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A Qualitative Typology of Chinese University EFL Learners' Responses to Self-Regulated Learning Reading Strategy Instruction

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Abstract

Self-regulated learning (SRL) has become a cornerstone of educational reform worldwide, yet how individual learners respond to SRL-based reading strategy instruction remains underexplored in Chinese higher education. This study employed typology-building qualitative content analysis to examine how first-year Chinese undergraduate EFL learners at a local university responded to a 12-week SRL reading strategy intervention targeting metacognitive and cognitive strategies. Data were collected through semi-structured interviews with 19 participants and analysed using Kluge's (2000) typology-building approach. The analysis yielded three qualitatively distinct learner profiles: Strategic Internalisers, who demonstrated deep understanding, consistent enactment, adaptive flexibility, and cross-contextual transfer; Selective Adopters, who valued and used strategies but in a narrower, task-dependent range; and Reactive Strategy Users, whose strategy use remained contingent and activated primarily when comprehension difficulties arose. These profiles illuminate the experiential diversity within a single instructional context and challenge the assumption that learners respond uniformly to SRL instruction. The findings suggest that effective strategy instruction must account for learner heterogeneity through differentiated scaffolding, peer modelling, and adaptive pedagogical designs. The study contributes a learner-centred typology that bridges the gap between aggregate policy mandates and localised classroom realities in centralised, exam-driven educational systems.

Keywords: Self-Regulated Learning, Reading Strategy Instruction, Typology, Chinese Efl Learners, Learner Profiles

Introduction

For many university EFL learners, reading is not simply a matter of understanding vocabulary and grammar; it is also a strategic activity that requires them to plan how to approach a text, monitor whether comprehension is breaking down, and adjust their actions

accordingly. When these regulatory processes are weak, students may rely on word-by-word translation, answer searching, or intuition, which can limit deeper comprehension, reduce confidence, and weaken their capacity for independent learning. In this sense, the cultivation of self-regulated learning (SRL) has become not only a broad educational priority but also a practical necessity in reading instruction. In an era of rapid knowledge expansion, the ability to monitor, evaluate, and adapt one's own learning processes is increasingly recognised as a foundational competence for lifelong learning (OECD, 2019a). The OECD Learning Compass 2030 explicitly positions self-regulation, metacognition, and foundational literacy as interconnected pillars of future-ready education, calling for pedagogical approaches that empower learners to take ownership of their cognitive development. Similarly, UNESCO (2021) underscores learner agency and humanistic and digital literacies as essential capacities for navigating complex information landscapes. Large-scale assessments such as PISA 2018 further reinforce this imperative by documenting that students who deploy strategic planning, monitoring, and evaluative reading comprehension processes consistently outperform their less self-regulated peers (OECD, 2019b). Within the European context, the Strategic Framework for Key Competences for Lifelong Learning has likewise elevated literacy and personal competence to core status, signalling broad international convergence on the centrality of SRL to educational quality (Council of the European Union, 2018). Taken together, these developments highlight why this area merits study: understanding SRL in EFL reading is important not only for explaining reading performance, but also for clarifying how learners can become more effective, more autonomous, and more responsive to strategy instruction.

Against this global policy backdrop, a substantial body of empirical research has documented the facilitative role of SRL strategies in second and foreign language (L2/EFL) reading development. Metacognitive strategies---encompassing planning, monitoring, and evaluating comprehension---together with cognitive strategies such as inferencing, elaboration, and summarisation, have been shown to significantly predict reading comprehension performance across diverse learner populations. In the Chinese educational context, Qi et al. (2025) found that primary school students' L1 and L2 SRL strategies could significantly predict reading performance in their respective languages, and that L1 strategy use positively influenced L2 strategy use. However, unlike in the Hong Kong bilingual context (Tse et al., 2022), where L1 strategies were more directly linked to L2 reading achievement, Qi et al. noted that mainland Chinese students' L1 strategies did not significantly predict L2 English reading performance, highlighting the impact of linguistic distance. More broadly, cross-context studies have shown that metacognitive monitoring and self-regulated strategy use are positively associated with reading achievement in bilingual and EFL settings (Kolić-Vehovec & Bajšanski, 2007; Tse et al., 2022). Collectively, this research indicates that SRL strategy instruction holds considerable promise and practical value. It may be effective not only in improving reading performance, but also in helping learners become more strategic, more confident, and more autonomous when dealing with unfamiliar texts.

Despite growing international recognition, systematic investigation into SRL-based reading strategy instruction within mainland Chinese higher education remains relatively scarce. Existing studies have predominantly adopted variable-centered approaches that examine aggregate relationships between strategy use and outcomes, often treating learner populations as homogeneous. While such research has yielded valuable insights, it has largely

overlooked the possibility that individual learners may respond to SRL instruction in qualitatively different ways. Chen et al. (2023), in a notable exception, employed a person-centered sequential explanatory mixed-methods design to identify three distinct SRL profiles among Chinese EFL readers in a high-stakes testing environment. However, as their focus was primarily on high school students navigating the Gaokao context, their findings may not fully capture the self-regulatory dynamics of university students facing distinct academic reading demands. Furthermore, while their design offered valuable initial qualitative insights, there remains a pressing need for more immersive, qualitatively driven research to unpack the micro-level experiential nuances of learners' strategy engagement. Such understanding is necessary if the value and effectiveness of SRL instruction are to be evaluated in a more differentiated and pedagogically meaningful way.

