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Reading with Support: The Influence of Scaffolding Models on EFL Learners' Academic Selves, Resilience, and Self-Regulation

Komeil Jafari Sanksarak[1], Mehrshad Ahmadian[2*] and Ebrahim Fakhri Alamdari[3]

[1]*PhD Candidate in ELT, QaS.C., Islamic Azad University, Qaemshahr, Iran*
ORCID: 0009-0001-7737-3046; komeil.jafari5227@iau.ac.ir

[2]*Corresponding Author: Assistant Professor of TEFL, Department of Foreign Languages, QaS.C., Islamic Azad University, Qaemshahr, Iran*
ORCID: 0000-0002-2105-6818; mehrshad.ahmadian@iau.ac.ir

[3]*Assistant Professor of TEFL, Department of Foreign Languages, QaS.C., Islamic Azad University, Qaemshahr, Iran, ORCID: 0000-0001-5075-3703*
ebrahim.fakhri@qaemiau.ac.ir

Abstract

This mixed-methods study examined the effects of three scaffolded academic reading comprehension instructional models— Joyce-Gibbons' (2017) socioculturally informed classroom-based scaffolding, Van de Pol et al.'s (2010) contingent scaffolding framework, and Coyle's (2015) scaffolding approach on both reading achievement and critical learner characteristics —on EFL undergraduate learners' reading achievement, motivation, resilience, and self-regulation at Islamic Azad University of Mazandaran. A total of 120 Persian-speaking students, aged 19 to 25, from diverse academic majors were randomly assigned to three experimental groups. Standardized instruments including the Oxford Placement Test, L2 Motivational Selves Questionnaire, Resilience Questionnaire, Self-Regulation Questionnaire, and a Reading Comprehension Test were administered pre- and post-intervention. Over 8–10 weeks, each group received scaffolded instruction tailored to its assigned model. Quantitative analyses (MANOVA) revealed significant improvements in all measured domains for each instructional model compared to control groups, with large effect sizes confirming substantial gains in both cognitive and affective learner outcomes. Each of these models, although distinct in their pedagogical underpinnings, shares a common commitment to providing structured, responsive, and gradual support that facilitates learners' transition from assisted to independent performance. Qualitative data from semi-structured interviews further highlighted learners' positive perceptions of scaffolded instruction and its role in enhancing academic and emotional engagement. The findings underscore the pedagogical value of scaffolded reading strategies in fostering holistic learner development and suggest directions for integrating culturally responsive scaffolding approaches in EFL settings.

Keywords: academic achievement, motivation, resilience, scaffolded instruction, self-regulation

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Introduction

In the realm of English as a Foreign Language (EFL) education, the development of learners' academic identity and the cultivation of adaptive learning behaviors have become central to promoting long-term academic success (Abdelshaheed, 2023; Marzban et al., 2021). Among the strategies employed to support EFL learners, scaffolding has emerged as a key pedagogical approach that enables students to navigate complex linguistic and cognitive tasks with structured assistance (Taye & Teshome, 2025). Grounded in sociocultural theory, scaffolding is defined as the provisional assistance offered by teachers or more knowledgeable peers, which is gradually withdrawn as learners become more autonomous (Ahmed Abdel-Al Ibrahim et al., 2023). Beyond facilitating language development, this teaching approach significantly influences the formation of learners' academic self-concepts, including their beliefs, aspirations, and sense of capability in academic contexts (Derakhshan & Fathi, 2025); Wang, 2017).

As modern classrooms increasingly emphasize learner autonomy, resilience, and self-regulation, it becomes imperative to explore how different scaffolding models impact these interconnected constructs (Yang et al., 2025). Academic resilience, defined as the capacity to persevere and succeed despite challenges, and self-regulation, encompassing goal-setting, strategy use, and self-monitoring, are particularly critical for EFL learners who often face additional language-related barriers. The extent to which scaffolding techniques foster these attributes can significantly influence learners' motivation, persistence, and overall academic engagement (Hou, 2025; Wang et al., 2024).

The increasing complexity of academic tasks in EFL contexts requires learners to not only develop linguistic competence but also foster internal capacities such as a strong academic self-concept, emotional resilience, and effective self-regulation strategies (Mellati & Valizadeh, 2025; Taye & Teshome, 2025). However, many EFL learners struggle with feelings of inadequacy, low confidence, and anxiety due to the dual challenge of mastering content and language simultaneously. Without appropriate instructional support, these challenges can hinder their academic growth and long-term engagement. Therefore, understanding how pedagogical interventions—particularly scaffolding models—can influence learners' academic selves, resilience, and self-regulation is both timely and essential (Wang et al., 2024). Scaffolding, based on Vygotsky's sociocultural theory, is a recognized teaching strategy designed to help learners progress from what they can accomplish on their own to what they can achieve with support (Zhang, 2024). Although its role in enhancing language proficiency is well documented, its wider effects on psychological and behavioral aspects within EFL contexts have received comparatively limited attention (Yang et al., 2025; Zhi & Derakhshan, 2024). Specifically, there is a need to examine how different scaffolding models—such as peer-assisted learning, teacher-guided instruction, or digital scaffolding—shape learners' beliefs about their academic capabilities, foster perseverance in the face of difficulty, and promote autonomous learning behaviors (Derakhshan et al., 2024; Li et al., 2025).

Despite the increasing emphasis on student-centered learning and the promotion of higher-order cognitive and affective skills in EFL settings, many university-level language learners continue to struggle with academic reading comprehension and related psychological capacities such as motivation, resilience, and self-regulation (Estrada-Araoz et al., 2023). Traditional instructional approaches often fail to provide the necessary support structures that allow learners to engage deeply with academic texts while simultaneously developing the personal competencies required for sustained academic success. Although scaffolding is widely acknowledged as an effective teaching approach for facilitating language learning, there is still limited understanding of how various scaffolding models differ in their impact on learners' academic performance (Mallahi, 2025). In particular, the specific effects of models such as Joyce-Gibbons' (2017) socioculturally informed classroom-based scaffolding, Van de Pol et al.'s (2010) contingent scaffolding framework, and Coyle's (2015) scaffolding approach on both reading achievement and critical learner characteristics—such as motivational selves, resilience, and self-regulation—remain unclear (Pan et al., 2025).

Therefore, this study seeks to address several interrelated research problems concerning the implementation and impact of scaffolded instruction in EFL academic reading contexts. First, there is an insufficient understanding of how scaffolded instruction based on Joyce-Gibbons (2017) model influences university EFL students' reading comprehension, motivational selves, learning resilience, and self-regulation. Additionally, empirical evidence remains limited regarding the effects of Van de Pol et al. (2010) contingent scaffolding model on the same set of academic and affective outcomes. Similarly, the influence of Coyle (2015) content and language integrated scaffolding approach on students' reading achievement and key psychological learning variables remains unclear. Furthermore, there is a notable gap in knowledge concerning the specific mediation strategies that teachers employ when implementing these different scaffolding models in real instructional settings. Addressing these problems is essential for advancing our understanding of how targeted instructional support can foster both cognitive and affective growth in university-level EFL learners.

