al., 2013; Gebril & Plakans, 2009; Zhu et al., 2016). Our research team, led by Xinhua Zhu as the principal investigator, has conducted ongoing research in this field and disseminated results in a series of publications. It is time to reflect upon and synthesize these research results in an integrative and systematic manner, thus bringing collective insights for researchers, educators, professionals, and other practitioners. To guide this review, we limited our focus to the following research questions: (1) What construct is measured by the Chinese L1 IW task? (2) How do psychological and behavioral factors influence the Chinese L1 IW task performance? (3) Are there any L1-L2 associations underlying IW tasks? (4) How can we design and develop Chinese L1 IW assessment and pedagogical activities effectively? This review is more than a summary of our research findings regarding Chinese L1 IW. Rather, it critically examines these findings to stimulate further interest and advancement in this field.

Fundamental research on the Chinese IW construct

The core of IW tasks lies in the construct, which supports the interpretation and use of test scores. Our research seeks to analyze the IW construct in tripartite ways: examining the underlying factor structure, comparing IW and independent skill task performance, and exploring the use of source materials to clarify its distinctiveness.

L1 IW competence factors

Three important points warrant our attention when constructing the evaluative framework for Chinese IW assessment (Zhu, 2015a). Aligning with international IW assessment practices, it firstly concerns the integrative employment of multiple language skills, with writing at the core

and listening and reading materials offering background information. Moreover, Chinese IW tasks do not simply measure subject-specific knowledge but also communication competence, especially students' communicative function and contextualized language use. Finally, Chinese IW tasks involve multiple levels of information processing, including comprehension, comparison, summarization, inference, argumentation, evaluation, and use of source information to support students' original and creative ideas. Drawing extensively on the above three points, Zhu (2015a) proposed a theoretical framework, namely the Four Traits of Integrated Writing Competence (or the four-pillar framework), to underpin the construct representation of Chinese IW assessment. It consists of four pillars: citation and synthesis, original opinion and argument, contextual awareness, and writing expression and organization. According to Canale and Swain (1980), communicative competence highlights the contextual appropriateness of language use in addition to grammatical and discoursal accuracy. It remains true in the writing domain. Chinese IW tasks are designed to measure students' ability to communicate in real-life contexts with the use of linguistic expressions, which gives rise to the pillars of contextual awareness and writing expression, and organization. More specifically, the pillar of contextual awareness concerns contextual and cultural aspects of authorship, readership, and writing conventions, while the pillar of writing expression and organization involves the quality of language use, logic, and macrostructure. Real-life communication is context-dependent, which does not occur in a vacuum. The background context in Chinese IW tasks is built on the provided materials. Students are expected to compose a text after processing multiple sources of materials. Thus, we draw on Spivey's (1984, 1990) discourse synthesis to develop the pillar of citation and synthesis, which involves comprehending and using information from multiple sources. Students' performance in L1 IW tasks is also assessed in terms of their higher-order thinking skills, including evaluation, argumentation, and creativity (Cheong et al., 2018). The last pillar of original opinion and argument, in this way, focuses on presenting and arguing for original and creative ideas. This framework has been implemented in Chinese public examinations and school-based assessments in Hong Kong secondary schools.

To empirically validate the four-pillar framework, Zhu et al. (2016) conducted a factor analysis on a group of secondary students' listening-reading-writing task scores. They examined ten indicators closely relevant to Chinese IW performance: identification, tone, writing convention, interaction, synthesis, citation, original opinion, argument, language use, and organization. Consistent with the four-pillar framework, four common factors were extracted in the exploratory factor analysis, which collectively accounted for a large proportion of the variance of students' task scores. Notably, the factors of citation and synthesis and original opinion and argument, assessing higher-order thinking and information-processing skills, contributed substantially to overall IW performance while they were regarded as the most challenging aspects (Zhu & Wu, 2014; Zhu et al., 2016).

Relationship between L1 IW and independent language skills

Chinese L1 IW assessment requires a hybrid of independent language skills, i.e., listening, reading, and writing. Our studies compared IW and independent skill tasks to identify variations in writing outcomes, thereby addressing the construct overlap and supporting the use of IW tasks as distinct language assessment measurements.

Zhu et al. (2016) compared students' performance in the Independent Listening task and the Listening-Reading-Writing task in the Hong Kong Chinese Language Examinations. The joint factor analysis results indicated no common factors between the two types of tasks. Students' performance in the two types of tasks was significantly correlated, while indicators of the Independent Listening task explained only 8.9% of the variance in Listening-Reading-Writing task scores. It indicates a slight overlap in the construct that the two task types assess. IW tasks require reading comprehension within a text and across texts (Karimi, 2017). Zhu et al. (2021a) compared the effects of students' L1 single- and multiple-text comprehension on L1 IW performance simultaneously. The latent variable path analysis results showed that both single- and multiple-text comprehension positively predicted IW performance, thereby verifying the reading-writing connection (Ahmed et al., 2014; Graham et al., 2018; Kim & Crossley, 2018). Independent writing also promotes IW performance because it has certain composing processes, such as planning, translating, and reviewing, shared with IW (Cheong et al., 2022). Independent language skills not only contribute to IW performance independently but also interact or mediate to shape IW performance (Cheong et al., 2018). For example, the interaction between reading and listening significantly influences IW performance (Cheong et al., 2018), and writing mediates the relationship between reading and IW (Cheong et al., 2022). Comparatively, the impact of independent listening and reading on IW performance is overshadowed by independent writing (Liao et al., 2021).

Therefore, the Chinese IW assessment goes beyond a mere amalgamation of independent listening, reading, and writing skills. IW demands a certain level of knowledge and cognitive processing akin to those required in independent tasks, according to significant correlations and regression coefficients found in our previous studies (e.g., Cheong et al., 2018, 2022; Liao et al., 2021; Zhu et al., 2016, 2018, 2025). However, the substantial amount of unexplained variance in IW performance offers compelling evidence for its distinctiveness (Liao et al., 2021; Zhu et al., 2016). It notes the need for an inclusive approach to integrating multiple independent skills and unique processing, such as source use under the IW construct representation.