The Chinese higher education context presents distinctive conditions that render this investigation both timely and necessary. The College English Curriculum Guidelines (2020 edition) (Ministry of Education of the People's Republic of China, 2020) explicitly foreground the development of autonomous learning capacities and the mastery of effective reading strategies as core instructional objectives. Aligned with the China Standards of English Language Ability (Ministry of Education, 2018), these policy directives collectively advocate a shift from teacher-centered knowledge transmission toward learner-centered strategy development. However, the implementation of SRL-oriented pedagogy remains uneven, particularly at second-tier local institutions where students often enter with limited prior strategy training and CEFR B1-level proficiency. At this developmental stage, learners may possess declarative knowledge of available strategies but lack the procedural fluency to deploy them spontaneously during authentic reading tasks. Understanding how these specific learners experience and respond to SRL reading strategy intervention is therefore essential not only for translating national policy intentions into effective classroom practice, but also for clarifying how students, teachers, and local institutions may benefit from more targeted and responsive instructional support (Zimmerman & Schunk, 2011).

Another limitation in the existing literature is its heavy dependence on variable-centered methods, which tend to break learner experience into separate strategy variables or smooth over meaningful differences across students. Pintrich (2004) noted that many SRL models work by isolating micro-level constructs, an approach that can miss the more holistic and experiential aspects of learning. From this perspective, typology-building content analysis offers a useful alternative within the broader tradition of qualitative content analysis (Kuckartz & Raediker, 2023; Mayring, 2022). Rather than focusing only on isolated variables, it compares cases systematically to develop learner types that are coherent within cases and distinct across cases (Kluge, 2000). To our knowledge, no previous study has used typology-building qualitative content analysis to explore how Chinese university EFL learners respond to SRL reading strategy instruction; the present study addresses that methodological and contextual gap. In doing so, it seeks to show not simply whether SRL-oriented instruction matters, but how and for whom it becomes meaningful and effective in practice.

The present study investigates how first-year Chinese undergraduate EFL learners at a local university respond to a 12-week SRL reading strategy intervention targeting metacognitive and cognitive strategies. Following a qualitative constructivist paradigm, data were collected through semi-structured interviews based on Zimmerman and Martinez-

Pons's (1986) established interview protocol, administered to 19 participants after the intervention. The analysis employed typology-building qualitative content analysis to construct learner profiles. Specifically, the study addresses two research questions:
RQ1: How do first-year Chinese university EFL students respond to SRL reading strategy instruction?
RQ2: What qualitative learner profiles can be constructed to capture students' varied responses to SRL reading strategy instruction?

By constructing a typology of learner responses, this study contributes a differentiated understanding of how SRL reading strategy instruction is experienced by a population that remains underrepresented in the literature, namely first-year Chinese EFL learners with B1-level proficiency at local universities. It also offers practical insight into how SRL-oriented reading instruction can be better adapted to learners with different patterns of strategy uptake, thereby enhancing its usefulness and effectiveness in university EFL reading classrooms.

Literature Review

Self-Regulated Learning: Theoretical Foundations

In this study, self-regulated learning (SRL) is treated as a goal-directed form of learning in which students actively manage what they think, feel, and do while working toward academic aims (Pintrich, 2000; Zimmerman, 2000). From a social-cognitive perspective, learners are seen as agents who can shape their own learning rather than simply receive instruction (Bandura, 1986; Zimmerman, 1989). Applied to reading, this means that comprehension depends partly on how readers prepare for a task, monitor understanding while reading, and evaluate the effectiveness of their approach afterward (Paris & Paris, 2001).

Among the major SRL models, Zimmerman's cyclical framework remains one of the most influential in education research (Zimmerman, 2000, 2002). It describes regulation as an ongoing movement between preparation for a task, strategic activity during task performance, and reflection after the task has been completed. In reading, these phases can be seen when learners preview a text and set purposes, check comprehension and adjust tactics while reading, and review how well their approach worked once the task ends. Zimmerman and Martinez-Pons (1986) investigated these processes through a structured interview schedule that identified fourteen SRL strategies used in school learning. Later L2 reading studies have drawn on this line of work to examine how EFL learners coordinate cognitive, metacognitive, and motivational resources during comprehension.

Pintrich's framework (2000, 2004) focuses more on motivation and suggests that the use of strategies by learners cannot be separated from their goals, beliefs about their own abilities, and emotional reactions. In reading tasks, students who aim to master content and have strong self-belief are more likely to continue using effortful strategies like inferencing, whereas students motivated mainly by performance concerns may give up on strategic efforts when vocabulary becomes challenging (Pintrich & De Groot, 1990). Efklides's (2011) MASRL model builds on this idea by showing how thinking about one's own learning, motivation, and emotions work together in real-time. Feelings like confidence or difficulty can trigger changes in how learners regulate their behavior during reading. These views

together show that self-regulated learning (SRL) in reading is a complex process that involves strategy use, checking progress, motivation, and emotional control.

For analytical purposes, strategies used in self-regulated reading can be grouped into three broad functions. Metacognitive strategies help learners plan, monitor, and review their reading (Grabe & Stoller, 2011). Cognitive strategies support meaning construction through actions such as identifying main ideas, making inferences, elaborating information, and summarising content (Anderson, 2003). Motivational regulation strategies help students maintain effort and interest when reading becomes demanding (Winne & Hadwin, 1998). Research suggests that achievement is more strongly related to the coordinated use of these strategy types than to reliance on any single strategy alone (Kolić-Vehovec & Bajšanski, 2007; Tse et al., 2022), which supports instructional approaches that develop SRL in an integrated way.

SRL Reading Strategy Instruction in EFL Contexts

A substantial body of research has examined the effects of metacognitive and cognitive strategy instruction on EFL reading comprehension. In the Chinese higher education context, Li et al. (2022) found that explicit reading strategy instruction improved Chinese university EFL students' reading comprehension, strategy use, motivation, and self-efficacy. Comparable gains have also been reported in European higher education, where explicit L2 reading strategy instruction improved students' academic reading comprehension (Yapp et al., 2023).

