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DEVELOPING SELF-REGULATED LEARNING IN EFL HIGHER EDUCATION THROUGH A BLENDED CONTENT-BASED INSTRUCTION FRAMEWORK: A CONCEPTUAL MODEL

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ABSTRACT

Developing students' ability to regulate their own learning is an important goal in contemporary English as a Foreign Language (EFL) education, particularly in higher education contexts where students are expected to demonstrate increasing autonomy and strategic learning behavior. However, integrating Self-Regulated Learning (SRL) principles into language instruction remains a challenge for many educators. This study is a conceptual paper that proposes a Blended Content-Based Instruction (BCBI) framework designed to support the development of SRL within EFL higher education settings. Drawing on theoretical foundations from Constructivism and SRL theory, the proposed model integrates thematic content engagement with structured preparation, interactive learning activities, and reflective practices. The significance of this study lies in addressing a gap in the literature concerning the lack of pedagogically grounded models that systematically integrate SRL within the BCBI framework in higher education. Methodologically, the framework is developed through a synthesis of relevant theoretical perspectives and prior empirical research on SRL, Blended Learning, and Content-Based Instruction. The model outlines practical guidelines that encourage students to engage with authentic materials, participate in collaborative discussions, and evaluate their learning progress through reflective tasks. By combining content-driven instruction with opportunities for strategic learning and self-assessment, the BCBI framework aims to foster learner autonomy, metacognitive awareness, and sustained engagement in the language learning process. The proposed model offers a flexible pedagogical approach that can support language instructors and curriculum designers in embedding SRL principles within blended EFL learning environments.

KEYWORDS: Blended Learning; Content-Based Instruction; EFL Higher Education; Learner Autonomy; Self-Regulated Learning.

1. INTRODUCTION

The landscape of higher education has shifted from the mere acquisition of linguistic knowledge to the development of lifelong learning competencies. In English Language Teaching (ELT), Self-Regulated Learning (SRL) has become an essential requirement, particularly for English as a Foreign Language (EFL) university students who must operate with limited exposure to the target language beyond the classroom (Hunutlu, 2023; Zheng & Wang, 2026). However, the restricted contact hours typical of higher education contexts remain insufficient for achieving advanced proficiency, which places greater responsibility on learners to manage their own learning processes (Namaziandost, 2025). Besides, traditional ELT approaches often fail to systematically engage students in SRL practices such as planning, monitoring, and evaluation (Omidvar & Meihami, 2025; Saihi et al., 2024).

The constructivist approach, which underpins the pedagogical framework of this study, views learning as an active, reflective process where knowledge is constructed through authentic experience rather than passive reception (De Corte, 2012; Robertson et al., 2024). This learning approach initiates with complex, content-driven inquiries that require students to actively negotiate meaning, moving away from traditional rote-learning and the memorization of isolated language drills or model answers (Adigun et al., 2024; Rankapola & Zuva, 2023). In this regard, positioning students as active participants in an authentic environment grants them the agency to discover linguistic and conceptual principles independently (Almusharraf, 2021).

Within this theoretical orientation, the Blended Content-Based Instruction (BCBI) framework offers a pedagogically coherent approach by integrating content-rich instruction with blended learning environments (Ismael et al., 2025; Yu & Du, 2019). By organizing instruction around interconnected themes rather than discrete linguistic elements, BCBI ensures that learning remains both cognitively engaging and contextually meaningful (Srikoon et al., 2026). Moreover, the integration of face-to-face and digital learning environments extends learning beyond the classroom, creating opportunities for continuous engagement and flexible interaction with content (Sareen & Mandal, 2024).