Source use

As Cumming et al. (2005) aptly pointed out, IW tasks require students to "produce writing compositions that display appropriate and meaningful uses of and orientations to source evidence, both conceptually and textually" (p. 34). As an inter-textual processing skill unique to IW, source use

is a complex meaning-making process requiring comprehension, integration, and transformation of source information to create written products (Gebril & Plakans, 2009). Spivey (1984, 1990) conceptualized three types of cognitive processing involved in source use: organizing (i.e., comprehending and organizing source materials), connecting (i.e., connecting information across source materials and linking source information to the writer's ideas), and selecting (i.e., determining and choosing appropriate ideas for use in the essay). The role of source use in IW is multifaceted and includes acquiring background knowledge and viewpoints, gathering perspectives or evidence, selecting words and phrases from the materials, and emulating text structures to organize one's writing. Source use has been an active research area in EFL contexts. Previous studies have examined source use features and processes, source functions, how source use differs across score levels and task types, scoring rubrics, and the rating process and consistency (Kyle, 2020; Ohta et al., 2018; Shin & Ewert, 2015; Uludag et al., 2019; Xie, 2023). Noticeably, source use is also central to studying L1 IW construct and processes (Cheong et al., 2023).

We have extended the existing literature to Chinese L1 IW contexts. Zhu and colleagues (2021b) examined Hong Kong secondary students' discourse synthesis skills in the Chinese L1 IW task and their effects on final task performance. Hierarchical regression analysis results revealed that students' discourse synthesis skills, that is, quotation, summarization, and connection, explained 63.6% variance of L1 IW scores. Their study further examined discourse synthesis processes between high- and low-performing writers by combining eye-tracking and stimulated-recall interview data. High-performing students had a higher level of visual engagement in processing relevant information than their low-performing peers. Similarly, Cheong et al. (2021) observed that secondary students' source use was closely connected to their written argumentation construction in L1 IW. The participants could comprehend and summarize competing information contained in source materials while they struggled to integrate source information to support their written arguments. Thus, student writers may not be competent enough to engage in higher complexity of source use processing even in L1 writing.

Our studies so far have revealed the determining role of source use in L1 IW performance. L1 writers possess the skills of comprehending, summarizing, and paraphrasing multiple sources of materials, while they are still facing difficulties in transforming and integrating source information into their writing. Consequently, care should be taken in cultivating higher-level source integration skills among these writers.

Further research on psychological and behavioral factors

IW, in its very nature, is a hybrid of multiple independent language skills and source use; it is particularly challenging and time-consuming for language learners due to the high demand for individual motivation, determination, and effort, even in the L1 context (Kormos, 2012; Pajares, 2003). Learners should be cognitively, psychologically, and behaviorally engaged to achieve their learning

goals in IW. Thus, researchers and educators should pay special attention to individual psychological and behavioral factors that possibly cause differential IW performance.

Motivational and emotional factors related to Chinese IW performance

Future selves have been conceptualized as the primary driving force for language learning (Dörnyei, 2005, 2009). Influenced by positive learning psychology, we have empirically clarified future selves (i.e., ideal and ought-to L2 self) specifically regarding IW. The ideal self refers to the desired writer images that learners hope to pursue in the future. Situated in the story continuation task setting, Cheong et al. (2022) found that high school students' ideal selves significantly and positively predicted final IW performance, despite the marginal magnitude. Students' ideal IW self was in tandem with their imaginative capacity to facilitate writing performance. Zhu et al. (2022a) revealed a modest relationship strength between the ideal self and IW performance, which further supported the motivation-writing achievement associations. Similarly, Zhan et al. (2023) also unveiled the positive and significant predictive effects of the ideal self on IW performance. Students with more entertaining images of future writers were more likely to score higher in the IW assessment. However, as intrinsic motivation, the direct effect of the ideal self on IW performance tends to diminish, especially in an examination-oriented educational context (Li et al., 2018; Zabihi, 2018; Zhao et al., 2023).

Students' current beliefs about writing abilities also play a role in their IW performance. A substantial body of research has focused on the impacts of self-efficacy on L2 writing performance (e.g., Bai et al., 2021; Hirvela et al., 2016; Teng et al., 2017) and reached an agreement concerning its importance. We extend this line of inquiry to L1 IW (Xu et al., 2023; Yao et al., 2023). Triangulating questionnaire and interview responses, Yao et al. (2023) empirically validated the five-dimensional framework of L1 IW self-efficacy: self-efficacy for ideation, source use, conventions, negative emotion control, and concentration. They categorized the participants into three groups of efficacious students via latent profile analysis (LPA). The three groups of participants reported above-medium levels of L1 IW self-efficacy, indicating relatively high confidence in performing L1 IW-related tasks. Unexpectedly, the three groups of efficacious participants had poor performance in the L1 IW task, and this study found no positive effects of self-efficacy on L1 IW performance. It could be partially attributed to the fact that the participants got slack with L1 IW tasks since they were not incorporated into the course grading system. Similarly, Xu et al. (2023) found no evidence for the predictive effects of self-efficacy on L1 IW performance, while it was identified as a significant predictor of L2 IW performance. Such contrasting results suggest the ceiling effect: Self-efficacy works prominently in tasks of higher complexity, that is, in the L2 IW context.

IW performance is also susceptible to the impact of writers' positive and negative emotions. Zhu et al. (2022b) examined writers' enjoyment and anxiety profiles in IW assessment and their relationship with IW performance. Students in the moderate-enjoyment/low-anxiety group scored highest in the IW assessment, while those in the low-enjoyment/high-anxiety group scored lowest in the IW assessment. There is no clear-cut conclusion concerning the effects of emotions. Positive emotions like enjoyment are better maintained at a moderate level since an excess of such emotions may inhibit language performance by occupying cognitive resources for purposive learning (Bielak, 2022). Negative emotions like anxiety are not necessarily associated with poor performance.

Mediating effects of behavioral factors on Chinese IW performance

Following the "motivation → behavior → outcome" chain (Dörnyei, 2005, p. 73), behavioral factors assume a mediating role in the relationship between psychological factors and IW performance. Students possibly capitalize on their expectations of future writer end-states to fully improve their writing performance with motivated behavior (Papi, 2010). Zhan et al. (2023) examined the mediating role of feedback-seeking behavior in the relationship between the ideal self and continuation story writing performance among a group of Chinese high school students. They revealed a mixed picture concerning the indirect path of "ideal-self → feedback-seeking behavior → story continuation performance": It was statistically significant among the high- and mid-performing students, while not among the low-performing ones. The mediating role of feedback-seeking behavior, influenced by embedded cost and value, tended to be sophisticated in the process of reducing self-discrepancy to achieve future writing goals. Future images and joyful feelings potentially boost the use of various strategies to maintain the arousal of positive experiences in writing (Kormos, 2012; Papi & Khajavy, 2021). Zhao et al. (2023) empirically tested the mediator of strategy use in the "motivation → behavior → outcome" chain. They found that the ideal self and enjoyment only showed a significant indirect influence on IW performance via the mediation of self-regulatory strategies. These motivational variables can exert positive effects on IW performance by evoking more self-regulatory strategies.