Cross-national studies have also suggested that the benefits of SRL-oriented reading instruction extend across delivery modalities and educational settings. In the Vietnamese context, Dinh and Phuong (2025) documented positive effects of SRL strategy instruction delivered through MOOCs, suggesting that the pedagogical benefits of metacognitive training are not confined to face-to-face classrooms. More broadly, research on cognitive strategy instruction indicates that such gains are shaped by learners' linguistic readiness and processing capacity. Strategies such as inferencing, identifying main ideas, and elaboration are cognitively demanding and require consolidated linguistic resources. Accordingly, the interaction between cognitive strategy use and linguistic proficiency has emerged as a critical factor: for learners at lower proficiency levels, demanding strategies may impose excessive working memory load, leading to strategy abandonment rather than successful deployment (Efklides, 2011).

While metacognitive and cognitive strategies have received substantial research attention, the motivational and affective dimensions of SRL reading remain relatively underexplored, particularly in EFL contexts. Pintrich (2004) argued that motivational regulation---strategies for maintaining effort, managing anxiety, and sustaining interest---is as critical to self-regulated learning as cognitive or metacognitive processes. Lau (2020) provided empirical support for this contention, demonstrating that self-regulated learning instruction enhanced both reading comprehension and motivation among students reading classical Chinese texts. However, studies specifically targeting motivational regulation in EFL academic reading remain scarce.

The affective challenges of L2 reading are particularly pronounced in exam-oriented educational cultures. Tse et al. (2022) documented that bilingual students in Hong Kong experienced significant anxiety when engaging with English academic texts, and that this anxiety impaired both metacognitive monitoring and cognitive strategy deployment. Related person-centered evidence from Chinese EFL readers in a high-stakes testing environment suggests that motivational beliefs and self-efficacy are closely intertwined with learners' SRL profiles (Chen et al., 2023). These findings suggest that effective SRL reading instruction must address cognitive, metacognitive, and motivational-emotional barriers simultaneously.

The Chinese EFL Context and Research Gap

The Chinese higher education context presents distinctive conditions that shape both the implementation and outcomes of SRL reading strategy instruction. The College English Curriculum Guidelines (2020 edition) and the China Standards of English Language Ability (Ministry of Education, 2018) collectively advocate a shift from teacher-centered knowledge transmission toward learner-centered strategy development. However, the translation of these mandates into classroom practice remains uneven, particularly at second-tier local universities where students often enter with limited prior strategy training and CEFR B1-level proficiency. Research on higher-education L2 reading likewise indicates that students with less prior experience in academic English reading often require explicit strategic support rather than assuming automatic transfer from earlier schooling (Yapp et al., 2023). These conditions make it especially difficult for lower-proficiency learners to move from declarative strategy awareness to flexible, self-initiated strategic reading.

Although prior studies generally support the value of SRL-based reading strategy instruction, several methodological issues remain unresolved. Much of this research uses variable-centered designs, so it highlights average relationships while leaving less room to see how motivation, metacognitive knowledge, and strategy use cluster differently across learners. Person-centered work suggests that these elements can combine in distinct patterns (Karlen, 2016). By contrast, many qualitative studies rely on thematic analysis, which is well suited to identifying recurring ideas but less suited to capturing whole learner configurations as types (Kluge, 2000; Kuckartz & Raediker, 2023). Typology-building qualitative content analysis is useful here because it combines systematic coding with cross-case comparison to develop clearly differentiated profiles (Mayring, 2022; Schreier, 2012; Kluge, 2000; Patton, 2015). To our knowledge, this approach has not yet been used to study Chinese university EFL learners' responses to SRL reading strategy instruction.

Methodology

Research Design

This study adopted a qualitative interpretive case study design (Yin, 2018) embedded within a constructivist paradigm. The constructivist orientation was chosen because the study sought to understand participants' subjective experiences and interpretations of SRL reading strategy instruction rather than test pre-defined hypotheses. The case study approach was appropriate because the research aimed to provide a rich, contextually grounded account of how a specific group of learners responded to a bounded instructional intervention.

Participants and Sampling

Nineteen first-year undergraduate EFL learners (10 female, 9 male) from a local comprehensive university in eastern China participated. Participants were selected using purposive, convenience, and snowball sampling. Purposive criteria ensured heterogeneity across English proficiency (CEFR B1--B2), academic major (spanning arts, sciences, and engineering), gender, and prior strategy training exposure---essential for typology construction (Kluge, 2000). All participants had completed a 12-week SRL reading strategy intervention (approximately 36 hours) as part of their regular College English curriculum. Prior to the intervention, most had received little to no formal strategy instruction, reflecting the traditional teacher-centered pedagogy characteristic of their secondary schooling. The sample was determined by data saturation. Table 1 presents the demographic characteristics and typological profile assignment of the participants.