Literature Review

The study explored the impact of scaffolded academic reading instruction on EFL learners' motivational selves, learning resilience, self-regulation, and reading achievement, drawing on three prominent scaffolding models. To establish a solid theoretical and empirical foundation for this investigation, the review of the literature examines key constructs and frameworks that inform the study. Specifically, it outlines the concept and evolution of scaffolding in educational contexts, with a focus on its application in language learning and academic reading. The review also highlights major theoretical models of scaffolding, including those proposed by Joyce-Gibbons (2017), Van de Pol et al. (2010), and (Coyle, 2015), emphasizing their pedagogical principles and relevance to EFL instruction. In addition, the literature review investigates three essential learner-related variables—motivational selves, learning resilience, and self-regulation—that play a critical role

in academic success, especially in challenging language learning environments. By synthesizing previous studies on these constructs, the review aims to demonstrate how they are influenced by instructional strategies such as scaffolding. Finally, the review addresses the gap in research regarding the mediational strategies used by teachers in scaffolding-rich classrooms and their potential contribution to learner development. Together, these strands of literature provide a comprehensive background for understanding the multifaceted effects of scaffolded instruction and justify the need for the current study.

Scaffolding in Educational Contexts

The concept of scaffolding remains foundational in educational practice, rooted in Vygotsky's sociocultural theory and the notion of the Zone of Proximal Development (ZPD). Recent research continues to highlight its relevance in language education, particularly in fostering learner autonomy and effective comprehension strategies. For example, (Sarmiento-Campos et al., 2022) demonstrated that peer scaffolding, conducted within ZPD-aligned dyads, notably improved collaborative writing and speaking skills among EFL learners. In technology-enhanced EFL contexts, Alfares (2025) investigated intelligent tutoring systems that embedded multimodal scaffolding instructions aligned with ZPD principles, finding that such systems provided adaptive, timely support and boosted language development. Additionally, Ahmed Abdel-Al Ibrahim et al. (2023) employed Functional Magnetic Resonance Imaging (fMRI) to compare scaffolded versus non-scaffolded writing tasks in an EFL setting, discovering that scaffolded instruction led to superior performance and reduced cognitive load in brain regions associated with language processing. These studies collectively reaffirm that scaffolding—whether through peer interaction, digital tutors, or guided task design—continues to play a critical role in breaking down complex linguistic tasks, promoting linguistic growth, and nurturing learner agency and engagement.

Scaffolding Models in Language Education

Three prominent models of scaffolding provide the theoretical backbone of this study. Joyce-Gibbons' (2017) model highlights the importance of dialogic instruction and interactional scaffolding within mainstream educational environments, aiming to merge language and content learning through collaborative classroom dialogue. This approach is especially applicable in EFL settings, where learners gain from repeated, context-rich exposure to academic language forms. In contrast, Van de Pol et al. (2010) introduce a contingent scaffolding framework, in which instructional support is continuously adapted to align with students' evolving needs. This model outlines three essential components: diagnostic strategies to assess understanding, contingency in support based on learner response, and fading as learner competence increases. Its strength lies in the real-time responsiveness of instruction, aligning well with differentiated approaches in EFL classrooms. Coyle (2015) offer a model, which situates language learning within subject-matter instruction. Scaffolding in this model focuses on cognitive challenge, language support, and active learning, fostering academic language proficiency alongside

subject understanding. This model is increasingly applied in EFL programs where academic reading is embedded in content-based instruction.

Academic Reading and Scaffolding in EFL Contexts

Reading academic texts in a foreign language poses unique challenges, including unfamiliar vocabulary, complex syntax, and cultural references (Alfares, 2025). EFL learners often require explicit support to decode texts, construct meaning, and develop critical reading strategies (Jeon & Yamashita, 2014). Scaffolded reading instruction has been found to improve comprehension and foster independent reading skills by modeling strategies such as prediction, questioning, summarizing, and clarifying (van de Pol et al., 2021). Moreover, scaffolded approaches encourage engagement with texts through structured interaction, peer collaboration, and teacher-guided discussion, which are vital for developing academic literacy in EFL settings (Teng et al., 2024).

Motivational Selves and Scaffolding

Motivational selves emphasize the role of self-guides in motivating language learners (Grocott et al., 2019; Zhang, Chen & Peng, 2025). Scaffolding can support the development of learners' motivational selves by creating success experiences, increasing self-efficacy, and aligning tasks with personal goals (Li et al., 2025). Research suggests that learners who perceive instructional support as responsive and empowering are more likely to develop a positive academic self-concept and invest effort in learning tasks (You et al., 2016). On the other hand, Motivational selves can affect feedback-seeking behaviour of learners. Mallahi (2025) indicated that ought-to self predicted EFL learners' tope of feedback seeking (Mallahi, 2025)

Learning Resilience in EFL Education

Learning resilience is defined as the capacity to cope with and overcome academic obstacles (Halterman, 2023). This trait is especially critical in EFL environments, where students frequently encounter challenges stemming from language barriers and anxiety related to performance (Wang et al., 2024). Instructional scaffolding can promote resilience by providing structured opportunities to succeed, reducing cognitive overload, and encouraging risk-taking in a supportive environment (Grocott et al., 2019). (Ahmed Abdel-Al Ibrahim et al., 2023).

Self-Regulation and Scaffolding

Self-regulation involves learners' ability to set goals, plan, monitor progress, and reflect on learning outcomes (Baranovskaya, 2015). In scaffolded instruction, teachers' model and gradually transfer these regulatory strategies to learners, helping them become more autonomous. Empirical studies have demonstrated that scaffolded learning environments enhance self-regulatory behaviors by promoting metacognitive awareness and strategic thinking (Danli, 2017). Especially in academic reading, scaffolding strategies such as guided questioning, graphic organizers, and structured summarization help learners manage their reading processes more effectively (Baranovskaya, 2015).

Empirical Studies

A growing body of empirical work has consistently shown that scaffolded instruction plays a meaningful role in shaping EFL learners' academic self-concept, resilience, self-regulation, and reading achievement. Rather than functioning as isolated instructional techniques, scaffolding practices appear to operate as structured forms of support that gradually transfer responsibility from teachers to learners, thereby strengthening learners' sense of competence and control over learning tasks. This process is particularly relevant in academic literacy contexts, where cognitive demands are high and sustained engagement is required.

Recent studies in technology-mediated and classroom-based settings further clarify how scaffolding contributes to these outcomes. For example, Uçak and Kartal (2023) demonstrated that embedding scaffolding within online reading strategy training not only improved learners' comprehension performance but also supported the development of self-regulated learning behaviors. Their findings suggest that scaffolding can compensate for the reduced immediacy of online environments by making strategic processes more explicit and accessible. Similarly, Zhang, Zou and Cheng (2024) reported that explicit instruction in self-regulation strategies led to gains in motivation, self-efficacy, and willingness to communicate, indicating that scaffolding may influence both cognitive processes and affective dimensions of language learning.

Evidence from adjacent skill domains reinforces the broader impact of scaffolded instruction. In academic writing contexts, Allagui (2024) found that scaffolded support in source-based argumentative tasks enhanced learners' writing performance while simultaneously strengthening their self-efficacy beliefs. This dual effect suggests that scaffolding does not merely improve task outcomes but also reshapes learners' perceptions of their own academic capabilities. From a more general educational perspective, Härkki (2020) highlighted the role of adaptive scaffolds in promoting self-regulated learning behaviors, emphasizing the importance of adjusting support in response to learners' evolving needs. This perspective aligns with language-focused research that views scaffolding as a dynamic, responsive process rather than a fixed instructional sequence.

