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IMPROVING READING COMPETENCE OF FUTURE ENGLISH LANGUAGE TEACHERS VIA METACOGNITIVE APPROACH

ABSTRACT

The issue of reading competence development among future English language teachers remains one of the most challenging aspects of teacher education, particularly in contexts where reading is treated primarily as a receptive skill rather than a consciously regulated cognitive process. From this perspective, the present article addresses reading not as passive text decoding but as an activity that requires continuous planning, monitoring, and reflective control on the part of the learner.

In line with this intention, the research is structured around several interconnected objectives: (1) to clarify the conceptual and methodological foundations of metacognition within foreign language pedagogy; (2) to identify key components of reading competence relevant to the professional development of future English language teachers; (3) to systematize metacognitive strategies related to planning, self-monitoring, and reflective evaluation during reading; (4) to define instructional conditions necessary for effective metacognitive guidance; and (5) to examine the impact of metacognitive instruction on learners' comprehension depth and strategic awareness.

The research design combines analytical observation of instructional practices with quantitative assessment of students' reading performance. Metacognitive tasks implemented before, during, and after reading activities resulted in observable improvements in learners' strategic behavior. The findings indicate increased comprehension accuracy, reduced

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BO'LAJAK INGLIZ TILI O'QITUVCHILARINING O'QISH MALAKASINI METAKOGNITIV YONDASHUV ASOSIDA RIVOJLANTIRISH

ANNOTATSIYA

Bo'lajak ingliz tili o'qituvchilarida o'qish kompetensiyasini rivojlantirish masalasi o'qituvchilar ta'limining eng murakkab jihatlaridan biri bo'lib qolmoqda. Bu ayniqsa o'qish ongli ravishda tartibga solinadigan kognitiv jarayon emas, balki asosan retseptiv ko'nikma sifatida qaraladigan muhitlarda yaqqol ko'rinadi. Ushbu nuqtai nazardan, mazkur maqolada o'qish matnini passiv dekodlash sifatida emas, balki o'quvchi tomonidan doimiy rejalashtirish, kuzatish va refleksiv nazoratni talab qiladigan faoliyat sifatida ko'rib chiqiladi.

Shu maqsadda tadqiqot bir nechta o'zaro bog'liq vazifalar atrofida tuzilgan: (1) chet tili pedagogikasida metakognitivlikning konseptual va metodologik asoslarini oydinlashtirish; (2) bo'lajak ingliz tili o'qituvchilarining kasbiy rivojlanishi uchun muhim bo'lgan o'qish kompetensiyasining asosiy tarkibiy qismlarini aniqlash; (3) o'qish jarayonida rejalashtirish, o'z-o'zini nazorat qilish va refleksiv baholash bilan bog'liq metakognitiv strategiyalarni tizimlashtirish; (4) samarali metakognitiv yo'naltirish uchun zarur bo'lgan ta'lim sharoitlarini belgilash; va (5) metakognitiv ta'limning o'quvchilarning tushunish chuqurligi va strategik ongliligi darajasiga ta'sirini o'rganish.

Tadqiqot dizayni ta'lim amaliyotini tahliliy kuzatish va talabalarning o'qish ko'rsatkichlarini miqdoriy baholashni o'z ichiga oladi. O'qishdan oldin, o'qish davomida va undan keyin qo'llanilgan metakognitiv topshiriqlar o'quvchilarning strategik xatti-harakatlarida

reliance on random guessing, and enhanced ability to consciously select and apply reading strategies. Quantitative results show that students receiving metacognitive instruction achieved higher scores in inferential comprehension tasks and demonstrated more consistent progress in reflective post-reading activities.

Additionally, learners displayed greater metacognitive awareness, manifested in their ability to identify comprehension difficulties and regulate reading processes independently. The study confirms that systematic integration of metacognitive instruction significantly contributes to the development of reading competence and supports the preparation of reflective and strategically competent future English language teachers.

Key words: reading competence, metacognitive approach, future English language teachers, metacognitive strategies, reading comprehension, teacher education, strategic awareness, self-regulated learning.

sezilarli yaxshilanishga olib keldi. Natijalar tushunish aniqligining oshganini, tasodifiy taxminlarga tayanishning kamayganini va o'qish strategiyalarini ongli ravishda tanlash hamda qo'llash qobiliyatining yaxshilanganini ko'rsatadi. Miqdoriy natijalar shuni ko'rsatadiki, metakognitiv ta'lim olgan talabalar xulosaviy tushunish topshiriqlarida yuqori natijalarga erishdilar va o'qishdan keyingi refleksiv faoliyatlarda izchil rivojlanishni namoyish etdilar.