Table 1
Participant characteristics and typological profile assignment (N = 19)

ID	Profile	Gender	CEFR	Major
S1	*Strategic Internaliser*	Female	B2	Business
S2	*Strategic Internaliser*	Female	B2	English
S3	*Strategic Internaliser*	Female	B1+	Computer Science
S4	*Selective Adopter*	Male	B1	Mechanical Eng.
S5	*Selective Adopter*	Female	B1	English
S6	*Reactive Strategy User*	Male	B1	Civil Eng.
S7	*Selective Adopter*	Male	B1+	Mathematics
S8	*Strategic Internaliser*	Female	B2	English
S9	*Strategic Internaliser*	Male	B2	International Trade
S10	*Strategic Internaliser*	Female	B1+	English
S11	*Reactive Strategy User*	Male	B1	Chemistry
S12	*Strategic Internaliser*	Female	B1	English
S13	*Selective Adopter*	Male	B1+	Accounting
S14	*Reactive Strategy User*	Female	B1	Nursing
S15	*Strategic Internaliser*	Male	B2	Software Eng.
S16	*Selective Adopter*	Female	B1	Tourism
S17	*Reactive Strategy User*	Male	B1	Electrical Eng.
S18	*Strategic Internaliser*	Female	B2	English

ID	Profile	Gender	CEFR	Major
S19	*Selective Adopter*	Male	B1+	Finance

Note. *CEFR = Common European Framework of Reference for Languages. Profile assignment followed typology-building qualitative content analysis with best-fit principles for boundary cases.*

Data Collection

Data were collected through semi-structured interviews conducted in the week following the intervention. The interview protocol was adapted from Zimmerman and Martinez-Pons (1986), comprising open-ended questions organised around five thematic areas: understanding of taught strategies, valuation of strategies, enactment in reading tasks, adaptation across task types, and transfer to other contexts. Interviews were conducted face-to-face in Mandarin Chinese by the first author, lasting 20--35 minutes (M = 27 minutes). All interviews were audio-recorded with informed consent and transcribed verbatim, totalling approximately 85,000 Chinese characters. Member checking with three participants confirmed transcription accuracy.

Data Analysis

The interview data were analysed using qualitative content analysis with a type-building orientation (Kuckartz & Raediker, 2023; Kluge, 2000). The analysis proceeded in several stages. First, all 19 transcripts were read iteratively and subjected to first-cycle coding. Two broad code families were developed: the first captured strategy-related content (metacognitive, cognitive, motivational), and the second captured responses to instruction (understanding, valuation, enactment, adaptation, transfer). In the second stage, initial codes were consolidated into five analytical dimensions. Each case was reconstructed in a structured analytic memo summarising responses across these dimensions, with representative quotations retained to ensure traceability.

Following Kluge (2000), systematic cross-case comparison of the 19 reconstructions was conducted to identify similarities and differences, focusing on recurring constellations of attributes rather than isolated codes. Patterns were iteratively refined through reflexive peer debriefing and expert feedback. Type assignment followed explicit decision rules with best-fit principles for boundary cases. The final analysis yielded three learner profiles: Strategic Internalisers, Selective Adopters, and Reactive Strategy Users.

Trustworthiness

Trustworthiness was enhanced through researcher reflexivity (analytical journal documenting coding decisions), peer debriefing (colleague review of coded transcripts), expert feedback (evaluation by an experienced SRL researcher), member checking with three participants, and a maintained audit trail documenting all analytical decisions from initial coding through final type assignment.

Findings

Students' responses to SRL reading strategy instruction

Interview data indicated that students' responses to the SRL-based reading strategy instruction were broadly positive, but varied in depth, consistency, and transferability. Across

the 19 cases, students described a range of changes in how they understood reading tasks, approached texts, coped with difficulty, and carried strategies into other contexts. The analysis is organised around five analytical dimensions.

Understanding of Srl Reading Strategies

Overall, students demonstrated at least basic understanding of core strategies, and many were able to explain not only what a strategy was called but also what it was supposed to do in a specific reading situation. This was especially clear in students' accounts of scanning, identification, monitoring, and contextual inferencing. Students' understanding was particularly strong for strategies with immediate procedural visibility: they could explain how to circle keywords, identify main ideas through titles or topic sentences, or infer the likely word class of a missing item from its position in a sentence. S2, for instance, described how she would first identify keywords in the question and then scan the passage for them, while S3 explained that unknown words in gap-filling tasks could be approached by looking at suffixes such as -tion or -ly. Such accounts suggest that a substantial number of students had moved beyond merely repeating strategy labels and were able to associate those labels with practical operations.

At the same time, understanding was not equally strong across all strategies. Students appeared less comfortable with strategies that required a more extended or reflective stance, such as elaboration, evaluation, and motivational regulation. Several learners could recognise these strategies when prompted, but their explanations were often less developed, more tentative, or tied to a narrow set of circumstances. In particular, evaluation was frequently interpreted as more relevant to post-reading reflection or general ability development than to immediate test performance. These differences suggest that the intervention was successful in helping students build an initial conceptual repertoire of reading strategies, but that some strategies became more cognitively available than others.

Valuation of Srl Reading Strategies

Positive valuation was the most consistent finding across the data. Most students reported that the strategy instruction had made reading feel more manageable, more efficient, or less intimidating. Several participants explicitly linked strategy learning to gains in confidence, reduced anxiety, or a stronger sense of direction when reading under time pressure.

However, students' positive evaluation was selective rather than indiscriminate. Strategies perceived as immediately useful for task completion---scanning, identification, monitoring, and inferencing---were consistently valued. Scan-based techniques were repeatedly described as helping students save time, find answers more quickly, and avoid unnecessary rereading. In contrast, planning, elaboration, and evaluation were more likely to receive mixed evaluations, particularly when students viewed them from an exam perspective. Planning was often judged to be too time-consuming for test situations, while elaboration was sometimes seen as difficult to implement under pressure because it required restating ideas in one's own words. Evaluation was commonly described as less useful in high-stakes reading tasks because students' primary concern was getting answers right rather than reviewing their reading process. This pattern shows that students actively judged strategies according to perceived usefulness, effort, timing, and compatibility with exam demands.

Enactment of SRL Reading Strategies

Enactment was where variation became most visible. In long matching tasks, enactment was generally the strongest. Many students described a clear sequence: reading the question set first, marking keywords, scanning the text for visible cues, and then matching likely sections. This task type provided an accessible context for using taught strategies in concrete ways.