To sum up, Chinese IW performance interacts with a diverse range of individual features. Our research has shed light on several motivational (i.e., ideal self and self-efficacy), emotional (i.e., enjoyment and anxiety), and behavioral (i.e., feedback-seeking behavior and strategy use) factors in this domain. Nevertheless, it seems to be challenging to reach a definitive consensus on how these individual factors impact IW performance due to their nuanced essence and intricate links. Researchers are expected to continue this line of research systematically, thus offering more profound insights.

Extended research on L1-L2 associations

Cummins' (1979) Linguistic Interdependence Hypothesis (LIH) postulated that there is a common underlying proficiency (CUP) shared between L1 and L2 literacy skills, facilitating the cross-language transfer of knowledge, skills, and strategies. Some cross-language studies have found similarities in strategy use and general performance in L1 and L2 writing (e.g., Guo & Huang, 2020; Pae, 2019). Our research has extended the extant literature by conducting within-subject comparisons in L1 Chinese and L2 English IW, thus advancing Cummins' (1979) theory of L1-L2 cross-language transfer with IW insights.

L1-L2 associations in general IW performance and subsumed skills

Administering L1 and L2 intertextual inference verification and IW tasks to 415 secondary students, Cheong et al. (2019) observed that multi-textual comprehension was consistently applied to reading-to-write tasks in both language contexts. A high level of similarity was found between L1 and L2 intertextual inference verification task performance and IW performance. Therefore, L2 learners are possibly advantaged to capitalize on multi-text comprehension and IW skills acquired in L1 to leverage their L2 IW performance. Similarly, Zhu et al. (2021a) found a significant predictive effect of L1 reading comprehension, including single-text and multiple-text comprehension, on L1 and L2 IW performance. The results indicated that L1 reading comprehension was positively associated with L1 and L2 IW performance, thus demonstrating the L1-L2 connections between reading and IW. Additionally, L1 discourse synthesis skills of quotation, summarization, and connection have been found to facilitate L2 IW performance cross-linguistically (Zhu et al., 2021b). Cheong et al. (2021) delved into the L1-L2 association of argumentation behaviors in IW. Although student writers scored higher in argumentative structure and reasoning quality in L1 IW than in L2 IW, their tendency to favor source information in support of personal views remained similar across both IW contexts. Thus, source-based argumentation skills seem to be a stable resource that can be invariantly accessed and utilized in both L1 and L2 IW. L2 IW performance is influenced not only by related skills in this language but also by parallel skills in L1 (Xu & Zhu, 2025).

L1-L2 associations in IW-related psychological factors

We have also examined psychological factors cross-linguistically to determine whether these factors contribute to the shared pool underlying L1 and L2 IW. L2 writing is an activity interacting with social, cultural, and educational contexts (Kormos, 2012). Correspondingly, learners' ideal image of L2 writers that they aspire to pursue in the future is possibly influenced by their L1 sociocultural environment. In the context of tertiary education, Zhu et al. (2022c) concluded that Chinese

EFL learners' enthusiastic self-images of their L1 IW had a constructive effect on those in L2 IW based on the significant path coefficient from L1 to L2 IW ideal selves. These students shared a common future image between L1 and L2 IW and valued the learning of IW in both language contexts similarly. Learners' current beliefs of IW ability, namely IW self-efficacy, are also strongly linked in L1 and L2 contexts. Learners who possessed a high level of confidence in their L1 IW were more likely to engage with their L2 IW, and vice versa (Xu et al., 2023). Learners also exhibit a stable and consistent level of favor or disfavor toward IW ability between L1 and L2 contexts (Zhu et al., 2024). In other words, they held equal attitudes toward IW across the two language contexts.

Our cross-linguistic studies collectively uncover the L1-L2 associations in general performance, subsumed skills, and psychological traits specifically regarding IW. In addition to empirically testing the LIH and CUP hypotheses, they revealed the nexus of L1 and L2 IW and noted the importance of collaborative language teaching to enhance bilingual development.

Applications concerning Chinese IW teaching and assessment

Knowing how to write in concert with other language modalities is challenging not only for students to learn but also for policymakers and instructors to assess and teach (Graham & Perin, 2007; Nelson, 2008; Pecorari & Petric, 2014). We have continually kept an eye on the perspectives of Chinese IW stakeholders and engaged in transferring empirical results into de facto pedagogical and assessment practices.

Student and teacher conceptions of Chinese L1 IW and its instruction

Zhu and Wu (2014) found that Hong Kong secondary students faced more difficulties in IW tasks than in independent ones according to their questionnaire responses. These students also expressed a need for IW guidance and instruction, especially in selecting and using source information to create valid arguments and opinions in written texts. However, there are still no unified conceptions of the IW nature and the purpose of IW instruction among teachers. Li et al. (2020) interviewed 25 Chinese language teachers and identified three main conceptions representing IW competence: a composite of disconnected parts, a logical inquiry, and a developmental process. Correspondingly, they held significantly different purposes for administering IW teaching practices: to fulfil examination requirements, to promote pre-writing activities enhancing students' reasoning skills, and to develop holistic language abilities through the comprehensive employment of language skills. Unfortunately, the exam-oriented view of IW competence and corresponding teaching purposes, less aligned with curriculum objectives, prevails among these

teachers. It may result from a lack of venues and resources for professional training, low receptivity to the legitimacy of IW assessment and curriculum, and fossilized format and content of IW tasks in public examinations. Therefore, more pedagogical and political effort is needed to help students go through the IW dilemma and to aid teachers in solving conceptualization and instruction puzzles.

Student self and peer feedback/assessment in Chinese L1 IW

Feedback involves "dialogic processes whereby learners make sense of information from various sources and use it to enhance their work or learning strategies" (Carless, 2016, p. 1). As an alternative formative assessment, feedback is gaining popularity in higher education to improve students' writing performance (Adachi et al., 2018). To capitalize on the benefits of feedback, Lu et al. (2021) compared the differential characteristics of self-feedback and peer-feedback in an academic abstract writing task where students were required to compose an abstract after reading one research paper. Their results revealed that both feedback modes significantly contribute to students' writing improvement despite the remarkable differences in the amount, type, and implementation. Self-assessment can complement peer assessment in guiding students to revise when the latter is lacking, forming a reference source to increase suggestion quality when peer assessment is at hand, evoking lasting and systematic reflections, relieving social-affective burdens, and mitigating the suggestion quality discrepancy from feedback givers of different proficiency (Cheong et al., 2023). Worth noting is that feedback quality matters in IW instead of feedback quantity. Excessive feedback added an extra burden on students' cognition and memory resources, which in turn caused undesirable effects on writing performance (Patchan et al., 2016). Meanwhile, feedback and its effects on writing improvement are influenced by individual characteristics. For example, low self-efficacious students were more likely to face difficulties in conducting self-reflections and giving feedback, while high self-efficacious students were more active in seeking advice and giving feedback based on self-reflections and peers' written texts (Wei et al., 2024). Lu et al. (2024) followed students' writing revision amount and function after receiving self- and peer-assessment. Both the quantity and the type of revisions played a pivotal role in writing improvement. Meanwhile, students' self-rating accuracy moderated the effects of revision. Revision amount benefited students with low self-rating accuracy more, while the revision function enhanced writing quality among students with high self-rating accuracy.