Bundan tashqari, o'quvchilar yuqori darajadagi metakognitiv onglilikni namoyon etdilar. Bu ularning tushunishdagi qiyinchiliklarni aniqlash va o'qish jarayonlarini mustaqil ravishda boshqarish qobiliyatlarida yaqqol ko'rindi. Tadqiqot shuni tasdiqlaydiki, metakognitiv o'qitishning tizimli integratsiyasi o'qish kompetensiyasini rivojlantirishga sezilarli hissa qo'shadi va refleksiv hamda strategik jihatdan kompetentli bo'lajak ingliz tili o'qituvchilarini tayyorlashni qo'llab-quvvatlaydi.

Kalit so'zlar: o'qish malakasi, metakognitiv yondashuv, kelajakdagi ingliz tili o'qituvchilari, metakognitiv strategiyalar, o'qib tushunish, o'qituvchilar tayyorlash, strategik ong, o'z-o'zini boshqaradigan ta'lim.

INTRODUCTION

In the current landscape of foreign language education, reading competence occupies a central position in the professional preparation of future English language teachers. Reading is no longer perceived merely as a technical skill aimed at extracting information from written texts; rather, it is increasingly understood as a cognitively demanding process that requires awareness, regulation, and purposeful strategic engagement. This shift is particularly relevant in higher education contexts, where future teachers are expected to operate with academically complex texts and to demonstrate a high level of reflective thinking in both learning and teaching situations. Nevertheless, despite the acknowledged importance of reading competence, its development within teacher education programs often remains limited to outcome-based assessment, leaving the internal cognitive mechanisms of reading insufficiently addressed.

Empirical studies conducted in recent years indicate that many learners, including pre-service teachers, experience persistent difficulties in reading comprehension, not because of inadequate linguistic knowledge but because of a lack of conscious control over reading strategies [Ataboyeva, 2024; 255]. Learners frequently approach texts intuitively, without planning their reading goals, monitoring comprehension breakdowns, or evaluating the effectiveness of chosen strategies. Research demonstrates that such unsystematic reading behavior results in superficial

understanding and unstable performance, particularly when learners encounter unfamiliar academic or professional texts [Iskandarova, 2025; 29]. These findings suggest that reading competence cannot be fully developed without addressing the metacognitive dimension of learning.

The problem becomes even more pronounced when viewed from the perspective of teacher education. Future English language teachers are required not only to comprehend texts effectively themselves, but also to serve as models of strategic reading for their students. Studies focusing on the professional preparation of English teachers emphasize that methodological competence in teaching reading is closely linked to teachers' own metacognitive awareness and ability to articulate reading strategies explicitly [Devorova, 2025; 115]. However, diagnostic observations reveal that many pre-service teachers possess a limited understanding of how reading strategies function and how they can be consciously regulated in instructional contexts [Sattorova, 2025; 1006]. This discrepancy between professional expectations and actual cognitive readiness highlights a critical gap in current teacher education practices.

Recent research in foreign language pedagogy demonstrates a growing interest in metacognitive approaches to reading comprehension across diverse educational contexts. Numerous studies conducted in general EFL settings report that explicit instruction in metacognitive strategies enhances learners' ability to plan reading goals, monitor comprehension, and evaluate understanding outcomes. Empirical findings from school and university-level contexts indicate that such instruction contributes to improved inferential comprehension, deeper textual processing, and increased learner autonomy [Bustami et.al., 2017; 430].

At the same time, a comparative analysis of existing literature reveals that the majority of studies on metacognitive reading strategies are situated in general language learning contexts and focus primarily on short-term instructional effects. Research conducted in Asian, European, and Middle Eastern educational environments consistently emphasizes performance gains among language learners, yet rarely addresses reading competence as a professionally oriented skill. In many cases, pre-service teachers are included in research samples only incidentally, without considering the specific cognitive and pedagogical demands of teacher education.

Studies that explicitly address future English language teachers tend to concentrate on methodological competence or instructional techniques, while reading competence is often treated as a background academic ability rather than as a consciously regulated professional resource. As a result, the role of metacognitive instruction in shaping future teachers' strategic reading behavior remains insufficiently examined [Zuraidah, & Kamarulzaman, 2016; 595]. This limitation is particularly evident in higher education contexts, where teacher trainees are expected to engage with complex theoretical, methodological, and research-based texts.

Against this backdrop, a clear research gap can be identified. While metacognitive approaches to reading have been widely validated in general EFL contexts, their systematic application in the professional preparation of future English language

teachers has not received adequate empirical attention [Solovyov, & Ustinova, 2020; 74]. Existing studies rarely investigate how metacognitive instruction influences not only reading comprehension outcomes but also the development of strategic awareness essential for pedagogical practice.

The present study addresses this gap by examining reading competence as a consciously regulated and professionally embedded activity within teacher education. Unlike previous research that primarily focuses on general language learners, this study situates metacognitive instruction within the specific context of preparing future English language teachers, thereby highlighting its role in the formation of reflective and strategically competent professionals.