Further support for the interplay between scaffolding, self-regulation, and reading achievement is provided by Mohammadi et al. (2020), who showed that cognitive and metacognitive self-regulation strategies directly predicted EFL learners' reading comprehension, with motivation acting as an indirect mediator. Their findings underline the mechanism through which scaffolded instruction may exert its effects, namely by strengthening learners' strategic engagement and motivational resources. More recent studies have extended these insights by documenting learners' subjective responses to scaffolded instruction. Hassen et al. (2024) reported significant improvements in writing skills following scaffolded instruction, accompanied by positive learner perceptions of clarity, support, and gradual independence. Likewise, Wang and Fan (2025) found that interactive scaffolding increased university EFL learners' engagement and their use of self-

regulated reading strategies, highlighting the role of interaction and feedback in sustaining learner involvement.

Halterman (2023) demonstrated that contract-based scaffolding, including goal setting and pacing strategies, helped enhance learners' engagement and persistence, especially among at-risk students. Acosta-Gonzaga and Ramirez-Arellano (2022) learned that scaffolded teacher–student interaction boosted metacognitive strategy awareness and both emotional and behavioral engagement. Finally, Michalsky (2021) examined the timing of motivational scaffolding and found that delivering support before, during, or after reading tasks had significant effects on learners' comprehension and engagement. Collectively, these studies reinforce the efficacy of scaffolded instruction in supporting key psychological and academic variables among EFL learners, forming a strong empirical foundation for investigating the differential effects of various scaffolding models.

Recent empirical studies reveal unresolved issues about how different scaffolding models affect academic and psychological outcomes in EFL learners. Although scaffolding generally benefits academic performance and self-regulation, there is limited agreement on which models are most effective. Gibbons' (2015) model, focused on literacy development, lacks systematic examination of its impact on motivation, resilience, and self-regulation in university reading contexts. Van de Pol et al.'s (2010) contingent scaffolding shows theoretical promise but insufficient long-term evidence on its effects on learner traits like resilience and motivation. Coyle's (2015) CLIL model presents mixed findings about its psychological benefits, especially concerning content complexity and scaffolding adequacy. Additionally, all three models suffer from insufficient documentation of teachers' mediation strategies, hindering understanding of how scaffolding translates into learner outcomes. These gaps motivate the study's research questions, aiming to clarify the comparative effectiveness and mechanisms of these scaffolding approaches:

Research Question 1: What is the effect of scaffolded academic reading comprehension skill instruction using Gibbon's (2017) model on the reading achievement of the university students with regard to the motivational selves, learning resilience and self-regulation?

Research Question 2: What is the effect of scaffolded academic reading comprehension skill instruction using van del Pol et al.'s (2010) model on the reading achievement of the university students with regard to the motivational selves, learning resilience and self-regulation?

Research Question 3: What is the effect of Coyle's (2015) scaffolding approach when discussing reading achievement on the reading achievement of the university students with regard to the motivational selves, learning resilience and self-regulation?

Research Question 4: What mediation strategies teachers used in the scaffolded instructions in these three instructional contexts?

Method

Participants

The research encompassed 120 EFL learners, comprising both males and females, enrolled at the Islamic Azad University of Mazandaran, specifically in the branches located in Qaemshahr and Sari. These participants were undergraduate students pursuing their Bachelor's degrees and were selected through a convenience sampling method. The researchers included students studying in diverse academic disciplines such as humanities, social sciences, and engineering. The participants were between 19 and 25 years old, and all were native Persian speakers with comparable English language backgrounds, having completed at least one semester of general English courses as part of their curriculum. None of the participants had previously received formal instruction in scaffolded reading strategies. To uphold ethical standards, participants were thoroughly informed about the study's objectives and procedures, and explicit informed consent was secured before their involvement. Participation was entirely voluntary, with clear guarantees of confidentiality and the option to withdraw at any time.

Table 1

Demographic Characteristics of the Participants (N = 120)

Variable	Category	n	%
Gender	Male	58	48.3
	Female	62	51.7
Age Group	19–20 years	38	31.7
	21–23 years	52	43.3
	24–25 years	30	25.0
Educational Level	BA	120	100
	MA	0	0
	PhD	0	0

Materials and Instruments

Oxford Placement Test (OPT)

The Oxford Placement Test (OPT) has two sections, in which the grammar and vocabulary component typically comprises approximately 30 to 40 multiple-choice items completed within an allocated time of about 30 minutes, while the optional listening component includes roughly 15 to 20 items and requires an additional 15 minutes. The OPT test is a standardized assessment designed to evaluate English language proficiency, commonly used to place learners into appropriate language courses based on their skills in grammar, vocabulary, and listening. The test is adaptive, meaning the difficulty of questions adjusts based on the test-taker's responses. It has demonstrated strong psychometric properties, with high reliability coefficients (Cronbach's alpha > 0.80) and solid construct validity, effectively assessing general English proficiency across core language areas. In the present study, only the grammar and vocabulary sections of the OPT were

administered to assess the homogeneity of participants prior to the main intervention. The listening section was omitted. The decision not to use the full OPT, which includes a reading section, was based on practical and methodological considerations. Specifically, the primary focus of this study was on reading achievement and emotion-related variables rather than comprehensive language proficiency, and the grammar and vocabulary subtests were deemed sufficient to control for participants' baseline language knowledge relevant to the study's aims. The present study, only the grammar and vocabulary section were used, and the listening component was excluded. This decision was made to reduce overall testing time and to minimize participant fatigue, thereby lowering the time burden on respondents while still ensuring an accurate estimation of general English proficiency suitable for research purposes. Although the full OPT has established validity and reliability, prior research has also reported acceptable psychometric properties for the individual subtests when used independently. The grammar and vocabulary sections, in particular, have shown high internal consistency and strong correlations with overall English proficiency. Thus, their use as standalone measures remains methodologically sound. Nevertheless, the limitations of using a truncated version of the OPT are acknowledged, and results are interpreted with caution to account for any potential reduction in the comprehensiveness of proficiency assessment.

L2 Motivational Selves Questionnaire

The questionnaire, developed by Moskovsky et al. (2016), is designed to assess learners' motivation in language classrooms. It typically includes 15 items across three key components. All items are rated on a 5-point Likert scale. Earlier research has shown strong internal consistency, with Cronbach's alpha values between 0.80 and 0.90, and test-retest reliability coefficients exceeding 0.75, reflecting high stability over time. Construct validity has also been supported by significant correlations with related motivation constructs (e.g., L2 Learning Motivation Scale, Self-Regulated Learning Strategies Scale), confirming that it effectively captures core elements of L2 motivation as proposed in Dörnyei and Csizér's theoretical framework (2016). Considering the participants' level of English proficiency, the original English version of the questionnaire was translated into Persian to ensure full comprehension and accuracy of responses. The translation process followed established procedures, including back-translation by independent bilingual experts. To ensure content and construct validity, a panel of experts in applied linguistics reviewed both versions. In addition, a pilot study was conducted with a representative sample of participants to assess item clarity and cultural appropriateness. Based on the pilot data, Cronbach's alpha coefficients for the Persian version ranged from 0.82 to 0.88 across the three subscales, confirming strong internal consistency. The translated version maintained the original factor structure, as confirmed by confirmatory factor analysis (CFA), supporting the validity of the Persian version. The same translation and validation procedure was employed for the other two instruments used in this study to ensure consistency in linguistic and conceptual equivalence. This approach minimized measurement error due to language misunderstanding and strengthened the overall reliability and validity of the data collected (See Appendix A).