As a concluding note, self and peer feedback/assessment potentially boost IW improvement. Thus, their combined use is recommended in writing classrooms to optimize students' IW performance. Also, teachers and instructors should attend to the specifics of the two formative assessment modes to maximize the positive effects and to learner characteristics in IW.

Teacher pedagogical and assessment practices of Chinese L1 IW

We conducted several research projects (e.g., the Hong Kong EDB project "Research and Development Project on Developing Students' Language Competence in the Integrative Use of Language Skills and Strategies in Chinese Language Education at the Secondary Level" and the Hong Kong Quality Education Fund project "Enhancing Students' Multi-Level Processing Competency of Multi-Source Information in Integrated Language Tasks in Secondary Schools") to empower teachers in adapting to curriculum changes and designing school-based IW instruction activities and assessment tasks. After collecting teachers' views toward Chinese IW assessment, Zhu (2015b) recommended four avenues for enhancing professional development: strengthening the understanding of IW assessment as a measurement of students' problem-solving ability in real-life language use, promoting practical skills in designing IW assessment tasks and using scoring rubrics, guaranteeing students' access to evaluating IW performance, and adjusting instructional activities aligned with students' IW development. Specifically, he proposed several fundamental strategies for successfully implementing school-based Chinese IW assessment (Zhu, 2017). The ability-oriented nature, authenticity, fairness, and positive washback for teaching Chinese IW assessment should be considered with high regard. It is also necessary to calibrate IW indicators with information processing. Moreover, authenticity should be operationalized in theme determination, selection, and adaptation of source materials, and prompt writing. Our research team also developed a teaching kit to assist teachers in fostering students' multi-level processing competence of multi-source information in integrated tasks (Zhu et al., 2018). We offered professional guidance and support for those teachers throughout the pilot process of the teaching kit, including conducting meetings to introduce the design rationale and application procedure before the pilot, inviting experts to address any problems those teachers encountered in the application, and providing teachers the access to our classroom observation and analysis reports to reflect on the teaching effects.

These scholarly and professional endeavors have consequently led to significant paradigm shifts from "norm-referenced tests" to "criterion-referenced tests," from "teaching for examination" to "teaching to develop skills," and from "rote learning" to "ability-oriented approach" in Chinese education of Hong Kong.

Conclusions, implications, and suggestions for future research

Chinese IW as a multi-faceted construct that involves intricate integrations between related independent skills and source use

By reviewing our research systematically, several statements concerning the Chinese IW construct can be made. At its very nature, the Chinese IW construct can be validly represented by "four pillars": contextual awareness, citation and synthesis, opinion and argument, and written expression

and organization (Zhu, 2005; Zhu et al., 2016). Besides appropriate language use and structure, Chinese IW tasks also assess the ability to present original and creative ideas after using the sources in line with cultural and contextual factors embedded in task requirements. Also, our studies have revealed strong associations between students' independent and integrated task performance, while independent skills accounted for a relatively low proportion of the variance in IW performance. Thus, the second statement concerning the IW construct is that it is not simply a summation of writing and other independent language modalities but a reciprocal integration between them. Specifically, IW tasks require students to produce written texts after a copious array of source processing, that is, organizing, connecting, and selecting, which is not available in independent ones. Spivey's discourse synthesis theory, rooted in English contexts, is also evident for Chinese L1 IW. Chinese students are facing difficulties in transforming and using the source language, content, and organization in their writing. There is a threshold level of language proficiency for L2 learners to process source materials in IW tasks (Cumming, 2013); the threshold also exists for L1 learners to have higher-order source use in such tasks.

We seek to understand the Chinese L1 IW construct through three subfields of research: extracting competence factors underlying students' performance, comparing students' performance in independent and integrated tasks, and examining source use and its contribution to IW performance. The three subfields of research altogether answer the core question of the Chinese L1 IW construct. It is a multifaceted construct that involves the integration of related independent language skills as well as the ability to comprehend and use source materials for writing. We hope this focused definition could serve as a theoretical source addressing the core question of what has been measured by Chinese IW tasks and informing the design and development of related assessment tasks (Cumming, 2013; Plakans, 2015). However, the lack of process-oriented efforts in this vein of research should be noted. Evidence concerning Chinese L1 IW strategies and processes in both real-life and testing contexts is important, as it provides in-depth insights and specifications about the underlying construct. Thus, we recommend that future research, building on and extending what we have found, collect and analyze Chinese L1 IW process data from students of multiple education levels over time and across different task conditions to capture its complexity and nuance.

Chinese IW performance as a result of the complex interplay of individual difference factors

Writing is a self-initiated and self-sustained process in which students are motivationally, affectively, and behaviorally engaged to achieve desired goals (Schunk & Zimmerman, 2011). Writers are expected to exhibit variations in their current beliefs (i.e., self-efficacy), future images (i.e., ideal self), emotional profiles (e.g., enjoyment and anxiety), and behavioral

engagement (e.g., strategy use and feedback-seeking behavior), ultimately causing differentiated IW performance. Our team has conducted ongoing research to uncover individual difference factors specifically related to IW tasks and how they influence students' IW performance separately and jointly (Xu et al., 2023; Yao et al., 2023; Zhao et al., 2023). This line of research yields meaningful but mixed findings concerning the effects of these psychological and behavioral factors on IW performance. We acknowledge the importance of these factors in the IW domain, while it is impossible for us to make any concluding statements about the extent to which a specific individual difference factor under investigation facilitates or constrains final IW performance. It seems understandable as these factors are largely constrained by the external environment and continually fluctuate within individuals (Kormos, 2012).