Enactment became more variable in gap-filling tasks. Here, students were more likely to report tension between strategic processing and uncertainty caused by vocabulary limitations or semantic ambiguity. Some students enacted strategies such as word-class analysis, suffix recognition, or contextual inference. Others, however, said that when the task became too difficult they fell back on intuition, rough guessing, or habitual reading patterns. In close-reading accounts, students described trying to identify sentence structure or infer meaning from context, yet these attempts were not always sustained. Overall, enactment was stratified: students most readily enacted visible, procedural strategies aligned with exam formats, while complex strategy use remained sensitive to perceived difficulty, time pressure, and confidence.

Adaptation of SRL Reading Strategies

Adaptation concerned whether students could adjust their strategy use according to task type, text difficulty, and comprehension breakdown. This dimension distinguished students who merely knew strategies from those beginning to read more flexibly and self-regulatively. Some students described choosing different strategies depending on task requirements---scanning rapidly for matching tasks but shifting to word-class analysis and contextual inferencing for gap-filling. Others reported adapting their treatment of difficult sentences based on whether they appeared central to questions.

Yet adaptation remained uneven. For some, flexibility was limited by task-specific fear, especially in gap-filling tasks where learners knew relevant strategies but failed to activate them when tasks felt too difficult. Others used adaptation in a restricted, compensatory sense such as skipping or guessing, rather than deliberately reconfiguring their strategy set. Nonetheless, many students no longer described reading every text the same way, increasingly recognising that different situations called for different strategic handling---an important marker of developing self-regulated reading behaviour.

Transfer of SRL Reading Strategies

Transfer was present but not equally strong across participants. Several students explicitly stated that they had begun using similar strategies when reading Chinese texts, revising subject content, or preparing for later English exams such as CET-4. In these accounts, scanning, monitoring, identifying main ideas, and summarising appeared especially portable. Transfer was most convincing when students provided concrete examples: some described marking keywords in Chinese reading tasks, others said they now summarised chapters more systematically, and still others reported using newly learned methods in CET-4 practice. Such cases suggest that for at least part of the sample, strategy instruction had begun reshaping broader academic literacy practices.

At the same time, not all students reported strong transfer. For some, strategies remained tied mainly to English reading lessons or the immediate exam setting. Others mentioned possible transfer only in general terms without indicating regular use in other domains. This suggests transfer was one of the clearest points of differentiation among students: whereas some had incorporated strategies into wider learning practices, others remained at the stage of task-bound application. Overall, students' responses were characterised by broad positive engagement but differentiated strategic development, laying the foundation for the learner typology below.

Qualitative Learner Profiles

Cross-case comparison of the 19 interview cases revealed three broad learner profiles capturing students' varied responses. Rather than rigid categories, these profiles describe dominant response patterns that were internally coherent yet still allowed for individual variation at the margins. The profiles differed not in whether students liked the instruction, but in how far they were able to understand, operationalise, adapt, and transfer the taught strategies.

Strategic Internalisers

Students in this profile (n = 9) demonstrated the most integrated and stable response to the SRL intervention. They showed strong understanding of the taught strategies, evaluated them positively, and reported using them consistently across different reading tasks. More importantly, their strategy use was not confined to surface-level techniques such as keyword matching. Instead, they described combining multiple strategies---including scanning, monitoring, inferencing, summarising, and structural analysis---in ways that helped them manage reading time, comprehend difficult sentences, and regulate their own reading processes.

A central feature of this profile was that strategy use had become part of the students' habitual way of approaching texts. These learners no longer described reading as simply moving through an article line by line or searching mechanically for answers. Rather, they approached texts with clearer goals, stronger awareness of text structure, and a greater sense of control over comprehension difficulties. Several also reported a marked reduction in anxiety when facing long or unfamiliar passages. As S3 stated: 'yi qian kan dao chang wen zhang jiu pa, xian zai zhi dao you fang fa ke yi qu ying dui ta, jiu mei you na me pa le' (I used to fear long articles; now I know there are ways to handle them, so I am not so scared anymore).

These students also displayed relatively high adaptive capacity. In matching tasks they used scanning and keyword location, but shifted to grammatical and contextual inferencing in gap-filling tasks. In close-reading tasks, they reported breaking down sentence structure or reconstructing meaning from context. A defining characteristic was transfer: S18 explained that 'hou mian qu zuo si ji ti mu de shi hou, hui zi jiao yun yong zhe xie fang fa qu zuo, dao zhi si ji yue du ti sheng ting da de' (when doing CET-4 practice later, I consciously used these methods, which led to significant improvement). S9 noted reading had shifted from locating answers to understanding 'what the text is trying to tell us.' Even within this group, evaluation was sometimes viewed as less relevant in high-pressure tests, yet such reservations did not

weaken overall engagement. These learners represented the clearest case of strategy instruction being internalised into a durable, self-regulated reading approach.

Selective Adopters

The second profile (n = 6) comprised students who responded positively but adopted strategies selectively. They typically recognised the intervention's usefulness and articulated the value of particular strategies, especially scanning, identification of main ideas, keyword marking, and skipping unimportant details. S5 described identification as useful because 'tiao guo sheng ci dui yu wo lai shuo shi you hao de' (skipping unknown words is helpful), showing how such strategies reduced pressure created by limited vocabulary. S16 made the selectivity explicit: she would not use all strategies but only 'ge bie wo jue de bi jiao shi he wo zi ji de' (only those I think suit me).