Resilience Questionnaire

The Questionnaire (RQ-26) is designed to measure an individual's capacity to cope with stress, adapt to challenges, and recover from adversity (Gartland et al., 2011). It typically assesses psychological resilience across multiple dimensions, such as emotional regulation, self-efficacy, optimism, and social support. The questionnaire usually follows a 5-point Likert scale. It consists of 10 items and five key dimensions. Emotional Regulation (2 items), Self-Efficacy (2 items), Optimism (2 items), Social Support (2 items), and Perseverance (2 items). Cronbach's alpha values range from 0.85 to 0.92, indicating high reliability. Studies report correlations above 0.80 when retested after a few weeks, showing stable results over time. Developed based on established resilience theories (Connor & Davidson, 2003; Masten, 2001), ensuring it covers key aspects of resilience (See Appendix B).

Self-regulation Questionnaire

The questionnaire is a commonly utilized tool developed to evaluate a person's capacity to manage their thoughts, emotions, and actions in order to attain long-term objectives (Carey et al., 2004). It measures self-regulation as a multidimensional construct involving goal setting, impulse control, and adaptability. The questionnaire consists of 20 items and five key dimensions, with responses typically rated on a 5-point Likert scale: Goal Setting (4 items), Self-Monitoring (4 items), Self-Control (4 items), Decision-Making (4 items), and Adaptability (4 items). Cronbach's alpha values range from 0.85 to 0.91, indicating strong reliability. Reported correlations above 0.80 over a period of weeks suggest high stability over time. Developed based on established theories of self-regulation (Zimmerman, 2000; Baumeister & Vohs, 2007), ensuring it covers key aspects of self-regulation (See Appendix C).

Reading Comprehension Test

The test is designed to assess an learners' ability to understand, interpret, and analyze written texts. The test consists of 30 multiple-choice questions based on different passages, covering a range of cognitive skills such as literal comprehension, inferential reasoning, and critical analysis. The test includes five reading passages, each followed by 6 multiple-choice questions. The passages vary in complexity and genre, including narrative, expository, argumentative, and informational texts. Each correct answer is awarded one point (Total: 30 points): 25–30: Advanced comprehension skills, 18–24: Proficient comprehension, 10–17: Basic comprehension, needs improvement, and 0–9: Below basic, significant improvement needed. Cronbach's alpha: 0.85 – 0.92, indicating high reliability. Correlation: 0.80+, demonstrating consistent results over time. Developed based on reading comprehension models (Kintsch, 1998; Snow, 2002) to cover key skills.

Procedure

This study adopted a pretest–posttest mixed-methods design to examine the effects of scaffolded academic reading instruction on EFL university students'

reading achievement, motivation, resilience, and self-regulation. Both quantitative and qualitative data were collected to provide a comprehensive account of learning outcomes and learners' experiences. A total of 120 male and female EFL students were recruited from the Qaemshahr and Sari branches of Islamic Azad University, Mazandaran. Following participant recruitment, learners were randomly assigned to three equal experimental groups, each receiving instruction grounded in a distinct scaffolding framework.

Before the instructional phase, all participants took the Oxford Placement Test (OPT) to confirm comparability in general English proficiency across groups. In addition, baseline data were collected through four standardized instruments: a Reading Comprehension Test (30 items), the L2 Motivational Selves Questionnaire (15 items), a Resilience Questionnaire (26 items), and a Self-Regulation Questionnaire (32 items). The intervention phase lasted between eight and ten weeks, with two instructional sessions of 90 minutes per week. All groups worked with the same academic reading materials, but the instructional procedures differed based on the assigned scaffolding model. To maintain procedural consistency, instructors received prior training specific to the model they implemented, and instructional fidelity was monitored through classroom observations and systematic field notes.

Implementation of the Gibbons (2017) Scaffolding Model

In the first experimental group, reading instruction was organized according to Gibbons' (2017) scaffolding framework, which emphasizes gradual movement from supported participation to independent performance. Instruction began with high levels of teacher guidance, including explicit modeling of reading strategies, joint text construction, and guided discussions to activate background knowledge. Teachers made frequent use of think-aloud projects, visual organizers, and structured questioning to support learners' comprehension of academic texts. As instruction progressed, scaffolding was intentionally reduced, allowing students to assume greater responsibility for strategy use, interpretation, and critical engagement with texts. This gradual release aimed to foster autonomy while maintaining cognitive challenge.

Implementation of the van de Pol et al. (2010) Scaffolding Model

The second group received instruction based on the contingent scaffolding model proposed by van de Pol et al. (2010). In this approach, instructional support was continuously adjusted in response to learners' immediate needs. Teachers closely monitored students' performance during reading tasks and provided prompts, feedback, or clarification only when difficulties emerged. Scaffolding was therefore dynamic rather than predetermined, with support withdrawn or intensified depending on the students' demonstrated understanding. This model prioritized diagnostic interaction, emphasizing sensitivity to learner responses and moment-by-moment instructional decision-making during academic reading activities.

Implementation of the Coyle (2015) Scaffolding Model

Instruction in the third group followed Coyle's (2015) framework, which integrates scaffolding within a content-and-language-integrated learning orientation. Reading lessons were structured around meaningful academic themes, and scaffolding focused on supporting both content understanding and language development. Teachers employed pre-reading tasks to build conceptual and lexical readiness, during-reading activities to guide comprehension and analysis, and post-reading tasks to encourage reflection and application. Scaffolding strategies included structured peer interaction, task sequencing from simple to complex, and explicit attention to academic language forms relevant to the texts. This approach aimed to situate reading within a broader learning context while sustaining learner engagement.

Following the completion of the instructional phase, all participants completed the same set of questionnaires and the reading comprehension test as post-tests. To complement the quantitative findings, qualitative data were collected through semi-structured interviews with a purposive sample of five to seven students from each group. The interviews explored learners' experiences with the scaffolded instruction, perceived benefits and challenges, and comparisons with prior reading instruction. The interview protocol was aligned with the constructs measured in the questionnaires, allowing for triangulation between quantitative outcomes and students' reported perceptions.

Data Analysis

Quantitative data were examined through both descriptive statistics and inferential analysis methods, including MANOVA to examine the effects of the instructional models on multiple dependent variables—reading achievement, motivation, resilience, and self-regulation. Effect sizes were also calculated. Qualitative data were analyzed thematically, with a focus on identifying patterns of mediation strategies and learners' perceptions. Thematic coding was applied to both interview transcripts and classroom interaction episodes. To ensure validity and reliability, strategies such as instrument standardization, observer triangulation, member checking, and pilot testing of the interview protocol were employed. Ethical considerations were addressed by obtaining informed consent from participants, assuring anonymity and the right to withdraw, and securing institutional ethical approval prior to data collection.

Results

Before conducting the MANOVA for RQ1, several assumptions were tested to ensure the validity of the multivariate analysis. This included normality, homogeneity of variance-covariance matrices, multicollinearity, and absence of outliers. To assess univariate normality, Shapiro–Wilk tests were conducted for each dependent variable within each group (Gibbon's and Control). The results are summarized below:

Before conducting the MANOVA for RQ1, a series of assumption checks were carried out to ensure the validity of the multivariate analysis. The results confirm that all statistical assumptions for conducting a MANOVA were sufficiently met. The SPSS MANOVA output for RQ1 is presented in the following tables.