Despite the absent consensus in the extant research, we can still suggest three key considerations for researchers in this field. Regarding methodology, our research has predominantly employed a quantitative design with statistical analyses of questionnaire responses and task scores. To provide robust interpretations and deep insights, it is crucial to incorporate multiple triangulated data sources. Also, the scope of our research in this area is limited to task-situated writing. Assessing students' IW performance solely based on one IW task may lead to misleading characterizations of their writing abilities. Therefore, we may recommend prolonging student writers' participation in IW tasks and documenting their IW performance over time to fully capture students' writing abilities. Finally, future research is warranted to investigate how these individual difference factors influence specific indicators of IW performance, thus uncovering the rich nuance of their relationship. Individual difference factors are not shaped in isolation, and they are more likely to interact with each other to influence IW performance. It deserves scholarly attention with various psychological and behavioral factors involved in one study, thus further specifying the "motivation → behavior → outcome" chain proposed by Dörnyei (2005, p. 73).

L1-L2 associations empirically proved in IW general performance, subsumed skills, and psychological factors

Our research has also documented L1-L2 associations of general performance, subsumed skills, and psychological factors in the IW domain through within-subject comparisons. Chinese EFL learners had similar general performance, reading comprehension, discourse synthesis, and source-based argumentation with direct relevance to L1 and L2 IW performance. Their future images, current beliefs, and attitudes of IW are also highly connected in the two contexts. L1 IW skills and related mental states have the potential to support the development of L2 IW cross-linguistically. Therefore, this line of research empirically tests the common underlying proficiency shared between L1 and L2 IW to some degree, and Chinese EFL learners are possibly advantaged to

perform L2 IW tasks due to their experience and resources already existing in the acquisition of L1 IW (Cummins, 1979). Given the cross-linguistic facilitation effect of L1 IW skills and influential factors on L2 IW counterparts, Chinese EFL learners are encouraged to draw upon their prior L1 IW experience and resources as a schema to activate L2 IW knowledge structure and cognitive framework (Pae, 2018). It underscores the importance of L1-L2 collaborative teaching to enhance teachers' understanding of students' IW competence and related variables. Joint talks and sharing workshops possibly help explore new avenues for cultivating successful writers with insights from the writing development of another language.

Meanwhile, we still observed the scarcity of cross-linguistic IW investigations. Three areas can be suggested for future research to move forward. To begin with, more attention should be paid to the variant L1-L2 associations in IW. L1 and L2 IW skills and factors may differ as a function of individual features and task characteristics (Jarvis & Pavlenko, 2008; Larsen-Freeman, 2013; Pae, 2018), indicating the possible existence of moderators that facilitate or constrain their relationship strength. Research on these moderators can help lift the veil of language learning mechanisms embedded in our brains (Sparks, 1995). Besides, previous studies have evidenced the bi-directional L1-L2 interactions (Su, 2010). The cross-linguistic influence occurs in both directions from L1 to L2 and from L2 to L1. Compared to the influence of L1 in L2, less research examines the backward influence of L2 in L1. Thus, future studies can extend prior ones by looking at L2 influence in different levels of L1 skills to mitigate possible conflicts between L1 and L2 learning and increase their reciprocal development. Another direction concerns the methodology. Our cross-linguistic research has relied on large-scale questionnaires and tasks to provide statistical evidence for the relationships between L1 and L2 IW-related skills and variables. Researchers are encouraged to adopt multiple and triangulated methods to collect data across different socio-cultural contexts and time points so as to add valid and dynamic insights into L1-L2 IW associations.

Challenges and prospects of developing standards and strategies for assessing and teaching Chinese IW

It suffices to assert that our research results have benefited Chinese IW teaching and assessment in Hong Kong. Research-informed policies of public examination and teacher training seminars continue to fuel related practices. However, we rarely gather feedback from teachers and students regarding the impact of these policy changes and training seminars. There is a long way to go for practitioners to develop IW assessment tasks and tailor instructions in a way that is compatible with students' holistic writing development.

Our research in this vein is still in an early but burgeoning stage with a specific focus on the standardized testing context, that is, HKDSE. We hope future research can attend more to

classroom-based IW tasks, thus shifting the foci away from writing test results to promoting learning-focused assessment (Zheng & Yu, 2019). IW tasks represent not purely a valid measurement tool but also a means to provide diagnostic information for students' writing, which in turn informs related teaching and learning (Lee, 2023). Teachers and test boards can explore systematic ways to integrate the value of writing processes and the diagnostic potential of IW tasks in the future. Furthermore, technological advancements such as artificial intelligence (AI) tools have greatly impacted various professional and academic domains, including writing (Barrot, 2023). The emergence of ChatGPT has brought the impact to a peak. As one of the most influential AI tools, ChatGPT is capable of engaging users "in natural and human-like interactive experiences through audio or text." Teachers and test professionals can be trained to use ChatGPT to document students' IW processes, access and select source input and practices for IW tasks, and offer specialized feedback on IW texts.

In conclusion, this review offers collective insights into core issues concerning Chinese IW tasks. It sheds light on the underlying construct, influential factors, L1-L2 associations, and related assessment and pedagogy practices after critically synthesizing our research over the past two decades. This line of research makes a unique contribution to the existing IW literature by extensively examining the Chinese L1 context. Noticeably, we tap into Chinese IW mainly from a perspective of cognitive process, which is not constrained by language and cultural settings. Therefore, studies are hoped to inform multilingual instruction by adopting the proposed four traits, that is, contextual awareness, citation and synthesis, original opinion and argument, and writing expression and organization across different language contexts and cultures to see if they remain inherent dimensions of IW competence. Besides, we have employed multiple methods such as questionnaire surveys, interviews, and eye-tracking recordings in our studies. A more diverse range of methods and a longitudinal design are still necessary to collect rich sources of triangulated data for the construct representation, the relationship among those involved variables, and the changing patterns of the inquiry. Moreover, there is a greater need for researchers to transfer what they have found into actual practices that promote IW competence compatible with students' language proficiency and target educational and cultural settings. Such academic knowledge transfer requires collaborations with various stakeholders, including policymakers, educators, and assessment boards.

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Xinhua Zhu was responsible for conceptualization, supervision, securing grants, and revision. Wandong Xu, Jialin Li, and Yiwen Sun contributed by conceptualizing, drafting, and revising the review drafts. Siyu Zhu and Wanru Pang identified, collected, and organized related empirical studies. Yuan Yao commented and revised the review drafts. All authors read and approved the final manuscript.

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The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical statement

Consents from all the participants in our previous empirical studies have been collected before data collection, and ethics approval for this review has been obtained from the Institutional Review Board of The Hong Kong Polytechnic University (number: HSEARS20211102003).