These learners performed reasonably in matching tasks where scanning and keyword-based location could be used directly. However, their strategy use became less stable in tasks requiring layered inferencing or tolerance of ambiguity. In gap-filling tasks, they frequently fell back on familiar techniques such as word-class identification or elimination without extending into fuller semantic analysis. Elaboration and evaluation were often seen as too time-consuming or insufficiently relevant. Their adaptation was partial: they had clearly changed reading habits but their repertoire remained narrow, shaped by task familiarity and practicality. Transfer was present but uneven---some reported applying strategies to Chinese reading, whereas others referred to only occasional use beyond the English classroom. Selective Adopters occupied a middle position: they had moved beyond unstrategic reading but their development remained concentrated around a preferred subset of methods.

Reactive Strategy Users

The third profile (n = 4) consisted of students who were not resistant in principle but whose strategy use remained reactive, unstable, and dependent on task difficulty. These learners generally understood at least some strategies and did not deny their usefulness. Nevertheless, strategy use had not become a stable default pathway; strategies were more likely to be activated after problems emerged. S6 captured this: 'nao hai zhong bu hui zi ran fu xian ce lve, jiu shi dan chun di ping yu gan' (strategies don't come to mind naturally; I just rely on intuition). S14 explained she would 'xiang qi lai yong shen me fang fa lai tui yi xia' (think of some method to reason through it) only when unable to answer---a compensatory rather than proactive form of strategic reading.

Their enactment was weaker and more fragmented than the other groups'. In gap-filling and demanding interpretive tasks, they often reported being overwhelmed by lexical uncertainty, logical ambiguity, or time pressure. Under such conditions, strategy use could collapse into skipping, choosing by feel, or returning to old habits. Motivation remained strongly tied to external requirements: S17 acknowledged the driving force was to 'ba si liu ji shen me de kao hao' (do well on CET-4 and CET-6), with motivation disappearing after exams. Some did report increased confidence, yet the broader pattern suggested strategic engagement was contingent on situational demands rather than grounded in a stable self-regulated orientation.

Taken together, the three learner profiles suggest that students' responses were shaped less by simple acceptance versus rejection than by how far strategy knowledge had been translated into usable, adaptive, and transferable reading practice. The typology highlights a continuum from relatively deep internalisation, through selective adoption, to more reactive and contingent strategy use.

Discussion

Closing the gap between pedagogical intentions and learners' actual strategy uptake is a persistent challenge in SRL instruction in EFL reading classrooms (Teng & Zhang, 2022). This study addresses this challenge by developing a nuanced typology---Strategic Internalisers, Selective Adopters, and Reactive Strategy Users---to understand the diverse ways first-year Chinese university EFL students respond to SRL reading strategy instruction targeting metacognitive and cognitive strategies. By situating these responses within broader cognitive, motivational, and contextual factors, this study provides insights into why some learners successfully embrace SRL strategies while others remain constrained.

A key insight lies in the tendency among Reactive Strategy Users to default to habituated, intuition-driven approaches despite expressing generally positive attitudes toward the intervention. As S6 candidly described, strategies do not emerge naturally---reflecting a critical disconnection between conceptual understanding and procedural automaticity in self-regulated learning (Winne & Hadwin, 1998). Within China's exam-oriented English education, where teacher-centered pedagogy and high-stakes assessment have historically dominated instructional landscapes (Ministry of Education, 2020), rote memorisation and vocabulary-translation approaches are deeply entrenched, leaving learners with low self-efficacy for autonomous strategy deployment. Bandura's (1986) social cognitive theory posits that self-efficacy beliefs profoundly influence willingness to adopt new behaviours, and these reactive learners' constrained strategy use mirrors their limited confidence in self-directed learning.

This reactivity is further reinforced by cognitive load dynamics. According to Efklides's (2011) MASRL model, the interplay between metacognition, motivation, and affect fundamentally shapes self-regulated learning. Reactive Strategy Users often experience heightened anxiety when confronted with complex academic texts, as working memory resources are consumed by decoding processes rather than allocated to higher-order comprehension monitoring. As S14 explained, strategies were typically activated only as remedial tools: 'dang jie bu chu ti shi, cai xiang qi yong yi xie fang fa qu tui li' (when I cannot solve a problem, only then do I remember to use some methods). This remedial trigger pattern indicates that strategies function as emergency resources rather than integrated habits. S17's externally driven motivation---'wei le guo si liu ji, kao wan le jiu mei le' (just to pass CET-4; once over, the motivation is gone)---exemplifies a vicious cycle where limited proficiency constrains deployment, restricted success undermines self-efficacy, and accumulated frustration reinforces avoidance.

In marked contrast, Strategic Internalisers demonstrate strong personal agency grounded in robust metacognitive awareness and positive motivational dispositions. This largest profile (n = 9) exhibited high understanding, positive valuation, high enactment, adaptation, and transfer across the analytical framework. Their confident and flexible

strategy use aligns with Zimmerman's (2002) proposition that self-regulated learners proactively plan, monitor, and evaluate, grounded in his earlier social cognitive framework (Zimmerman, 1989). These learners often exhibit higher English proficiency and prior successful learning experiences, which function as motivational anchors reinforcing self-efficacy (Bandura, 1986; Pintrich, 2000). Their development trajectory resonates with the cyclical nature of SRL: successful strategy deployment generates positive outcomes that further strengthen regulatory skills and motivational investment.