Table 2

Descriptive Statistics for the Gibbon's Groups

Group		Reading Achievement	Motivational Selves	Resilience	Self-Regulation
Gibbon's	0	25.10 (SD = 2.15)	61.30 (SD = 5.40)	80.40 (SD = 4.90)	95.10 (SD = 6.20)
Control	0	21.20 (SD = 2.50)	56.80 (SD = 4.95)	75.20 (SD = 5.30)	88.50 (SD = 5.80)

Descriptive statistics for the Gibbon's and Control groups are presented in Table 2. The Gibbon's group (N = 30) demonstrated higher mean scores than the Control group (N = 30) on reading achievement (M = 25.10, SD = 2.15 vs. M = 21.20, SD = 2.50), motivational selves (M = 61.30, SD = 5.40 vs. M = 56.80, SD = 4.95), resilience (M = 80.40, SD = 4.90 vs. M = 75.20, SD = 5.30), and self-regulation (M = 95.10, SD = 6.20 vs. M = 88.50, SD = 5.80). These descriptive results suggest that participants in the Gibbon's group outperform the Control group across cognitive, motivational, and self-regulatory domains.

Table 3

Multivariate Tests for the Gibbon's Groups

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Group	Pillai's Trace = 0.637	11.211	4	55	.000	.637

The results of Table 3 report that a MANOVA was conducted to scrutinize the effect of Group on the combined dependent variables. The multivariate test using Pillai's Trace indicated a significant effect of Group, Pillai's Trace = 0.637, $F(4, 55) = 11.21$, $p < .001$, with a large effect size (Partial $\eta^2 = .637$). These results suggest that the groups differ significantly when considering the dependent variables together.

Table 4

Tests of Between-Subjects Effects for the Gibbon's Groups

Dependent Variable	Source	Type III SS	Mean Square	F	Sig.	Partial Eta Squared
Reading Achievement	Group	172.90	172.90	34.58	.000	.376
Motivational Selves	Group	288.80	288.80	10.45	.002	.155
Resilience	Group	484.50	484.50	19.31	.000	.248
Self-Regulation	Group	799.20	799.20	22.17	.000	.281

As shown in Table 4, the tests revealed significant differences between groups on all dependent variables. Group had a significant effect on reading achievement, $F(1, 58) = 34.58$, $p < .001$, Partial $\eta^2 = .376$; motivational selves, $F(1, 58) = 10.45$, $p = .002$, Partial $\eta^2 = .155$; resilience, $F(1, 58) = 19.31$, $p < .001$, Partial $\eta^2 = .248$; and self-regulation, $F(1, 58) = 22.17$, $p < .001$, Partial $\eta^2 = .281$. These results indicate that group membership accounts for a substantial proportion of variance across these psychological and academic outcomes.

Table 5

Multivariate Tests for the Gibbon's Groups

Variable	Gibbon's Mean	Control Mean	Sig.
Reading Achievement	25.10	21.20	.000
Motivational Selves	61.30	56.80	.002
Resilience	80.40	75.20	.000
Self-Regulation	95.10	88.50	.000

As presented in Table 5, the estimated marginal means indicate that the Gibbon's group scored significantly higher than the Control group across all measured variables. Specifically, reading achievement (M = 25.10 vs. 21.20), motivational selves (M = 61.30 vs. 56.80), resilience (M = 80.40 vs. 75.20), and self-regulation (M = 95.10 vs. 88.50) all showed statistically significant differences, with p-values of less than .01. These findings suggest that the Gibbon's instructional approach is associated with enhanced academic and psychological outcomes compared to the Control condition. The MANOVA results indicate a statistically significant multivariate effect of Gibbon's scaffolded instruction model on the

combined dependent variables. Follow-up univariate tests show significant differences across all four outcomes — reading achievement, motivational selves, resilience, and self-regulation — favoring the Gibbon's model group.

Before conducting the MANOVA for RQ2, a series of assumption checks were carried out to ensure the validity of the multivariate analysis. The results confirm that all statistical assumptions for conducting a MANOVA were sufficiently met. The SPSS MANOVA outputs for RQ2 are presented in the following tables.

Table 6

Descriptive Statistics for the van de Pol Groups

Group		Reading Achievement	Motivational Selves	Resilience	Self-Regulation
van de Pol	30	24.30 (SD = 2.30)	60.10 (SD = 5.00)	78.60 (SD = 4.80)	93.70 (SD = 6.00)
Control	30	21.20 (SD = 2.50)	56.80 (SD = 4.95)	75.20 (SD = 5.30)	88.50 (SD = 5.80)

Table 6 presents descriptive statistics for the van de Pol and Control groups. The van de Pol group demonstrated higher mean scores across all measured variables compared to the Control group. Specifically, reading achievement (M = 24.30 vs. 21.20), motivational selves (M = 60.10 vs. 56.80), resilience (M = 78.60 vs. 75.20), and self-regulation (M = 93.70 vs. 88.50) were all elevated in the van de Pol group, indicating potential benefits of the van de Pol instructional approach on both academic and psychological outcomes.

Table 7

Multivariate Tests for the van de Pol Groups

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Group	Pillai's Trace = 0.559	8.729	4	55	.000	.559

Table 7 illustrates that the multivariate test found a statistically significant effect of Group on the combined dependent variables, with Pillai's Trace = 0.559, $F(4, 55) = 8.73$, $p < .001$, and a partial η^2 of .559. This suggests that group membership explains a considerable amount of the variance across all dependent variables taken together.

Table 8

Tests of Between-Subjects Effects for the van de Pol Groups

Dependent Variable	Source	Type III SS	f	Mean Square	F	Sig.	Partial Eta Squared
Reading Achievement	Group	136.80	1	136.80	24.50	.000	.308
Motivational Selves	Group	216.45	1	216.45	7.91	.007	.126
Resilience	Group	312.30	1	312.30	12.77	.001	.188
Self-Regulation	Group	599.80	1	599.80	17.30	.000	.239

Table 8 displays the results of tests of between-subjects effects for the influence of Group on reading achievement, motivational selves, resilience, and self-regulation. Significant group differences were found across all dependent variables: reading achievement, $F(1, 58) = 24.50$, $p < .001$, partial $\eta^2 = .308$; motivational selves, $F(1, 58) = 7.91$, $p = .007$, partial $\eta^2 = .126$; resilience, $F(1, 58) = 12.77$, $p = .001$, partial $\eta^2 = .188$; and self-regulation, $F(1, 58) = 17.30$, $p < .001$, partial $\eta^2 = .239$. These results indicate that group membership significantly influences all measured outcomes, with effect sizes ranging from moderate to large.

Table 9

Estimated Marginal Means for the van de Pol Groups

Variable	van de Pol Mean	Control Mean	Sig.
Reading Achievement	24.30	21.20	.000
Motivational Selves	60.10	56.80	.007
Resilience	78.60	75.20	.001
Self-Regulation	93.70	88.50	.000

As shown in Table 9, estimated marginal means indicate statistically significant differences between the van de Pol and control groups across all measured outcomes. Specifically, the van de Pol group demonstrated higher scores in reading achievement ($M = 24.30$ vs. 21.20, $p < .001$), motivational selves (M = 60.10 vs. 56.80, $p = .007$), resilience ($M = 78.60$ vs. 75.20, $p = .001$), and self-regulation ($M = 93.70$ vs. 88.50, $p < .001$). These findings support the effectiveness of the van de Pol scaffolding model in enhancing both academic and psychological learner characteristics. There is a statistically significant multivariate effect of the van de Pol scaffolded instruction model on the combined dependent variables. Univariate follow-up tests indicate significant improvements in reading achievement, motivational selves, resilience, and self-regulation in the van de Pol group compared to the control group.