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References

Adachi, C., Tai, J. H. M., & Dawson, P. (2018). Academics' perceptions of the benefits and challenges of self and peer assessment in higher education. *Assessment & Evaluation in Higher Education*, *43*(2), 294–306. https://doi.org/10.1080/02602938.2017.1339775

Ahmed, Y., Wagner, R. K., & Lopez, D. (2014). Developmental relations between reading and writing at the word, sentence, and text levels: A latent change score analysis. *Journal of Educational Psychology*, *106*(2), 419–434. https://doi.org/10.1037/a0035692

Alderson, J. C. (2009). Test review: Test of English as a foreign language: Internet-based test (TOEFL iBT®). *Language Testing*, *26*(4), 621–631. https://doi.org/10.1177/0265532209346371

Bai, B., Wang, J., & Nie, Y. (2021). Self-efficacy, task values and growth mindset: What has the most predictive power for primary school students' self-regulated learning in English writing and writing competence in an Asian Confucian cultural context? *Cambridge Journal of Education*, *51*(1), 65–84. https://doi.org/10.1080/0305764X.2020.1778639

Barkaoui, K., Brooks, L., Swain, M., & Lapkin, S. (2013). Test-takers' strategic behaviors in independent and integrated speaking tasks. *Applied Linguistics*, *34*(3), 304–324. https://doi.org/10.1093/applin/ams046

Barrot, J. S. (2023). Using ChatGPT for second language writing: Pitfalls and potentials. *Assessing Writing*, *57*, 100745. https://doi.org/10.1016/j.asw.2023.100745

Bielak, J. (2022). To what extent are foreign language anxiety and foreign language enjoyment related to L2 fluency? An investigation of task-specific emotions and breakdown and speed fluency in an oral task. *Language Teaching Research*, 1–31. https://doi.org/10.1177/1362168822107931

Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, *1*(1), 1–47. https://doi.org/10.1093/applin/I.1.1

Carless, D. (2016). Feedback as dialogue. In M. A. Peters (Ed.), *Encyclopedia of educational philosophy and theory* (pp. 1–6). Springer.

Cheng, L., & Qi, L. (2006). Description and examination of the national matriculation English test. *Language Assessment Quarterly*, *3*(1), 53–70. https://doi.org/10.1207/s15434311laq0301_4

Cheong, C. M., Luo, N., Zhu, X., Lu, Q., & Wei, W. (2023). Self-assessment complements peer assessment for undergraduate students in an academic writing task. *Assessment & Evaluation in Higher Education*, *48*(1), 135–148. https://doi.org/10.1080/02602938.2022.2069225

Cheong, C. M., Zhu, X., Li, G. Y., & Wen, H. (2019). Effects of intertextual processing on L2 integrated writing. *Journal of Second Language Writing*, *44*, 63–75. https://doi.org/10.1016/j.jslw.2019.03.004

Cheong, C. M., Zhu, X., & Liao, X. (2018). Differences between the relationship of L1 learners' performance in integrated writing with both independent listening and independent reading cognitive skills. *Reading and Writing*, *31*(4), 779–811. https://doi.org/10.1007/s11145-017-9811-8

Cheong, C. M., Zhu, X., & Liu, Y. (2022). The role of need for cognition (NfC) in the effect of language modalities on integrated writing performance. *British Journal of Educational Psychology*, *92*(4), 1256–1277. https://doi.org/10.1111/bjep.12498

Cheong, C. M., Zhu, X., & Xu, W. (2021). Source-based argumentation as a form of sustainable academic skill: An exploratory study comparing secondary school students' L1 and L2 writing. *Sustainability*, *13*(22), 12869. https://doi.org/10.3390/su132212869

Cumming, A. (2013). Assessing integrated writing tasks for academic purposes: Promises and perils. *Language Assessment Quarterly*, *10*(1), 1–8. https://doi.org/10.1080/15434303.2011.622016

Cumming, A., Kantor, R., Baba, K., Erdosy, U., Eouanzoui, K., & James, M. (2005). Differences in written discourse in independent and integrated prototype tasks for next generation TOEFL. *Assessing Writing*, *10*(1), 5–43. https://doi.org/10.1016/j.asw.2005.02.001

Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, *49*(2), 222–251. https://doi.org/10.3102/00346543049002222

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Routledge.

Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9–42). Multilingual Matters.

Gebril, A., & Plakans, L. (2009). Investigating source use, discourse features, and process in integrated writing tests. *Spaan Fellow Working Papers in Second or Foreign Language Assessment*, *7*(1), 47–84.

Grabe, W., & Zhang, C. (2013). Reading and writing together: A critical component of English for academic purposes teaching and learning. *TESOL Journal*, *4*(1), 9–24. https://doi.org/10.1002/tesj.65

Graham, S., Liu, X., Bartlett, B., Ng, C., Harris, K. R., Aitken, A., Barkel, A., Kavanaugh, C., & Talukdar, J. (2018). Reading for writing: A meta-analysis of the impact of reading interventions on writing. *Review of Educational Research*, *88*(2), 243–284. https://doi.org/10.3102/0034654317746927

Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools*. Carnegie Corporation.

Guo, X., & Huang, L. (2020). Are L1 and L2 strategies transferable? An exploration of the L1 and L2 writing strategies of Chinese graduate students. *Language Learning Journal*, *48*(6), 715–737. https://doi.org/10.1080/09571736.2018.1435710

Hirvela, A., Hyland, K., & Manchón, R. M. (2016). Dimensions of L2 writing theory and research: Learning to write and writing to learn. In R. M. Manchón & P. K. Matsuda (Eds.), *Handbook of second and foreign language writing* (pp. 45–63). de Gruyter.

Hong Kong Curriculum Development Council. (2017). *Supplement to Chinese language education key learning area curriculum guide: Learning content of primary reading*. The Printing Department.

Hong Kong Curriculum Development Council & Hong Kong Examinations and Assessment Authority (HKCDC & HKEAA). (2007). *Chinese Language curriculum and assessment guide (Secondary 4−6)*. HKCDC & HKEAA. https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/chi-edu-/chi_lang_final_5805.pdf

Hong Kong Examinations and Assessment Authority (HKEAA). (2005). *HKCEE Chinese language level descriptors and exemplars for standards-referenced assessment*. HKEAA.

Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic influence in language and cognition*. Routledge.