In contrast to other approaches, Content and Language Integrated Learning (CLIL), which focuses on teaching subject matter through the target language, primarily emphasizes content-driven language acquisition but often lacks structured support for planning, monitoring, and evaluating

learning within blended environments (Haidov & Bensen, 2021; Qizi, 2025). Similarly, flipped learning, where instructional content is delivered prior to class, tends to prioritize procedural engagement with pre-designed materials rather than fostering reflective interaction that promotes metacognitive development (Lobos et al., 2024). In the same vein, blended models designed to support SRL provide general scaffolds for learner autonomy but are often task-general and insufficiently embedded within discipline-specific content (Fayaza & Ahangama, 2024). By comparison, the BCBI framework integrates thematic content, blended modalities, and explicit SRL processes within learning tasks, enabling students to actively plan, monitor, and evaluate their learning while engaging with authentic academic content (Sadek, 2025). This integrated design positions BCBI as a more comprehensive framework for fostering both linguistic competence and metacognitive autonomy in higher education EFL contexts (Herrador-Alcaide et al., 2020; Saliha, 2023).

Although previous studies Ojugo et al., (2023) and Yu & Du (2019) have demonstrated the effectiveness of content-based and blended approaches in enhancing linguistic proficiency, learner cognition, and engagement, they have primarily focused on observable learning outcomes. Consequently, limited attention has been given to how such environments can be systematically designed to develop the underlying processes of self-regulation. This reveals a critical gap in the literature, namely the absence of pedagogically grounded models that explicitly integrate SRL processes within blended content-based instruction in higher education EFL contexts. Without structured opportunities to develop SRL, learners may remain dependent on instructor guidance and struggle to meet the demands of autonomous academic learning (Öztürk & Çakıroğlu, 2021).

The significance of this study lies in addressing this gap by proposing a theoretically grounded and pedagogically structured BCBI framework that explicitly integrates SRL processes into content-based blended learning environments. By doing so, the study contributes to the existing literature by offering a practical and adaptable model that supports both language development and learner autonomy. Accordingly, this study aims to develop a conceptual BCBI framework that systematically embeds SRL processes within EFL higher education contexts. To achieve this aim, the study is guided by the following research objectives:

1. to examine the theoretical relationships between SRL, constructivism, and blended

content-based instruction;

2. to identify the limitations of existing instructional models in supporting SRL development; and
3. to propose a structured BCBI framework that integrates SRL processes into content-based blended learning.

In line with these objectives, the study addresses the following study questions:

1. How can Self-Regulated Learning be conceptually integrated into a blended content-based instructional framework?
2. What are the key components of an effective BCBI framework for promoting SRL in EFL higher education contexts?

2. REVIEW OF LITERATURE

2.1. Self-Regulated Learning

Self-regulated learning (SRL) is broadly conceptualized as learners' proactive capacity to plan, monitor, and evaluate their cognitive, motivational, and behavioral processes in pursuit of academic goals (Zimmerman, 1989). Classical models of SRL emphasize metacognitive control as central to effective learning. For example, Zimmerman's cyclical model conceptualizes SRL as a recursive process of forethought, performance, and self-reflection, while Pintrich (2000) extends this perspective by incorporating motivational regulation and contextual influences across planning, monitoring, control, and reaction phases. Socio-cultural perspectives, such as those derived from Vygotsky (1978) and Bandura (1991), complement these cognitive models by highlighting the socially mediated nature of regulation, in which peer collaboration, scaffolding, and contextual affordances shape learners' capacity to self-regulate. Together, these models establish SRL as a multidimensional construct integrating cognitive, motivational, and social dimensions of learning.