Within this context, the metacognitive approach emerges as a theoretically grounded and pedagogically effective framework for improving reading competence. Metacognition, understood as awareness and regulation of one's cognitive processes, enables learners to approach reading as a purposeful activity involving planning, monitoring, and evaluation [Tang et.al, 2024; 372]. A number of studies confirm that explicit instruction in metacognitive strategies contributes to improved comprehension, deeper textual interpretation, and greater learner autonomy [Bustami et.al., 2017; 430]. Importantly, these improvements are not confined to short-term performance gains but support the long-term development of self-regulated reading behavior.

At the same time, the effectiveness of metacognitive instruction depends largely on how it is integrated into the educational process. Research indicates that isolated strategy training yields limited results, whereas systematic and reflective incorporation of metacognitive tasks into reading instruction leads to more sustainable outcomes [Tang et.al, 2024; 372]. For future English language teachers, this integration must take into account the professional orientation of their studies, including exposure to pedagogical texts, methodological literature, and discipline-specific materials. In this sense, metacognitive instruction should function not only as a learning tool but also as a component of professional identity formation.

Thus, the development of reading competence among future English language teachers requires a shift from traditional text-centered instruction toward cognitively oriented pedagogical models that foreground strategic awareness and reflective control [Ismoilova, 2025; 165]. The present study is grounded in this assumption and seeks to examine how a metacognitive approach can be employed to strengthen reading competence in teacher education contexts. By focusing on reading as a consciously regulated activity, the study aims to address existing methodological gaps and contribute to the enhancement of professional training for future English language teachers. In the process of training future English language teachers, reading often becomes a silent expectation rather than an explicitly shaped competence. University students are generally assumed to "know how to read," especially once they reach advanced levels of language proficiency. However, classroom reality demonstrates a different picture. Many pre-service teachers approach academic texts with confidence at the lexical or grammatical level, yet struggle when required to sustain meaning across longer passages, evaluate arguments critically, or adapt their reading strategies to unfamiliar

genres [Roza, & Meruyert, 2016; 595]. These difficulties are frequently interpreted as individual weaknesses, while their pedagogical roots remain unexamined.

Observations from higher education contexts indicate that such problems are rarely caused solely by insufficient language knowledge [Iskandarova, 2025; 30]. Instead, they are closely connected to the way reading has been taught and experienced throughout prior stages of education. Learners tend to rely on habitual reading behaviors formed earlier, often without being aware of why a particular strategy works in one situation and fails in another. Research focusing on English language learning confirms that even academically successful students may demonstrate unstable comprehension when reading complex texts if they lack conscious control over their reading processes [Iskandarova, 2025; 30]. This indicates that reading competence involves more than automatic decoding or vocabulary recognition. For future English language teachers, this issue has serious professional implications. Teacher education is not limited to personal academic achievement; it also involves the gradual formation of pedagogical thinking. When pre-service teachers themselves read intuitively and without reflection, they are unlikely to guide their future learners toward strategic reading. Studies devoted to the preparation of English teachers underline that methodological competence in teaching reading depends on teachers' ability to explain, model, and adapt reading strategies consciously [Devorova, 2025; 115]. Without this awareness, reading instruction risks becoming mechanical and outcome-driven.

The concept of metacognition offers a productive lens through which these challenges can be reconsidered. Rather than treating reading as a linear activity, metacognitive theory emphasizes the learner's active role in managing cognitive effort. Planning how to approach a text, monitoring understanding while reading, and evaluating results afterward are not spontaneous skills; they require systematic development. Research in the field of reading pedagogy demonstrates that learners who are introduced to metacognitive strategies begin to perceive reading as a controllable process rather than an unpredictable task [Roza, & Meruyert, 2016; 596]. This shift changes not only how texts are read but also how learners relate to reading difficulties.

Classroom-based studies further suggest that metacognitive strategy instruction influences the overall learning environment. When learners are encouraged to articulate their reading intentions and reflect on comprehension problems, classroom interaction becomes more cognitively focused. Such conditions support deeper engagement with texts and reduce learners' dependence on external correction [Nida et al., 2025; 502]. Importantly, these effects are not limited to school contexts; similar tendencies have been observed in higher education, where students exposed to metacognitive guidance demonstrate greater independence in academic reading tasks [Bustami et al., 2017; 431]. From the perspective of professional development, metacognitive awareness plays a bridging role between learning and teaching. Future English language teachers who understand how their own reading processes function are better prepared to design instructional tasks and anticipate learners' difficulties. Research devoted to metacognitive approaches in language education highlights that such awareness

contributes to the formation of reflective practitioners capable of making informed pedagogical decisions [Kasimkhodjayeva, 2025; 115]. In this sense, metacognition becomes part of professional identity rather than a purely cognitive skill.

Nevertheless, the development of metacognitive competence does not occur automatically. Evidence from action research indicates that learners benefit most when metacognitive strategies are introduced gradually, practiced consistently, and linked to specific reading challenges [Lian & Azlina, 2020; 90]. Sporadic strategy training produces limited results, whereas systematic integration encourages learners to internalize strategic behavior. Over time, this leads to greater adaptability when encountering new text types and academic demands [Uldárico, 2020; 110]. These considerations suggest that improving reading competence in teacher education requires a fundamental rethinking of instructional priorities. Reading must be treated as a consciously regulated activity supported by metacognitive guidance rather than as a background skill assumed to develop on its own. Building on this understanding, the present study explores how a metacognitive approach can strengthen reading competence among future English language teachers and support their professional preparation in a more reflective and sustainable manner.