Several cases illustrate how deep internalisation extends beyond tool adoption to encompass shifts in reading orientation itself. S9 explicitly distinguished between reading methods and test-taking tricks---'wo zhang wo de shi yue du fang fa, er bu shi zuo ti ji qiao' (what I mastered are reading methods, not test-taking techniques)---revealing a conceptual transformation from answer-seeking to meaning-construction. S3 connected strategy learning to emotional resilience: 'yi qian jue de hai pa, xian zai zhi dao you fang fa ke yi chu li, jiu mei na me hai pa le' (I used to feel intimidated; now I know there are methods to handle it). For lower-proficiency learners in this group, strategies served as compensatory resources: S12 described them as a lifeline for managing vocabulary limitations. Their willingness to share strategies with peers aligns with Hadwin et al.'s (2017) framework of co-regulation. Under conducive classroom conditions, these learners can function as catalysts for broader classroom change.

The Selective Adopters illustrate the fragile balance between emerging awareness and implementation difficulty. These learners (n = 6) possess sufficient motivation but lack consolidated skills for sustained autonomous use across all task conditions---consistent with Boekaerts and Cascallar's (2006) observation that the gap between theoretical understanding and practical application remains substantial. S16's vocabulary threshold effect---'kan dao bu ren shi de dan ci, ji ben jiu bu zen me yong ce lve, zhi jie fang qi' (when I see unfamiliar words, I basically don't use strategies and just give up)---reveals why positive valuation does not automatically translate into high enactment. S19's reported strategy overload further complicates the picture. These learners' reform beliefs conflict with implementation realities, producing regulatory uncertainty.

The Selective Adopters' pattern is particularly valuable for understanding the affective dimension of strategy engagement. S5, a lower-proficiency learner, found strategies emotionally transformative: 'yi qian jue de ying yu yue du hen nan, xian zai hao duo le, zhi shao ke yi jie shou le' (I used to find English reading very difficult; now it is much better, at least acceptable). This demonstrates that even when strategy deployment remains uneven, the affective benefits of SRL instruction can be substantial. These factors create reinforcing cycles rather than operating independently. High proficiency provides cognitive resources; successful deployment strengthens metacognitive awareness and self-efficacy; positive affective experiences further motivate engagement---a virtuous cycle explaining Strategic Internalisers' deepening competence. Conversely, Reactive Strategy Users experience vicious cycles. The Selective Adopters occupy an intermediate position. Critically, instructional quality emerges as a potential circuit breaker---even learners in constraining contexts show increased engagement with scaffolded instruction (Li et al., 2022).

These findings resonate with cross-linguistic research on SRL in Chinese educational contexts. Qi et al. (2025) found that students' strategy use in English reading is profoundly shaped by prior literacy experiences and institutional expectations. Tse et al. (2022) similarly documented significant relationships between SRL strategies and reading comprehension among bilingual students in Hong Kong, reinforcing that metacognitive regulation is culturally and linguistically situated. While confirming these broader patterns, the present typology extends this literature by demonstrating that even within a single instructional context, learners construct qualitatively distinct response profiles---a nuance that aggregated variable-centered analyses may obscure. The study offers transferable insights for other centralised, exam-driven EFL systems where structural constraints and learner agency interact to shape strategy instruction outcomes.

Building on these mechanisms, the typology directly informs differentiated instructional strategies. Reactive Strategy Users require structured implementation guides, extensive modeling, and intensive scaffolding to build metacognitive confidence. Embedding such scaffolding within guided annotation protocols and think-aloud routines may reduce cognitive load while building regulatory competence. For these learners, explicit strategy scripts are essential bridges between conceptual knowledge and spontaneous deployment. Selective Adopters benefit most from collaborative learning environments with peer models and formative feedback. Pairing them with Strategic Internalisers creates productive co-regulatory dynamics. Strategic Internalisers should be positioned as peer mentors, transforming isolated success into catalysts for classroom change. Such approaches acknowledge learners at varying stages of SRL readiness, each requiring distinct support.

The predominance of Strategic Internalisers (47%) with no explicitly resistant type warrants interpretation. This likely reflects the interplay between China's education culture and methodological factors: exam-oriented culture may encourage performative compliance (Li et al., 2022), self-reported data may amplify social desirability bias, and voluntary participation likely introduced selection bias. However, this distribution may also partially reflect genuine engagement given the scaffolded 12-week intervention design. Importantly, the typology captures expressed orientations rather than necessarily actual deployment. The relationships among profiles are dynamic: transitions may occur under conducive conditions, though as a cross-sectional study, these remain theoretical possibilities requiring longitudinal examination (Creswell & Poth, 2018; Patton, 2015). Finally, the study focused on self-reported perceptions; future research should incorporate think-aloud protocols and reading logs to investigate alignment between stated orientations and actual processes (Schunk, 2005).

Conclusion

This study presents a qualitative typology of first-year Chinese university EFL learners' responses to SRL reading strategy instruction, identifying three profiles: Strategic Internalisers, Selective Adopters, and Reactive Strategy Users. The typology reveals that learners vary along a continuum from deep internalisation through selective adoption to reactive strategy use, challenging assumptions of homogeneous response to instruction. The findings carry practical implications: Strategic Internalisers can serve as peer mentors; Selective Adopters require collaborative environments to consolidate their repertoire; Reactive Strategy Users need intensive scaffolding to build procedural fluency.

Several limitations temper generalisability: reliance on self-reported data, cross-sectional design, voluntary sampling, and focus on a single institution. Future research should employ longitudinal designs, observational methods such as think-aloud protocols, and intervention studies testing differentiated instruction based on the proposed typology. Expanding the sample to include multiple institutions and proficiency levels would further enhance generalisability.