Contemporary research has advanced these foundational perspectives by conceptualizing SRL as a dynamic, context-sensitive, and socially embedded process. Panadero (2017) emphasizes the shift toward socially shared regulation of learning (SSRL), in which regulatory processes are co-constructed through peer interaction and collaborative tasks. Similarly, Efklides' Metacognitive and Affective Model of Self-Regulated Learning (MASRL), recently revisited by Efklides and Schwartz (2024), underscores the role of metacognitive experiences, such as perceived task difficulty and cognitive effort, in triggering affective responses that directly influence strategy use and persistence. These

perspectives are particularly relevant in complex learning environments, where cognitive and emotional demands interact to shape regulation. Empirical studies reinforce these theoretical developments: Hunutlu (2023) demonstrates that SRL strategies are critical for EFL learners' engagement in technology-mediated environments, while Fayaza and Ahangama (2024) identify metacognitive regulation as a primary predictor of success in blended learning contexts. Collectively, these models and findings suggest that SRL in contemporary educational settings emerges from the interplay of cognitive regulation, affective experiences, social mediation, and technological affordances.

Despite these advances, SRL remains insufficiently contextualized in English as a Foreign Language (EFL) higher education. A central challenge is the "double burden" faced by learners, defined as the simultaneous processing of disciplinary content and a foreign language (Sriram & Anburaj, 2024; Yue & Saad, 2025). From a cognitive perspective, this dual demand can be understood through cognitive load theory: learners must manage both intrinsic load from complex subject matter and additional extraneous load imposed by linguistic constraints, which directly affects their ability to self-regulate (Do, 2022; Fayaza & Ahangama, 2024; Lobos et al., 2024). This combination places substantial pressure on working memory, often exceeding learners' processing capacity and disrupting critical SRL processes such as monitoring comprehension, selecting strategies, and evaluating performance. Within Efklides' framework, such overload may also trigger negative metacognitive experiences, including confusion or frustration, which undermine motivation and strategic engagement. Thus, the double burden is not merely a contextual challenge but a direct threat to effective self-regulation.

This challenge becomes particularly pronounced in blended learning environments, where students are required to manage learning across multiple modalities with reduced direct instructional support. Although blended learning offers flexibility and extended engagement opportunities, its effectiveness depends heavily on learners' self-regulatory capacities. Empirical evidence indicates that while blended learning can enhance engagement and outcomes, it often lacks explicit mechanisms for scaffolding SRL. Ojugo et al. (2023) highlight that adaptive blended environment improve learner engagement but require structured guidance to support self-directed learning. Similarly, Rasheed et al. (2020) and Lim et al. (2023) found that students

frequently struggle to manage online components independently, leading to disengagement when regulatory support is insufficient.

Research on Content-Based Instruction (CBI) shows that engagement with authentic academic content can enhance linguistic proficiency and cognitive development (Cenoz, 2015; Öztürk & Çakıroğlu, 2021). However, the success of CBI in higher education is closely tied to learners' ability to manage complex cognitive demands, which again highlights the importance of SRL. Existing models, including CLIL and other integrated approaches, often prioritize content and language outcomes without systematically addressing the regulatory processes necessary to navigate this complexity. Consequently, a significant gap remains in the literature regarding the integration of SRL within blended, content-rich learning environments.

To address this gap, the present study adopts Zimmerman's cyclical model of SRL as the primary theoretical framework, due to its clear alignment with instructional design and its emphasis on iterative learning processes. The proposed Blended Content-Based Instruction (BCBI) framework operationalizes this model by mapping the forethought, performance, and self-reflection phases onto three instructional stages: preparation, interaction, and reflection. Beyond a purely individual cognitive perspective, the framework incorporates Pintrich's emphasis on motivation and context, as well as socio-cultural perspectives highlighting the role of interaction and feedback in shaping regulation. In doing so, the model situates SRL within a blended, socially mediated, and technologically supported learning environment.

Ultimately, this study reconceptualizes SRL not as a supplementary strategy but as a necessary mechanism for managing the cognitive and metacognitive challenges inherent in EFL higher education. By explicitly embedding SRL processes within a blended content-based framework, the study moves beyond outcome-focused approaches and provides a structured model that addresses both the "double burden" of language and content learning and the regulatory demands of contemporary educational contexts.