The issue of reading competence in the professional preparation of future English language teachers becomes most evident at the point where theoretical expectations collide with instructional reality [Mikhael, 2014; 307]. Teacher education programs typically assume that advanced language proficiency ensures effective reading, particularly at the university level. Yet sustained observation of pre-service teachers suggests otherwise. Even learners who demonstrate strong grammatical control and extensive vocabulary often encounter difficulties when working with theoretically dense or methodologically complex texts. These difficulties tend to surface not immediately, but gradually, as texts require comparison, inference, and conceptual synthesis rather than surface comprehension [Moussa, & El Cheikh, 2024; 25]. Such observations compel a reconsideration of how reading competence is conceptualized within teacher education. If reading is treated primarily as a receptive skill whose success is measured through correct answers, then the internal processes that govern comprehension remain outside pedagogical attention. Empirical findings indicate that under these conditions, learners rely on habitual strategies developed earlier, regardless of whether those strategies remain effective in new academic contexts [Iskandarova, 2025; 30]. As a result, reading becomes increasingly effortful and inconsistent, particularly when texts demand reflective engagement.

Within this framework, metacognition emerges not as an optional enhancement but as a necessary explanatory construct. Research in language pedagogy consistently points to the role of metacognitive regulation in sustaining comprehension across extended texts and unfamiliar genres [Tang et al., 2024; 375]. However, what remains insufficiently addressed is how this regulation develops within teacher education and why it often fails to become an integral part of professional training. The assumption that learners will naturally acquire metacognitive control through exposure to texts appears increasingly untenable. For future English language teachers, the implications

are particularly significant [Mamadjanova, 2025; 73]. Reading in the professional domain is inseparable from decision-making: selecting instructional materials, interpreting methodological recommendations, and evaluating pedagogical innovations all depend on the ability to read critically and reflectively. Studies focusing on teacher competence suggest that when this ability is underdeveloped, professional growth becomes fragmented and reactive rather than deliberate [Sattorova, 2025; 1007]. In such cases, teachers may reproduce instructional models without fully understanding their theoretical foundations.

Metacognitive strategy instruction offers one possible response to this challenge, yet its implementation requires careful consideration. Research shows that strategy training is most effective when learners are guided to reflect on why a particular strategy is used and under what conditions it remains effective [Bustami et al., 2017; 432]. Without this reflective dimension, strategies risk becoming procedural routines rather than tools for cognitive regulation. This distinction is especially important in teacher education, where procedural knowledge alone is insufficient for professional autonomy. Another aspect that deserves attention concerns the temporal nature of metacognitive development [Ergasheva, 2024; 170]. Evidence from action research indicates that metacognitive competence does not emerge from isolated instructional episodes but rather from sustained engagement with reflective tasks embedded in regular learning activities [Lian & Azlina, 2020; 91]. From this perspective, teacher education programs that allocate limited time to strategic reflection may inadvertently undermine the development of stable reading competence.

Moreover, metacognitive reading competence contributes to a broader capacity for self-directed learning. Studies conducted in higher education contexts highlight that learners who actively regulate their reading demonstrate greater resilience when confronted with unfamiliar theoretical material and are more willing to revise their interpretations in light of new evidence [Kasimkhodjayeva, 2025; 116]. For future teachers, this disposition is essential, as professional practice increasingly requires continuous engagement with evolving educational research. At the same time, it would be misleading to portray metacognitive approaches as a universal solution. Analyses of professional development emphasize that metacognitive strategies must be adapted to specific educational contexts and learner needs [Moydinova, 2024; 39]. This suggests that teacher education should focus not only on transmitting strategies but also on cultivating an understanding of their pedagogical limits and possibilities.

Taken together, these considerations indicate that improving reading competence among future English language teachers requires a shift in instructional priorities. Reading must be addressed as a reflective, internally regulated activity that plays a formative role in professional thinking. The present study proceeds from this understanding and seeks to explore the potential of metacognitive approaches to support the development of reading competence as a core component of teacher education [Gavrilina, 2022; 109]. Proceeding from the identified research gap, the present empirical study addresses the following research questions:

1. How does metacognitive instruction influence the development of reading

competence among future English language teachers?

2. What changes occur in pre-service teachers' strategic reading behavior as a result of systematic metacognitive guidance?

3. To what extent does metacognitive instruction enhance learners' awareness and regulation of reading processes in academic and professional contexts?