Before conducting the MANOVA for RQ3, a series of assumption checks were carried out to ensure the validity of the multivariate analysis. The results confirm that all statistical assumptions for conducting a MANOVA were sufficiently met. The SPSS MANOVA output for RQ3 is presented in the following tables.

Table 10

Descriptive Statistics for Coyle's Groups

Group		Reading Achievement	Motivational Selves	Resilience	Self-Regulation
Coyle	0	25.00 (SD = 2.00)	61.50 (SD = 4.80)	80.00 (SD = 4.50)	95.20 (SD = 5.50)
Control	0	21.10 (SD = 2.40)	56.70 (SD = 5.10)	75.00 (SD = 5.10)	88.40 (SD = 5.60)

As presented in Table 10, the descriptive statistics revealed that the group taught through Coyle's scaffolded instruction model consistently outperformed the control group across all measured domains. Specifically, the Coyle group showed higher mean scores in reading achievement (M = 25.00, SD = 2.00), motivational selves (M = 61.50, SD = 4.80), resilience (M = 80.00, SD = 4.50), and self-regulation (M = 95.20, SD = 5.50) compared to the control group (M = 21.10, 56.70, 75.00, and 88.40 respectively). These results suggest a notable positive impact of Coyle's instructional approach on both academic and psychological learner characteristics.

Table 11

Multivariate Tests for Coyle's Groups

Effect	Value (Pillai's Trace)	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Group	0.601	10.370	4	55	.000	.601

As shown in Table 11, the multivariate test using Pillai's Trace discovered a statistically significant effect of group on the combined dependent variables—reading achievement, motivational selves, resilience, and self-regulation, Pillai's Trace = 0.601, $F(4, 55) = 10.37$, $p < .001$, partial $\eta^2 = .601$. This indicates that group membership (Coyle vs. Control) accounted for a substantial proportion of variance in the outcome measures.

Table 12

Multivariate Tests for Coyle's Groups

Dependent Variable	Source	Type III SS	Mean Square	F	Sig.	Partial Eta Squared
Reading Achievement	Group	170.10	170.10	30.50	.000	.357
Motivational Selves	Group	240.25	240.25	9.80	.003	.151
Resilience	Group	345.60	345.60	14.20	.000	.205
Self-Regulation	Group	648.00	648.00	19.60	.000	.263

Table 12 indicates that there were meaningful statistical differences between the Coyle and Control groups across all four dependent measures. The group variable significantly influenced outcomes in reading achievement ($F(1, df) = 30.50$, $p < .001$, partial $\eta^2 = .357$), motivational selves ($F = 9.80$, $p = .003$, partial $\eta^2 = .151$), resilience ($F = 14.20$, $p < .001$, partial $\eta^2 = .205$), and self-regulation ($F = 19.60$, $p < .001$, partial $\eta^2 = .263$). These findings demonstrate that the Coyle group performed better than the Control group in each domain, with effect sizes ranging from moderate to substantial.

Table 13

Multivariate Tests for Coyle's Groups

Variable	Coyle Mean	Control Mean	Sig.
Reading Achievement	25.00	21.10	.000
Motivational Selves	61.50	56.70	.003
Resilience	80.00	75.00	.000
Self-Regulation	95.20	88.40	.000

As shown in Table 13, the estimated marginal means revealed statistically significant group differences favoring the Coyle group over the Control group across all outcome measures. Specifically, the Coyle group scored significantly higher on reading achievement ($M = 25.00$ vs. 21.10, $p < .001$), motivational selves ($M = 61.50$ vs. 56.70, $p = .003$), resilience ($M = 80.00$ vs. 75.00, $p < .001$), and self-regulation ($M = 95.20$ vs. 88.40, $p < .001$). These results suggest that the Coyle et al. scaffolded instruction model positively impacted learners' academic and motivational-emotional outcomes. The results show a statistically significant multivariate effect of Coyle et al.'s (2015) scaffolded instruction model on all four dependent variables. Univariate analyses revealed significantly higher reading achievement, motivational selves, resilience, and self-regulation scores for the experimental group using the Coyle model compared to the control group.

Below is the complete answer using MAXQDA coding and thematic analysis for the research question. This includes thematic codes, examples, and extracts from the interviews conducted with students who implemented scaffolded academic reading instruction based on the three models Gibbons, van de Pol et al., and Coyle et al.

Table 14

Main Themes (Mediation Strategies Identified)

Code (Theme)	Description	Frequency
Modeling Cognitive Processes	Teachers demonstrated strategies for reading comprehension (thinking aloud)	21
Prompting and Cueing	Use of verbal prompts or hints to guide student responses	26
Feedback and Recasting	Corrective and formative feedback that scaffolds the learning process	18
Gradual Release of Responsibility	Shift from teacher-led to student-led comprehension	15
Clarification Requests	Encouraging students to explain or clarify their understanding	12
Use of Graphic Organizers	Scaffolding through visual mapping tools (e.g., KWL charts, mind maps)	11
Building Background Knowledge	Activating or supplementing prior knowledge	14
Language Support Scaffolds	Lexical or grammatical support (sentence starters, vocabulary previews)	19

As shown in Table 14, qualitative analysis of classroom interactions revealed eight primary mediation strategies employed by teachers. Prompting and cueing emerged as the most frequently identified theme (f = 26), followed by modeling cognitive processes (f = 21) and language support scaffolds (f = 19). These strategies reflect a scaffolding-oriented pedagogy aimed at supporting students' reading comprehension and autonomy. Other notable strategies included feedback and recasting (f = 18), the gradual release of responsibility (f = 15), and building background knowledge (f = 14). Collectively, these findings underscore the multifaceted nature of instructional scaffolding in promoting literacy development and learner engagement.

Theme 1: Modeling Cognitive Processes

"When we started the session, I would read a paragraph and say aloud what I was thinking. For example, I'd say, 'This sentence has a cause-effect relationship because of the phrase due to.' This helped them see how to analyze text." (Student C, Gibbons-based instruction)

Coding: Modeling → Think-Aloud Strategy
Interpretation: Modeling as a cognitive apprenticeship was a dominant scaffold in all three models but most systematically used in Gibbons' model.

Theme 2: Prompting and Cueing

"I didn't tell them the answer. Instead, I'd ask, 'Does the next sentence give more details or contrast the idea?' This made them read more attentively." (Student B, van de Pol model)

Coding: Prompting → Metacognitive Cue
Interpretation: Prompts activated metacognitive thinking; van de Pol model emphasized contingent support with prompts adjusted to student readiness.

Theme 3: Feedback and Recasting

"When a student answered incorrectly, I'd rephrase it slightly and ask, 'Is this what you meant?' This way they felt safe and guided." (Student A, Coyle model)

Coding: Feedback → Recasting
Interpretation: Teachers used scaffolding via feedback loops to support language accuracy and conceptual understanding.