2.2. Blended Content-Based Instruction

2.2.1 The Need for An Integrated Blended Learning Model

In many EFL contexts, particularly in higher education, students face structural challenges that limit their opportunities to develop language proficiency. These challenges include large class

sizes, limited exposure to English outside the classroom, lack of infrastructure, especially in developing countries, and restricted instructional hours often constrain meaningful language practice and interaction (Ghoneim & Elsayed, 2023; Wannas & Abdel-Mohsen, 2025). Under such conditions, students frequently rely on passive learning strategies and teacher-centered instruction, which limits their ability to actively engage with the language or regulate their own learning processes (Fauziah & Kim, 2026).

These constraints highlight the need for instructional models that extend learning beyond the classroom while encouraging students to take responsibility for their own learning. One pedagogical approach that addresses these challenges is blended learning. Blended learning involves more than simply replacing classroom activities with online components. Rather, it involves the thoughtful integration of online and face-to-face learning experiences to create a dynamic and flexible learning ecosystem (Huang et al., 2026; Zhang et al., 2025).

Within such environments, teachers can design learning activities that occur both inside and outside the classroom, including live chats, discussion forums, blogs, podcasts, digital journals, and collaborative online projects (Nguyen et al., 2026). These tools enable students to interact with course materials, instructors, and peers in multiple ways, thus creating opportunities for more meaningful and continuous engagement with the language (Nabih & Banihani, 2021).

Beyond improving access to learning resources, blended learning environments foster SRL by placing greater responsibility on students to manage their learning across multiple settings (Tong et al., 2022). When students interact with digital learning platforms, complete online tasks, and prepare for face-to-face discussions, they must organize their time, monitor their understanding, and adjust their learning strategies accordingly (Alharthi & Elsigini, 2022).

2.2.2. Content-Based Instruction in Blended Learning Environments

While blended learning provides the technological and structural framework for flexible learning, Content-Based Instruction (CBI) contributes a meaningful academic context for language learning. It focuses on teaching language through meaningful subject matter rather than isolated linguistic forms (Xinfa et al., 2025). In this approach, language learning occurs as students

engage with authentic content related to academic or real-world topics (Zhang et al., 2024).

Content-based instruction has been widely recognized as an effective approach for promoting communicative competence and cognitive engagement in language learning. Instead of memorizing vocabulary or grammar rules in isolation, students interact with authentic materials and develop language skills while exploring meaningful topics (Brinton, 2003; Stoller, 2004).

In content-based learning environments, instructional units are typically organized around themes or real-world issues such as immigration, environmental problems, education, cultural identity, or social change (Glynn & Spenader, 2020). These themes provide rich input and create opportunities for students to discuss ideas, analyze information, and express opinions in the target language. Various types of materials can be used to introduce thematic content, including documentaries, news articles, short stories, academic texts, and multimedia resources (Yaseen et al., 2025). Such materials provide students with diverse linguistic input and encourage them to interact with the language in meaningful contexts.

When CBI is integrated with BL environments, students are able to explore thematic content both inside and outside the classroom. Online platforms can provide access to multimedia resources, while face-to-face sessions can focus on discussion, problem-solving, and collaborative activities.

2.3. Theoretical Underpinnings of The BCBI-SRL Model

The integration of BL and CBI is strongly supported by constructivist learning theory. Constructivism emphasizes that knowledge is actively constructed by students through interaction, experience, and reflection rather than being passively transmitted by instructors (Bou-Saad et al., 2025; Do et al., 2023; Matthews, 1998; McLeod, 2025). From a constructivist perspective, learning environments should encourage exploration, collaboration, and meaningful engagement with knowledge (Vygotsky, 1978).

CBI complements this perspective by organizing language learning around thematic academic content, enabling students to develop linguistic competence while simultaneously constructing subject-matter knowledge (Zhang et al., 2022). In the same vein, BL environments provide an effective pedagogical structure for implementing content-based instruction by combining digital learning resources with face-to-face interaction (Niu & Jiang,

2025). Through the use of online materials, discussion platforms, and collaborative learning activities, students are encouraged to interact with language input in meaningful contexts (Sariani et al., 2022). Such environments promote social knowledge construction, which aligns closely with the principles of constructivist learning theory (Han et al., 2024).