METHODS

Study design

The study employed a mixed-method research design, combining quantitative and qualitative approaches in order to examine reading competence as a cognitively regulated and pedagogically situated process. This design was selected to capture both measurable changes in reading performance and qualitative shifts in learners' metacognitive awareness. The research followed a quasi-experimental pre-test/post-test structure with a comparative instructional component, allowing for the examination of differences between traditional reading instruction and metacognitive strategy-based instruction.

The participants of the study were future English language teachers enrolled in a teacher education program at a higher education institution in Uzbekistan. The sample consisted of $N = 48$ undergraduate students (aged 19–22), including 34 female and 14 male participants. All participants were studying in their second and third years of a Bachelor's degree program in English language teaching. The sample was selected using a convenience sampling method, as intact classes were used for instructional and ethical reasons.

Participants had previously completed foundational courses in language skills and methodology, which ensured a relatively homogeneous level of linguistic proficiency. Prior to the study, none of the participants had received systematic instruction in metacognitive reading strategies as part of their curriculum.

The study was conducted over a period of 8 weeks and consisted of two instructional conditions implemented sequentially within the same educational context. During the initial phase, participants received traditional reading instruction, which focused on text comprehension through vocabulary explanation, comprehension questions, and teacher-led discussion. This phase served as the baseline condition.

In the second phase, metacognitive strategy-based instruction was introduced. The same instructor conducted both instructional phases in order to control for teacher-related variables. Instructional materials and text difficulty levels were kept consistent across conditions. The metacognitive intervention explicitly targeted three core components: planning (pre-reading goal setting and prediction), monitoring (self-questioning and comprehension checks during reading), and reflective evaluation (post-reading analysis of strategy effectiveness).

Metacognitive tasks were systematically integrated into reading lessons before, during, and after reading activities. Students were guided to articulate reading goals, identify comprehension difficulties, and reflect on the strategies they employed. The duration and intensity of instruction were equivalent across both instructional

conditions.

Data were collected using multiple instruments to ensure methodological triangulation.

1. Reading Comprehension Tests

A researcher-designed pre-test and post-test were administered using academic texts relevant to teacher education. The tests assessed literal comprehension, inferential understanding, integration of ideas, and interpretation of implicit meaning. Test items included multiple-choice and short-answer questions.

2. Questionnaire on Metacognitive Awareness

A structured questionnaire was used to examine learners' awareness of reading strategies, perceived sources of difficulty, and self-evaluation practices. Responses were measured using a Likert-scale format.

3. Qualitative Data Sources

Qualitative data were collected through students' written reflections and classroom observations conducted during reading activities. These data provided insight into how learners articulated their reading processes and justified strategic decisions.

Quantitative data were analyzed using descriptive statistical methods, including calculation of mean scores, standard deviations, and percentage changes between pre-test and post-test results. These measures were used to identify patterns of improvement in reading performance.

Qualitative data analysis followed a deductive coding approach based on predefined metacognitive categories: planning, monitoring, and evaluation. A coding scheme was developed prior to analysis, drawing on established models of metacognitive regulation in reading. Students' reflections and observation notes were coded according to these categories in order to identify manifestations of metacognitive strategy use.

To enhance analytical reliability, the coding process was reviewed by an additional researcher familiar with metacognitive frameworks. Discrepancies in coding were discussed and resolved through analytical consensus. This procedure functioned as an audit process rather than a statistical inter-rater reliability calculation, which is consistent with small-scale classroom-based research.

All participants were informed about the purpose of the study and provided voluntary consent. Participation had no impact on course assessment. To ensure validity, research instruments were piloted prior to implementation, and quantitative findings were cross-checked against qualitative data. The integration of multiple data sources strengthened the interpretive credibility of the findings.

The first research question addressed how metacognitive instruction influences the development of reading competence among future English language teachers. To answer this question, students' reading performance was examined across two instructional phases: a baseline phase characterized by traditional reading instruction and a subsequent phase involving systematic metacognitive strategy-based instruction.

Pre-test results collected after the traditional instructional phase indicated

that the 48 pre-service English language teachers demonstrated relatively stable comprehension when working with short and familiar texts. However, their performance declined noticeably on tasks requiring inferential reasoning, integration of ideas across paragraphs, and interpretation of implicit meaning. This pattern suggests that baseline reading instruction supported surface-level comprehension but did not sufficiently foster higher-order reading processes relevant to academic and professional texts.

Following the metacognitive instructional phase, post-test results revealed a clear improvement in overall reading performance. As shown in Table 1, the mean score increased from 64.2 to 76.9, representing a 19.8% gain. At the same time, the standard deviation decreased, indicating greater consistency among participants. From our perspective, this reduction in performance dispersion is particularly significant, as it suggests that metacognitive instruction supported not only higher-achieving students but also those who initially demonstrated weaker reading outcomes.