Karimi, M. N. (2017). The mediated/unmediated contributions of language proficiency and prior knowledge to L2 multiple-texts comprehension: A structural equation modelling analysis. *Applied Linguistics*, *39*(6), 1–22. https://doi.org/10.1093/applin/amw059

Kim, M., & Crossley, S. A. (2018). Modeling second language writing quality: A structural equation investigation of lexical, syntactic, and cohesive features in source-based and independent writing. *Assessing Writing*, *37*, 39–56. https://doi.org/10.1016/j.asw.2018.03.002

Knoch, U., & Sitajalabhorn, W. (2013). A closer look at integrated writing tasks: Towards a more focussed definition for assessment purposes. *Assessing Writing*, *18*(4), 300–308. https://doi.org/10.1016/j.asw.2013.09.003

Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing*, *21*(4), 390–403. https://doi.org/10.1016/j.jslw.2012.09.003

Kyle, K. (2020). The relationship between features of source text use and integrated writing quality. *Assessing Writing*, *45*, 100467. https://doi.org/10.1016/j.asw.2020.100467

Larsen-Freeman, D. (2013). Transfer of learning transformed. *Language Learning*, *63*(1), 107–129. https://doi.org/10.1111/j.1467-9922.2012.00740.x

Lee, K. (2023). Diagnosing Chinese college-level English as a Foreign Language (EFL) learners' integrated writing capability: A Log-linear Cognitive Diagnostic Modeling (LCDM) study. *Assessing Writing*, *57*, 100730. https://doi.org/10.1016/j.asw.2023.100730

Leki, I., & Carson, J. (1997). Completely different worlds: EAP and the writing experiences of ESL students in university courses. *TESOL Quarterly*, *31*, 39–69. https://doi.org/10.2307/3587974

Li, C., Jiang, G., & Dewaele, J.-M. (2018). Understanding Chinese high school students' foreign language enjoyment: Validation of the Chinese version of the foreign language enjoyment scale. *System*, *76*, 183–196. https://doi.org/10.1016/j.system.2018.06.004

Li, G. Y., Zhu, X., & Cheong, C. M. (2020). Secondary teachers' conceptions of integrated writing skills: Are teachers' conceptions aligned with the curriculum objectives. *Asia Pacific Education Review*, *21*(3), 379–391. https://doi.org/10.1007/s12564-020-09629-x

Liao, X., Zhu, X., & Cheong, C. M. (2021). Direct and indirect effects of independent language skills on the integrated writing performance of Chinese-speaking students with low proficiency. *Reading and Writing*, *34*(10), 2529–2557. https://doi.org/10.1007/s11145-021-10152-7

Lu, Q., Yao, Y., & Zhu, X. (2024). The effects of writing revisions on writing improvement among undergraduate students: The moderating role of self-rating accuracy. *The Asia-Pacific Education Researcher*, *33*(3), 535–544. https://doi.org/10.1007/s40299-023-00749-7

Lu, Q., Zhu, X., & Cheong, C. M. (2021). Understanding the difference between self-feedback and peer feedback: A comparative study of their effects on undergraduate students' writing improvement. *Frontiers in Psychology*, *12*, 1–13. https://doi.org/10.3389/fpsyg.2021.739962

Nelson, N. (2008). The reading-writing nexus in discourse research. In C. Bazerman (Ed.), *Handbook of research on writing* (pp. 435–450). Erlbaum.

Ohta, R., Plakans, L., & Gebril, A. (2018). Integrated writing scores based on holistic and multi-trait scales: A generalizability study. *Assessing Writing*, *38*, 21–36. https://doi.org/10.1016/j.asw.2018.08.001

Pae, T. I. (2019). A simultaneous analysis of relations between L1 and L2 skills in reading and writing. *Reading Research Quarterly*, *54*(1), 109–124. https://doi.org/10.1002/rrq.216

Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, *19*, 139–158. https://doi.org/10.1080/10573560308222

Papi, M. (2010). The L2 motivational self system, L2 anxiety, and motivated behavior: A structural equation modeling approach. *System*, *38*(3), 467–479. https://doi.org/10.1016/j.system.2010.06.011

Papi, M., & Khajavy, G. H. (2021). Motivational mechanisms underlying second language achievement: A regulatory focus perspective. *Language Learning*, *71*(2), 537–572. https://doi.org/10.1111/lang.12443

Patchan, M. M., Schunn, C. D., & Correnti, R. J. (2016). The nature of feedback: How peer feedback features affect students' implementation rate and quality of revisions. *Journal of Educational. Psychology*, *108*(8), 1098. https://doi.org/10.1037/edu0000103

Pecorari, D., & Petrić, B. (2014). Plagiarism in second-language writing. *Language Teaching*, *47*(3), 269–302. https://doi.org/10.1017/S0261444814000056

Plakans, L. (2015). Integrated second language writing assessment: Why? What? How? *Language and Linguistics Compass*, *9*(4), 159–167. https://doi.org/10.1111/lnc3.12124

Schunk, D. H., & Zimmerman, B. (2011). *Handbook of self-regulation of learning and performance*. Taylor & Francis.

Shin, S. Y., & Ewert, D. (2015). What accounts for integrated reading-to-write task scores? *Language Testing*, *32*(2), 259–281. https://doi.org/10.1177/0265532214560

Sparks, R. L. (1995). Examining the linguistic coding differences hypothesis to explain individual differences in foreign language learning. *Annals of Dyslexia*, *45*, 187–214. https://doi.org/10.1007/BF02648218

Spivey, N. N. (1984). *Discourse synthesis: Constructing texts in reading and writing* [Outstanding Dissertation Mono-graph Series]. International Reading Association.

Spivey, N. N. (1990). Transforming texts: Constructive processes in reading and writing. *Written Communication*, *7*, 256–287. https://doi.org/10.1177/074108839000700200

Su, I. R. (2010). Transfer of pragmatic competences: A bi-directional perspective. *The Modern Language Journal*, *94*(1), 87–102. https://doi.org/10.1111/j.1540-4781.2009.00985.x

Teng, L. S., Sun, P. P., & Xu, L. (2017). Conceptualizing writing self-efficacy in English as a foreign language context: Scale validation through structural equation modeling. *TESOL Quarterly*, *52*(4), 911–942. https://doi.org/10.1002/tesq.432

Uludag, P., Lindberg, R., McDonough, K., & Payant, C. (2019). Exploring L2 writers' source-text use in an integrated writing assessment. *Journal of Second Language Writing*, *46*, 100670. https://doi.org/10.1016/j.jslw.2019.100670

Wang, C. (2016). Learning by extension. *Modern Foreign Languages*, *39*(6), 784–793.