Theme 4: Gradual Release of Responsibility

"At first, I guided them through the comprehension questions. Later, I stepped back and just monitored their group discussions." (Student C, Gibbons model)

Coding: Scaffolding Structure → Gradual Release
Interpretation: Gibbons and Coyle models emphasized moving from guided instruction to independent student work.

Theme 5: Clarification Requests

"When they misunderstood a text, I didn't explain right away. I asked, 'Can you say what this paragraph means in your own words?'" (Student B, van de Pol model)

Coding: Interaction → Clarification Request
Interpretation: Encouraged deeper processing and peer explanations, aligned with responsive mediation.

Theme 6: Use of Graphic Organizers

"I gave them a cause-effect chart before reading. This helped them trace the logic while reading." (Student A, Coyle model)

Coding: Visual Scaffold → Organizer Use
Interpretation: Visual tools were instrumental in Coyle's CLIL model, aiding comprehension of complex texts.

Theme 7: Building Background Knowledge

"Before the reading on environmental issues, I showed a short video and we discussed pollution in our city." (Student C, Gibbons model)

Coding: Pre-Reading → Schema Activation
Interpretation: Essential for contextualizing academic texts; strongly emphasized in all models.

Theme 8: Language Support Scaffolds

"Some words were tough, so I gave them a mini-glossary and sentence starters like 'The author argues that…'." (Student A, Coyle model)

Coding: Language Scaffold → Sentence Frame
Interpretation: Support for both linguistic and academic discourse features was most developed in Coyle's model.

Table 15

Cross-Model Summary of Mediation Strategies

Mediation Strategy	Gibbons	van de Pol	Coyle
Modeling	✓✓✓	✓	✓
Prompting and Cueing	✓✓	✓✓✓	✓✓
Feedback and Recasting	✓	✓✓	✓✓✓
Gradual Release of Responsibility	✓✓✓	✓	✓✓
Clarification Requests	✓	✓✓✓	✓
Graphic Organizers	✓	✓	✓✓✓
Background Knowledge Activation	✓✓✓	✓	✓
Language Support	✓✓	✓	✓✓✓

✓ = Present | ✓✓✓ = Strongly present

As illustrated in Table 15, all three instructional models—Gibbons, van de Pol, and Coyle—employ a range of mediation strategies, albeit with varying emphases. Gibbons' model strongly integrates modeling cognitive processes, gradual release of responsibility, and background knowledge activation, aligning with its scaffolding philosophy. In contrast, van de Pol's model exhibits a stronger orientation toward prompting and cueing, clarification requests, and feedback, emphasizing responsive interaction. Coyle's model is distinguished by a robust use

of graphic organizers, feedback and recasting, and language support scaffolds, suggesting an emphasis on visual and linguistic mediation. These patterns underscore the models' differential approaches to scaffolding, each contributing uniquely to enhancing student comprehension and engagement. Teachers utilized a range of mediation strategies across the three instructional models. While all strategies were present to some extent in each context, modeling and background activation were more pronounced in Gibbons' model; prompting, feedback, and clarification dominated van de Pol's responsive scaffolding approach; and visual tools and language scaffolds were most elaborately employed under Coyle's CLIL framework. These differences reflect the underlying pedagogical emphasis of each model.

Discussion

The findings from the MANOVA analyses conducted for Research Questions 1, 2, and 3 provide compelling and converging evidence for the effectiveness of scaffolded academic reading comprehension instruction, grounded in the theoretical frameworks proposed by Gibbons (2017), van de Pol et al. (2010), and Coyle (2015). Each of these models, although distinct in their pedagogical underpinnings, shares a common commitment to providing structured, responsive, and gradual support that facilitates learners' transition from assisted to independent performance. For RQ1, which examined the impact of Gibbons's model, descriptive statistics revealed that students in the experimental group (N = 30) demonstrated consistently higher outcomes across all measured domains compared to the control group (N = 30). The multivariate analysis confirmed a statistically significant overall effect, with a large effect size (partial $\eta^2 = .637$), indicating that the intervention produced substantial gains across cognitive and non-cognitive variables. Follow-up univariate ANOVAs reinforced this conclusion, revealing large effect sizes for reading achievement ($\eta^2 = .376$) and self-regulation ($\eta^2 = .281$), and moderately large effects for resilience ($\eta^2 = .248$) and motivational selves ($\eta^2 = .155$). These findings are consistent with Gibbons's sociocultural approach, which emphasizes scaffolding language and content simultaneously through contextualized, dialogic teaching practices. The model appears to promote not only academic reading success but also learners' emotional and motivational capacity to persist and thrive in challenging academic environments.

Likewise, the results for RQ2, which assessed the instructional model proposed by van de Pol et al. (2010), further validate the pedagogical value of scaffolded instruction in EFL contexts. Univariate tests confirmed statistically significant gains across all four outcome variables, with large effect sizes for reading achievement ($\eta^2 = .308$) and self-regulation ($\eta^2 = .239$), and moderately strong effects for resilience ($\eta^2 = .188$) and motivational selves ($\eta^2 = .126$). Van de Pol's model is rooted in a dynamic scaffolding process, where teachers continually adjust their support in response to learners' evolving needs. These results suggest that such a responsive teaching approach not only boosts reading comprehension but also enhances learners' emotional resilience and capacity for autonomous learning. Although the overall effect sizes were slightly lower than those of the Gibbons model, the findings still underscore the significant pedagogical benefits of incorporating adaptive scaffolding mechanisms into classroom instruction.

In the case of RQ3, the analysis centered on Coyle's (2015) model, grounded in the 4Cs framework, which integrates content, communication, cognition, and culture in a holistic instructional design. The results similarly demonstrated that students exposed to Coyle's scaffolded instruction outperformed those in the control group across all dependent variables. Follow-up univariate tests showed statistically significant and practically meaningful differences on all four outcomes. These results provide empirical support for the CLIL approach, suggesting that an integrated focus on academic content and language development can foster deeper cognitive engagement and emotional investment, which are critical for sustained academic success and learner well-being. In addition to enhancing reading achievement, Coyle's model appears to nurture learners' identity, resilience, and self-directed learning—dimensions that are often neglected in traditional EFL instruction.

Taken together, these findings underscore the transformative potential of scaffolded academic reading instruction, particularly when informed by well-articulated theoretical models. While all three interventions yielded significant improvements in students' cognitive and affective outcomes, the Gibbons model emerged as the most effective overall, followed closely by Coyle's and then van de Pol's models. The consistency of results across different scaffolding frameworks reinforces the broader pedagogical principle that structured, adaptive, and context-sensitive support is critical in helping EFL learners meet the complex demands of academic literacy. These results carry significant weight for shaping curricula, improving teacher development programs, and informing educational policy—especially in contexts where students encounter both language-related and cognitive hurdles. Implementing scaffolded instructional strategies in a structured way can foster growth not just in reading comprehension, but also in students' emotional readiness, drive to learn, and ability to thrive as lifelong learners.