Table 1

Comparative results of reading performance across instructional phases

Instructional phase	Mean score	Standard deviation	Percentage change
Traditional instruction (baseline)	64.2	8.1	—
Metacognitive instruction	76.9	6.3	+19.8%

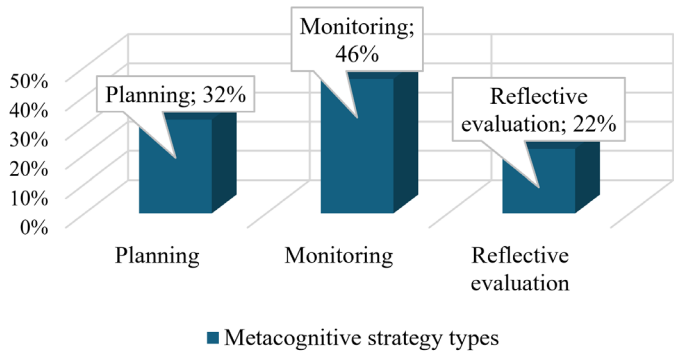
Improvement was most pronounced in tasks requiring inference and synthesis of information rather than literal comprehension. This finding indicates that metacognitive instruction primarily influenced cognitively demanding aspects of reading competence, which are essential for future English language teachers' engagement with methodological and theoretical texts. The second research question focused on changes in pre-service teachers' strategic reading behavior as a result of metacognitive instruction. Strategic behavior was identified through deductive coding of students' written reflections and classroom observation notes, based on predefined metacognitive categories: planning, monitoring, and reflective evaluation.

During the baseline instructional phase, students predominantly relied on spontaneous and unregulated reading strategies. Planning activities before reading were minimal, and monitoring strategies were employed inconsistently, typically only after comprehension breakdowns became evident. Reflective evaluation following reading tasks was rare and often superficial. These findings indicate that strategic knowledge existed in a fragmented form and was not consciously integrated into reading activity.

After the introduction of metacognitive strategy-based instruction, a qualitative shift in strategic behavior was observed. Students increasingly articulated explicit reading goals prior to engaging with texts, monitored comprehension more actively during reading, and demonstrated emerging awareness of strategy effectiveness after task completion. The distribution of metacognitive strategy use following the intervention is presented in Figure 1.

Figure 1

Distribution of metacognitive reading strategies after the intervention



Monitoring strategies emerged as the most frequently employed category, followed by planning strategies. Reflective evaluation, although less frequent, showed qualitative improvement, as learners increasingly referred to specific strategies when assessing their reading outcomes. From our standpoint, this redistribution of strategic effort reflects a transition from intuitive reading toward consciously regulated engagement with texts.

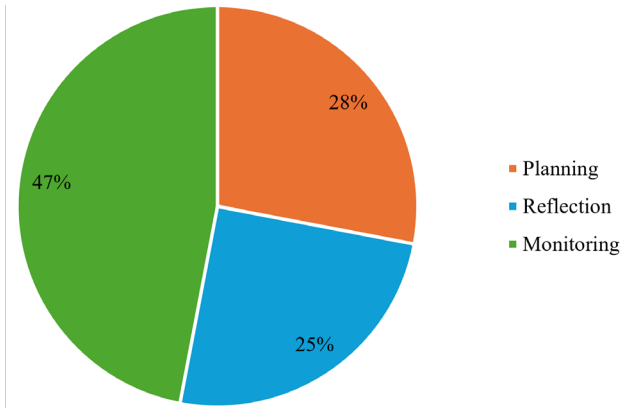
The third research question examined the extent to which metacognitive instruction enhanced learners’ awareness and regulation of reading processes. Data from the metacognitive awareness questionnaire and qualitative reflections indicate a noticeable increase in students’ self-regulatory behavior following the instructional intervention.

Post-intervention responses reveal that participants became more aware of their own reading processes and more capable of identifying sources of comprehension difficulty. Learners reported increased use of self-questioning techniques, greater persistence in resolving misunderstandings independently, and reduced reliance on immediate instructor support. This suggests that reading gradually shifted from an externally guided activity to a more internally regulated process. Figure 2. illustrates the proportional distribution of learners’ cognitive focus during reading tasks after the metacognitive instructional phase.

As shown in Figure 2, monitoring activities accounted for the largest proportion of learners’ cognitive focus, followed by planning and reflective evaluation. Although reflection remained the least dominant component, its presence indicates the initial consolidation of evaluative practices. From our perspective, this pattern confirms that metacognitive awareness develops progressively and that reflective regulation requires sustained instructional support.

Figure 2

Cognitive focus during reading after metacognitive instruction



To provide a more differentiated view of metacognitive development, changes in individual components of metacognitive competence were examined. As shown in Table 2, planning awareness and monitoring control demonstrated substantial growth following the intervention, while reflective evaluation developed more gradually.