Wei, W., Cheong, C. M., Zhu, X., & Lu, Q. (2024). Comparing self-reflection and peer feedback practices in an academic writing task: A student self-efficacy perspective. *Teaching in Higher Education*, *29*(4), 896–912. https://doi.org/10.1080/13562517.2022.2042242

Weigle, S. (2004). Integrating reading and writing in a competency test for non-native speakers of English. *Assessing Writing*, *9*(1), 27–55. https://doi.org/10.1016/j.asw.2004.01.002

Xie, Q. (2023). Assessing source use: Summary vs. reading-to-write argumentative essay. *Assessing Writing*, *57*, 100755. https://doi.org/10.1016/j.asw.2023.100755

Xu, W., Zhao, P., Yao, Y., Pang, W., & Zhu, X. (2023). Effects of self-efficacy on integrated writing performance: A cross-linguistic perspective. *System*, *115*, 103065. https://doi.org/10.1016/j.system.2023.103065

Xu, W., & Zhu, X. (2025). A cross-linguistic approach to investigating metacognitive regulation in writing among Chinese EFL learners: Insights for its trait/state distinction. *International Journal of Applied Linguistics*, *35*(1), 274–290. https://doi.org/10.1111/ijal.12615

Yao, Y., Zhu, X., Zhu, S., & Jiang, Y. (2023). The impacts of self-efficacy on undergraduate students' perceived task value and task performance of L1 Chinese integrated writing: A mixed-method research. *Assessing Writing*, *55*, 100687. https://doi.org/10.1016/j.asw.2022.100687

Yu, G. (2010). Effects of presentation mode and computer familiarity in summarization of extended texts. *Language Assessment Quarterly*, *7*(2), 119–136. https://doi.org/10.1080/15434300903452355

Zabihi, R. (2018). The role of cognitive and affective factors in measures of L2 writing. *Written Communication*, *35*(1), 32–57. https://doi.org/10.1177/07410883177358

Zhan, J., Yao, Y., & Zhu, X. (2023). The mediating effect of feed-seeking behavior on the relationship between ideal L2 writing self and story continuation writing performance: A multigroup structural equation modeling approach. *System*, *113*, 102976. https://doi.org/10.1016/j.system.2022.102976

Zhao, J. (2016). The reform of the National Matriculation English Test and its impact on the future of English in China: Will English lose its predominance in the Chinese foreign language landscape? *English Today*, *32*(2), 38–44. https://doi.org/10.1017/S0266078415000681

Zhao, P., Zhu, X., Yao, Y., & Liao, X. (2023). Ideal L2 self, enjoyment, and strategy use in L2 integrated writing: A self-regulatory learning perspective. *System*, *115*, 103033. https://doi.org/10.1016/j.system.2023.103033

Zheng, Y., & Yu, S. (2019). What has been assessed in writing and how? Empirical evidence from assessing writing. *Assessing Writing*, *42*, 100421. https://doi.org/10.1016/j.asw.2019.100421

Zhu, X. (2005). *A study of setting standards of Chinese language assessment in reading, writing and integrated skills. Technical Report (unpublished). Project No: CD/C/13-0309. Commissioned by Education and Manpower Bureau, HKSAR*. National Institute of Education, Nanyang Technological University.

Zhu, X. (2014). Strategies for setting band descriptors of students' Chinese language performance in the standards of education quality. *Curriculum, Teaching Material and Method*, *34*(3), 49–55.

Zhu, X. (2015a). An assessment framework of integrated writing in teaching Chinese as a first language. In Z. Guo & B. Zheng (Eds.), *Recent development of Chinese teaching and learning in higher education: Applied Chinese language studies* (pp. 108–116). Sinolingua London Ltd.

Zhu, X. (2015b). Implementing integrated testing of Chinese language in Hong Kong secondary schools: Current situation and improvement strategies. *Educational Research*, *36*(5), 114–121.

Zhu, X. (2017). Three essential strategies for implementing Chinese integrated testing. *Curriculum, Teaching Material and Method*, *37*(3), 58–64.

Zhu, X., Guan, Y., & Yao, Y. (2022c). Transfer of ideal L1 and L2 writing selves and their impacts on L2 writing enjoyment and integrated writing performance. *Assessing Writing*, *54*, 100674. https://doi.org/10.1016/j.asw.2022.100674

Zhu, X., Ko, M. L., Zeng, F., Li, G. Y., & Cheong, C. M. (2018). A project in enhancing students' multi-level processing competency of multi-source information in integrated language tasks in secondary schools: Implementation and effectiveness. *Journal of Chinese Language Education*, *16*(1), 84–104.

Zhu, X., Li, G. Y., Cheong, C. M., & Wen, H. (2021a). Effects of L1 single-text and multiple-text comprehension on L2 integrated writing. *Assessing Writing*, *49*, 100546. https://doi.org/10.1016/j.asw.2021.100546

Zhu, X., Li, G. Y., Cheong, C. M., Yu, G., & Liao, X. (2021b). Secondary school students' discourse synthesis performance on Chinese (L1) and English (L2) integrated writing assessments. *Reading and Writing*, *34*, 49–78. https://doi.org/10.1007/s11145-020-10065-x

Zhu, X., Li, X., Yu, G., Cheong, C. M., & Liao, X. (2016). Exploring the relationships between independent listening and listening-reading-writing tasks in Chinese language testing: Towards a better understanding of the construct underlying integrated writing tasks. *Language Assessment Quarterly*, *13*(3), 167–185. https://doi.org/10.1080/15434303.2016.1210609

Zhu, X., Sun, Y., Liu, Y., Xu, W., & Cheong, C. M. (2025). Towards a better understanding of integrated writing performance: The influence of literacy strategy use and independent language skills. *Assessing Writing*, *64*, 100922. https://doi.org/10.1016/j.asw.2025.100922

Zhu, X., & Wu, Y. (2014). Strategies for secondary students to overcome difficulties of completing integrated writing tasks in Chinese language. In A. D. Zhang (Ed.), *Effective teaching and joyful learning (III)* (pp. 21–34). Pearson Education.

Zhu, X., Yao, Y., Pang, W., & Zhu, S. (2022a). Investigating the relationship between linguistic competence, ideal self, learning engagement, and integrated writing performance: A structural equation modeling approach. *Journal of Psycholinguistic Research*, *52*(3), 787–808. https://doi.org/10.1007/s10936-022-09923-2

Zhu, S., Yao, Y., & Zhu, X. (2024). Exploring the interplay of attitudes: The transfer of self-efficacy and emotions between L1 Chinese and L2 English integrated writing contexts. *International Journal of Applied Linguistics*, *34*(3), 821–841. https://doi.org/10.1111/ijal.12534

Zhu, X., Zhan, J., & Yao, Y. (2022b). A latent profile analysis of Chinese EFL learners' enjoyment and anxiety in reading and writing: Associations with imaginative capacity and story continuation writing performance. *International Review of Applied Linguistics in Language Teaching*. https://doi.org/10.1515/iral-2022-0105