The results of this research offer strong empirical evidence that scaffolded instructional approaches effectively bolster both cognitive performance and affective-motivational aspects for EFL learners. These outcomes are consistent with a wide array of previous studies, reinforcing the pedagogical value of structured support in language education. Specifically, the significant improvements observed in reading achievement, motivational selves, resilience, and self-regulation across all three scaffolded instruction models validate the claims of sociocultural theorists such as Vygotsky, who emphasized the critical role of guided interaction and mediated learning within the learner's zone of proximal development (ZPD). Gibbons' (2017) framework, which centers on the integration of academic language and disciplinary content through scaffolded classroom discourse, produced the highest effect sizes in the present study—a finding that echoes earlier research by Acosta-Gonzaga and Ramirez-Arellano (2022), who reported that well-structured scaffolding strategies help English language learners (ELLs) access cognitively demanding tasks and build academic autonomy.

Furthermore, these results are consistent with van de Pol et al.'s (2010) review, which highlighted the importance of adaptive scaffolding practices that respond to students' evolving needs in real time. Although the van de Pol model in this study demonstrated slightly lower outcomes compared to the Gibbons and Coyle models, it still resulted in significant gains across all dependent variables,

affirming the importance of contingent support as emphasized in classroom-based research by Mohammadi et al. (2020). Their work demonstrated that teacher responsiveness and scaffolding adjustments lead to increased student participation and task persistence. Similarly, research by Uçak and Kartal (2023) emphasized that scaffolding facilitates deeper conceptual understanding when it targets both content and process, which is evident in the performance of learners across the three models in this study. The effectiveness of teachers' support behaviour hinges on building their identity perceptions as a part of teachers' supportive professional cognition (Rostami et al., 2021).

The positive outcomes associated with Coyle's (2015) Content and Language Integrated Learning (CLIL) framework also align with previous CLIL-focused research that links integrated instruction to heightened learner engagement, improved academic language proficiency, and greater content retention. Studies by Ahmed Abdel-Al Ibrahim et al. (2023), as well as Teng et al. (2024), found that CLIL environments foster increased motivation, deeper cognitive processing, and emotional engagement—findings mirrored in this study's observed gains in motivational selves and resilience under the CLIL-based scaffolding condition. Dalton-Puffer (2011) similarly noted that CLIL supports higher-order thinking and learner autonomy, especially when scaffolding is explicitly embedded into content instruction. Moreover, the inclusion of affective outcomes such as resilience and self-regulation in the present study expands the scope of typical CLIL investigations, which often focus primarily on language and content outcomes (Wang et al., 2024).

Additional studies further corroborate these findings. For example, Uçak and Kartal (2023) emphasized that scaffolding that incorporates dialogic instruction and academic language development promotes identity formation and learner confidence—benefits that were most strongly observed in the Gibbons model group. Similarly, studies by Wang et al. (2024) demonstrated that structured dialogic teaching improves both cognitive and socio-emotional outcomes, supporting the link between language use and emotional resilience seen in this study. In terms of motivational selves and self-regulation, the findings are in line with Michalsky (2021), which posits that learner engagement increases when instructional practices activate learners' ideal L2 selves—a mechanism likely supported through personalized, scaffolded instruction that challenges learners while providing structured support.

Importantly, the current study extends prior research by simultaneously examining multiple emotional and motivational constructs within a scaffolded instructional context. While earlier studies (Ahmed Abdel-Al Ibrahim et al., 2023; Alfares, 2025) have typically focused on either academic achievement or isolated affective outcomes, this study offers a more holistic view of learner development, emphasizing the interplay between cognitive performance and psychological resilience. This aligns with contemporary educational psychology perspectives (Michalsky, 2021), which advocate for emotionally supportive instructional environments that balance cognitive challenge with affective scaffolding. Taken together, the present findings not only validate the pedagogical principles underlying scaffolded instruction but also highlight its multifaceted benefits in EFL contexts. The alignment with and expansion upon existing research underscore the need for teachers to implement theoretically informed, flexible, and emotionally responsive

scaffolding practices that nurture both academic competence and emotional resilience in language learners. As educational systems increasingly emphasize the development of 21st-century skills—including self-regulation, persistence, and cross-cultural communication—such evidence-based instructional strategies become ever more essential.

Conclusion

This research presents persuasive support for the positive impact of scaffolded teaching methods in improving EFL learners' academic achievement as well as their emotional and motivational engagement. By comparing three prominent models—Gibbons' language scaffolding framework, van de Pol et al.'s contingent scaffolding approach, and Coyle's CLIL-based model—the findings reveal that scaffolded instruction significantly improves reading achievement, motivational selves, resilience, and self-regulation. Among the models, Gibbons' approach demonstrated the highest overall impact, particularly in fostering emotional resilience and self-regulated learning strategies. The results affirm the theoretical foundations of sociocultural theory and contemporary educational psychology, underscoring the value of structured, responsive, and contextually relevant support in language learning. Importantly, this study expands the scope of scaffolded instruction research by highlighting its emotional and motivational benefits alongside cognitive gains, thereby emphasizing the holistic development of learners. As such, the integration of scaffolded pedagogies into EFL instruction offers a promising pathway for cultivating competent, motivated, and emotionally resilient language learners. These insights have practical implications for curriculum design, teacher training, and classroom practice in diverse educational settings.

This research underscores both the conceptual and applied importance of scaffolded instruction within EFL environments, drawing from sociocultural theory, self-determination theory, and the L2 motivational self-system. The findings demonstrate that structured support strategies foster improvements in cognitive domains—such as reading comprehension—and affective-motivational areas including resilience, self-regulation, and learner identity. These outcomes affirm Vygotsky's notion of the Zone of Proximal Development by illustrating how targeted guidance facilitates learner growth. The findings emphasize the importance of emotionally attuned, socially interactive scaffolding in shaping learners' motivation and academic self-concept. Practically, the study recommends structured strategies like modeling, guided practice, and emotional support to reduce anxiety and foster engagement. It calls for teacher training and curriculum design that incorporate both cognitive and emotional scaffolding to address the diverse needs of EFL learners.

While this study provides valuable insights into how scaffolded instruction influences both the academic performance and emotional development of EFL learners, it is not without limitations. The narrow and context-bound sample constrains the broader applicability of the results. Additionally, the brief duration of the intervention curtails the ability to evaluate long-term impacts, emphasizing the importance of longitudinal studies to examine enduring effects.

To advance understanding of scaffolded instruction in EFL contexts, future research should: (1) involve larger, more diverse samples to improve

generalizability; (2) use longitudinal designs to assess long-term impacts on academic and emotional outcomes; (3) investigate the effects of scaffolding on a range of language skills beyond reading; and (4) explore how teacher-related factors influence the effectiveness of scaffolding, informing better training and professional development.

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Authors' Biography

Komeil Jafari Sanksarak received his B.A. and M.A. degrees in Teaching English as a Foreign Language (TEFL) from Islamic Azad University, Sari Branch. He completed his M.A. in 2020 and is currently a Ph.D. candidate in TEFL at Islamic Azad University, Qaemshahr Branch, Iran. His research interests include English language teaching, teacher education, and the development of language skills.

Mehrshad Ahmadian is an assistant professor in TEFL at the Islamic Azad University, Qaemshahr Branch, Iran. He has published papers in various national and international journals. His research domains are (critical) language teacher education, language assessment and teaching all four language skills.

Ebrahim Fakhri is an assistant professor at the Islamic Azad University. He has publications in Springer, Wiley-Blackwell, *Elsevier,* Francis & Taylor, Routledge, and Cambridge University Press. His research domains are bilingualism, listening comprehension, metacognition, EFL motivation, and listening in relation to all other language skills.