Table 2

Development of metacognitive components in reading competence

Metacognitive component	Initial level	Post-intervention level	Degree of change
Planning awareness	Low	High	Significant
Monitoring control	Moderate	High	Substantial
Reflective evaluation	Low	Moderate	Gradual

These results suggest that components directly supported by structured instructional scaffolding are more responsive to pedagogical intervention. At the same time, the gradual development of reflective evaluation highlights the need for prolonged and systematic engagement with metacognitive tasks. Overall, the results demonstrate that metacognitive instruction led to both quantitative improvement in reading performance and qualitative reorganization of reading behavior. Pre-service English language teachers not only achieved higher comprehension scores but also developed greater strategic awareness and self-regulation. From our standpoint, this transformation constitutes a critical prerequisite for treating reading competence as a stable professional resource within teacher education.

DISCUSSION

The discussion of the present findings requires moving beyond a narrow interpretation of instructional effectiveness based solely on numerical performance indicators. While the quantitative improvement observed in Table 1 demonstrates a statistically and pedagogically meaningful increase in reading comprehension scores, these figures alone do not fully capture the nature of the changes that occurred during the instructional intervention. From our perspective, the most significant transformation was not limited to performance outcomes but was reflected in how future English language teachers reconceptualized reading as a cognitively regulated activity.

Prior to the intervention, reading was predominantly approached as a task-oriented process aimed at producing correct answers. Such an orientation reflects a long-standing instructional tradition in which comprehension is evaluated primarily through outcomes rather than underlying cognitive processes. However, the post-intervention results indicate a gradual shift toward viewing reading as an intellectually demanding activity requiring conscious planning, ongoing monitoring, and reflective evaluation. This qualitative transformation corresponds to the redistribution of strategic behavior illustrated in Figure 1, where monitoring strategies emerged as the dominant component of learners' post-intervention reading activity. These findings support earlier claims that metacognitive development initially manifests as heightened awareness before stabilizing into consistent strategic regulation [Iskandarova, 2025; 30; Roza & Meruyert, 2016; 595].

One of the most stable patterns identified in the results concerns the reallocation of cognitive effort during reading. As shown in Figure 2, learners devoted a substantial proportion of their cognitive focus to real-time monitoring, while planning and reflection occupied complementary but less dominant roles. Importantly, this redistribution did not result in faster reading performance; in several cases, reading initially became slower. From our standpoint, this deceleration should not be interpreted as regression. On the contrary, it signals a transition from automatic yet fragile comprehension to deliberate and controlled engagement with text. Comparable dynamics have been documented in studies demonstrating that strategic regulation often increases cognitive load before long-term efficiency is achieved [Bustami et al., 2017; 432].

The strongest and most consistent improvements were recorded in tasks requiring inference-making, synthesis of ideas, and interpretation of implicit meaning, as reflected in the post-test results presented in Table 1. In contrast, tasks focusing on literal comprehension exhibited comparatively modest change. This distinction is theoretically significant, as it suggests that metacognitive strategies primarily influence higher-order comprehension processes, where readers must integrate information, evaluate arguments, and construct meaning beyond explicit textual cues. Such findings are consistent with systematic reviews indicating that metacognitive instruction is particularly effective when learners engage with conceptually dense and abstract texts [Tang et al., 2024; 374]. In the context of teacher education, this outcome is especially relevant, given that professional reading rarely involves simple information retrieval.

At the same time, the data reveal uneven development across components of metacognitive competence. As demonstrated in Table 2, planning awareness and monitoring control showed more pronounced growth than reflective evaluation. This imbalance is not accidental. Reflection requires learners to distance themselves from task execution and critically assess their own cognitive decisions, a process that typically develops more gradually. Educational research suggests that without sustained pedagogical scaffolding, reflective practices tend to remain episodic rather than fully internalized [Leushina, 2020; 52; Evdokimova, 2018; 120]. From our perspective, the limited development of reflective evaluation reflects both the relatively short duration of the intervention and the absence of systematic reflective

modeling across the broader curriculum.

Learners' subjective perceptions further illuminate the developmental trajectory of metacognitive competence. Questionnaire data revealed a noticeable increase in learners' confidence and perceived control over reading processes, occasionally preceding stable performance gains. Rather than treating this discrepancy as methodological noise, we interpret it as a characteristic feature of metacognitive development. As learners become aware of their cognitive processes, previously automated strategies are questioned, which may temporarily destabilize performance. Medvedeva characterizes this stage as a necessary phase in the formation of regulatory competence, in which awareness precedes effective control [Medvedeva, 2023; 118].

The findings also challenge a persistent assumption in higher education that advanced language proficiency guarantees effective academic reading. Despite strong lexical and grammatical knowledge, many participants experienced difficulty when engaging with theoretically complex or methodologically dense texts. These difficulties were not rooted in linguistic insufficiency but in limited strategic flexibility. Comparable conclusions have been reported in studies of pre-service teacher education, where habitual reading behaviors persist despite increasing academic demands [Uldárico, 2020; 110; Lian & Azlina, 2020; 90]. When instructional practice emphasizes outcomes over processes, strategies remain implicit and resistant to transformation. Metacognitive instruction alters this dynamic by rendering cognitive processes visible and open to reflection, which we regard as the core pedagogical value of the metacognitive approach [Ariyan & Gorobinskaya, 2024; 140].