References

Anderson, N. J. (2003). Scrolling, clicking, and reading English: Online reading strategies in a second/foreign language. *The Reading Matrix*, *3*(3), 1–33.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Boekaerts, M. (1999). Self-regulated learning: Where we are today. *International Journal of Educational Research*, *31*(6), 445–457. https://doi.org/10.1016/S0883-0355(99)00014-2

Boekaerts, M., & Cascallar, E. (2006). How far have we moved toward the integration of theory and practice in self-regulation? *Educational Psychology Review*, *18*(3), 199–210. https://doi.org/10.1007/s10648-006-9013-4

Chen, J., Lin, C.-H., Chen, G., & Fu, H. (2023). Individual differences in self-regulated learning profiles of Chinese EFL readers: A sequential explanatory mixed-methods study. *Studies in Second Language Acquisition*, *45*(4), 955–978. https://doi.org/10.1017/S0272263122000584

Council of the European Union. (2018). Council Recommendation of 22 May 2018 on key competences for lifelong learning (2018/C 189/01). *Official Journal of the European Union*, C 189, 1–13. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018H0604(01)

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Dinh, C. T., & Phuong, H.-Y. (2025). Teaching self-regulated learning strategies to EFL students in MOOCs: A case study in Vietnam. *Turkish Online Journal of Distance Education*, *26*(1), 101–121. https://doi.org/10.17718/tojde.1440472

Efklides, A. (2011). Interactions of metacognition with motivation and affect in self-regulated learning: The MASRL model. *Educational Psychologist*, *46*(1), 6–25. https://doi.org/10.1080/00461520.2011.538645

Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading* (2nd ed.). Routledge.

Hadwin, A. F., Järvelä, S., & Miller, M. (2017). Self-regulation, co-regulation, and shared regulation in collaborative learning environments. In D. H. Schunk & J. A. Greene (Eds.), *Handbook of self-regulation of learning and performance* (2nd ed., pp. 83–106). Routledge. https://doi.org/10.4324/9781315697048-6

Karlen, Y. (2016). Differences in students' metacognitive strategy knowledge, motivation, and strategy use: A typology of self-regulated learners. *The Journal of Educational Research*, *109*(3), 253–265. https://doi.org/10.1080/00220671.2014.942895

Kluge, S. (2000). Empirically grounded construction of types and typologies in qualitative social research. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *1*(1), Article 14. https://doi.org/10.17169/fqs-1.1.1124

Kolić-Vehovec, S., & Bajšanski, I. (2007). Comprehension monitoring and reading comprehension in bilingual students. *Journal of Research in Reading*, *30*(2), 198–211. https://doi.org/10.1111/j.1467-9817.2006.00319.x

Kuckartz, U., & Rädiker, S. (2023). *Qualitative content analysis: Methods, practice and software* (2nd ed.). SAGE Publications Ltd.

Lau, K.-L. (2020). The effectiveness of self-regulated learning instruction on students' classical Chinese reading comprehension and motivation. *Reading and Writing*, *33*(8), 2001–2027. https://doi.org/10.1007/s11145-020-10028-2

Li, H., Gan, Z., Leung, S. O., & An, Z. (2022). The impact of reading strategy instruction on reading comprehension, strategy use, motivation, and self-efficacy in Chinese university EFL students. *SAGE Open*, *12*(1), 1–15. https://doi.org/10.1177/21582440221086659

Mayring, P. (2022). *Qualitative content analysis: A step-by-step guide*. SAGE Publications Ltd. https://doi.org/10.4135/9781036231798

Ministry of Education of the People's Republic of China. (2020). *College English curriculum guidelines (2020 edition)*. Higher Education Press.

Ministry of Education. (2018). *China's standards of English language ability*. Higher Education Press.

OECD. (2019a). *OECD future of education and skills 2030: OECD learning compass 2030*. https://www.oecd.org/education/2030-project/

OECD. (2019b). *PISA 2018 results (Volume I): What students know and can do*. https://doi.org/10.1787/5f07c754-en

Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, *36*(2), 89–101. https://doi.org/10.1207/S15326985EP3602_4

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451–502). Academic Press. https://doi.org/10.1016/B978-012109890-2/50043-3

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, *16*(4), 385–407. https://doi.org/10.1007/s10648-004-0006-x

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*(1), 33–40. https://doi.org/10.1037/0022-0663.82.1.33

Qi, J., Reynolds, B. L., & Bai, X. (2025). Examining the relationship between self-regulated learning strategies and reading comprehension in Chinese and English among primary school students in mainland China: An extension of Tse, Lin, & Ng (2022). *Reading in a Foreign Language*, *37*(1), 1–38. https://doi.org/10.64152/10125/67480

Schreier, M. (2012). *Qualitative content analysis in practice*. SAGE Publications Ltd.

Schunk, D. H. (2005). Self-regulated learning: The educational legacy of Paul R. Pintrich. *Educational Psychologist*, *40*(2), 85–94. https://doi.org/10.1207/s15326985ep4002_3

Tse, S. K., Lin, L., & Ng, R. H. W. (2022). Self-regulated learning strategies and reading comprehension among bilingual primary school students in Hong Kong. *International Journal of Bilingual Education and Bilingualism*, *25*(9), 3258–3273. https://doi.org/10.1080/13670050.2022.2049686

UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. https://unesdoc.unesco.org/ark:/48223/pf0000379381

Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Metacognition in educational theory and practice* (pp. 277–304). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410602350-19

Yapp, D. J., de Graaff, R., & van den Bergh, H. (2023). Effects of reading strategy instruction in English as a second language on students' academic reading comprehension. *Language Teaching Research*, *27*(6), 1456–1479. https://doi.org/10.1177/1362168820985236

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, *81*(3), 329–339. https://doi.org/10.1037/0022-0663.81.3.329

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). Academic Press. https://doi.org/10.1016/B978-012109890-2/50031-7

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, *41*(2), 64–70. https://doi.org/10.1207/S15430421TIP4102_2

Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, *23*(4), 614–628. https://doi.org/10.3102/00028312023004614

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