The professional implications of these findings are substantial. For future English language teachers, reading competence functions as a gateway to pedagogical theory, curriculum interpretation, and methodological decision-making. Weaknesses in reading therefore accumulate over time, shaping not only academic achievement but also classroom practice. Research on professional competence consistently emphasizes the interdependence of cognitive, metacognitive, and reflective dimensions [Sattorova, 2025; 1007; Moydinova, 2024; 39]. The present study reinforces this perspective by demonstrating that strategic reading competence contributes directly to professional autonomy.

Several limitations must nevertheless be acknowledged. The duration of the instructional intervention was insufficient for full internalization of reflective practices. As shown in Table 2, reflective evaluation developed more slowly than other components, indicating that metacognitive competence, particularly at the evaluative level, requires extended and repeated application across varied contexts [Vlasicheva, 2025; 15]. Accordingly, the observed gains should be interpreted as developmental tendencies rather than finalized competencies.

Another limitation concerns curricular coherence. While metacognitive strategies were explicitly addressed within the experimental framework, parallel courses continued to rely on traditional reading paradigms. This inconsistency likely constrained transfer effects. Studies on teacher education reform emphasize that isolated methodological innovations rarely produce sustainable change without

systemic integration [Ataboyeva & Ermatova, 2025; 95; Turdaliyev, 2025; 402]. Our findings therefore underscore the need for coordinated curricular implementation of metacognitive principles.

Finally, the discussion raises a broader theoretical issue regarding the role of reading competence in teacher identity formation. As participants developed greater control over their reading processes, they increasingly articulated reading as a professional responsibility rather than a purely academic requirement. From our perspective, this shift is particularly significant. Teachers capable of critically engaging with pedagogical texts are better positioned to evaluate methodologies, resist unreflective adoption of practices, and adapt instruction to contextual demands. Research on intellectual and methodological readiness identifies this capacity as a key indicator of professional maturity [Hotamova, 2024; 79; Ibragimov, 2025; 452].

In sum, the revised discussion demonstrates that metacognitive instruction influences reading competence not only through measurable performance gains but through a deeper reorganization of cognitive effort. By linking quantitative results with qualitative changes in strategic behavior, the study shows that metacognitive approaches support the formation of reflective and professionally oriented reading competence. These outcomes justify the integration of metacognitive principles into the core structure of teacher education programs and point to the necessity of further longitudinal research on their sustained impact.

CONCLUSION

The present study was motivated by a practical concern that emerged repeatedly in our work with pre-service English language teachers: many students who demonstrate solid language proficiency still experience persistent difficulty when engaging with academic and methodological texts. Throughout the research process, it became increasingly clear to us that this difficulty cannot be explained solely by gaps in vocabulary or grammar. Rather, it reflects deeper issues related to how reading is understood, taught, and practiced within teacher education.

The results of the study confirm that a metacognitive approach creates conditions for a more conscious and sustainable form of reading development. What we observed was not a simple increase in test scores, but a gradual change in learners' relationship with texts. Reading was no longer perceived merely as a requirement to be completed or a source of correct answers. Instead, many participants began to approach texts as objects of analysis, reflection, and professional inquiry. From our perspective, this shift is particularly valuable for future teachers, whose professional growth depends on their ability to interpret theoretical positions and critically evaluate pedagogical ideas.

An important conclusion concerns the nature of the observed progress. The strongest changes were found in tasks that required inference, integration of ideas, and evaluation of implicit meaning. In contrast, surface-level comprehension improved more modestly. We interpret this pattern as evidence that metacognitive instruction primarily strengthens higher-order reading processes. This finding aligns with

classroom observations: when students learn to ask themselves why a text is difficult, where misunderstanding occurs, and how meaning is constructed, they become more resilient readers in complex academic contexts.

At the same time, the study highlights that metacognitive competence does not develop evenly across all components. Planning and monitoring strategies were adopted more readily than reflective evaluation. This suggests that reflection requires extended pedagogical support and cannot be expected to emerge automatically. In our view, this finding has important curricular implications. Metacognitive reading instruction should not be confined to isolated modules or short-term interventions but integrated systematically across the teacher education program.

Another significant conclusion is that reading competence should be treated as a professional skill rather than a background ability. The assumption that advanced language proficiency guarantees effective academic reading proved insufficient. Even capable students struggled when they lacked strategic awareness. Recognizing this gap allows teacher educators to rethink instructional priorities and place greater emphasis on conscious reading regulation.

In conclusion, the study demonstrates that metacognitive instruction contributes to reading competence not only quantitatively, but qualitatively. It reshapes how future English language teachers think about texts, learning, and their own professional development. From our standpoint, fostering such reflective reading practices is essential for preparing teachers who are capable of independent learning, critical judgment, and continuous professional growth. Future research should extend this work by examining long-term effects and exploring how metacognitive reading competence transfers into actual classroom teaching.

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