The proposed framework is also grounded in SRL theory, which explains how students manage their cognitive, motivational, and behavioral learning processes (Arvatz et al., 2025). SRL is conceptualized as a cyclical process involving goal setting, strategic planning, performance monitoring, and reflective evaluation (Dignath & Büttner, 2018; Xu et al., 2025). Within the BCBI context, students are encouraged to take active responsibility for their learning by preparing for classroom interaction, engaging in collaborative inquiry, and reflecting on their linguistic and cognitive performance.

To illustrate, BL environments naturally facilitate the development of SRL skills. Online learning activities require students to prepare learning materials before class by engaging with authentic thematic content, such as academic texts, multimedia resources, or topic-based resources aligned with the instructional objectives (Zou et al., 2025). During task completion, students monitor their comprehension and learning progress, while reflecting on feedback obtained through discussions and interactive assignments (Banihani, 2021). Meanwhile, face-to-face sessions focus on meaning negotiation, collaborative problem-solving, and guided inquiry, enabling students to apply language knowledge within meaningful communicative and content-rich contexts (Rittmann & Mpofu, 2024).

Therefore, the proposed BCBI framework integrates thematic content learning with blended instructional delivery to support the development of self-regulated language learning. By embedding language learning within meaningful academic themes and providing structured opportunities for interaction and reflection inside and outside the class, the framework aims to enhance student autonomy, strategic awareness, and cognitive engagement.

2.4. Overview of the BCBI-SRL Framework

Building on constructivism and self-regulated learning theories, the present study proposes a Blended Content-Based Instruction framework designed to foster self-regulated learning among EFL university students in higher education contexts. The BCBI-SRL model conceptualizes language learning as a dynamic cognitive and metacognitive process

that develops through meaningful content engagement across BL environments.

The framework is organized into three interconnected instructional stages that correspond to the core processes of self-regulated learning: preparation, interaction, and reflection. Rather than treating SRL as an isolated skill, the model operationalizes SRL development as an evolving learning mechanism supported by thematic content learning, social interaction, and reflective knowledge construction.

1. Preparation Stage (Planning Phase)

The preparation stage focuses on cognitive activation and strategic learning planning. Students engage with online thematic materials before classroom interaction. These materials may include videos, academic articles, podcasts, or discussion prompts aligned with the instructional objectives.

During this stage, students activate prior knowledge, identify key concepts, and generate preliminary ideas related to the learning theme. The stage primarily targets planning-oriented self-regulated learning processes, including goal setting, strategic organization of information, and anticipation of knowledge gaps. By interacting with authentic thematic content, students begin constructing preliminary linguistic and conceptual schemas that facilitate subsequent classroom interaction.

2. Interaction Stage (Monitoring Phase)

The interaction stage represents the core learning environment of the framework. During face-to-face sessions, students participate in collaborative inquiry activities such as discussions, debates, role-playing, and problem-solving tasks.

This stage promotes performance monitoring skills by enabling students to check comprehension in real time, negotiate meaning, and adjust communication strategies through peer interaction and instructor scaffolding. Students are encouraged to support their arguments with evidence derived from the thematic content while engaging in collaborative reasoning and feedback exchange.

3. C. Reflection Stage (Evaluation Phase)

The reflection stage emphasizes metacognitive awareness and knowledge consolidation. After classroom activities, students engage in reflective learning tasks such as digital journals, peer feedback, or online discussion participation.

This stage supports evaluation-oriented SRL development by encouraging self-assessment,

performance review, and strategic refinement of learning approaches. Through reflective practice, students develop deeper awareness of their linguistic performance, cognitive strategies, and areas requiring improvement, thereby promoting long-term autonomous learning.

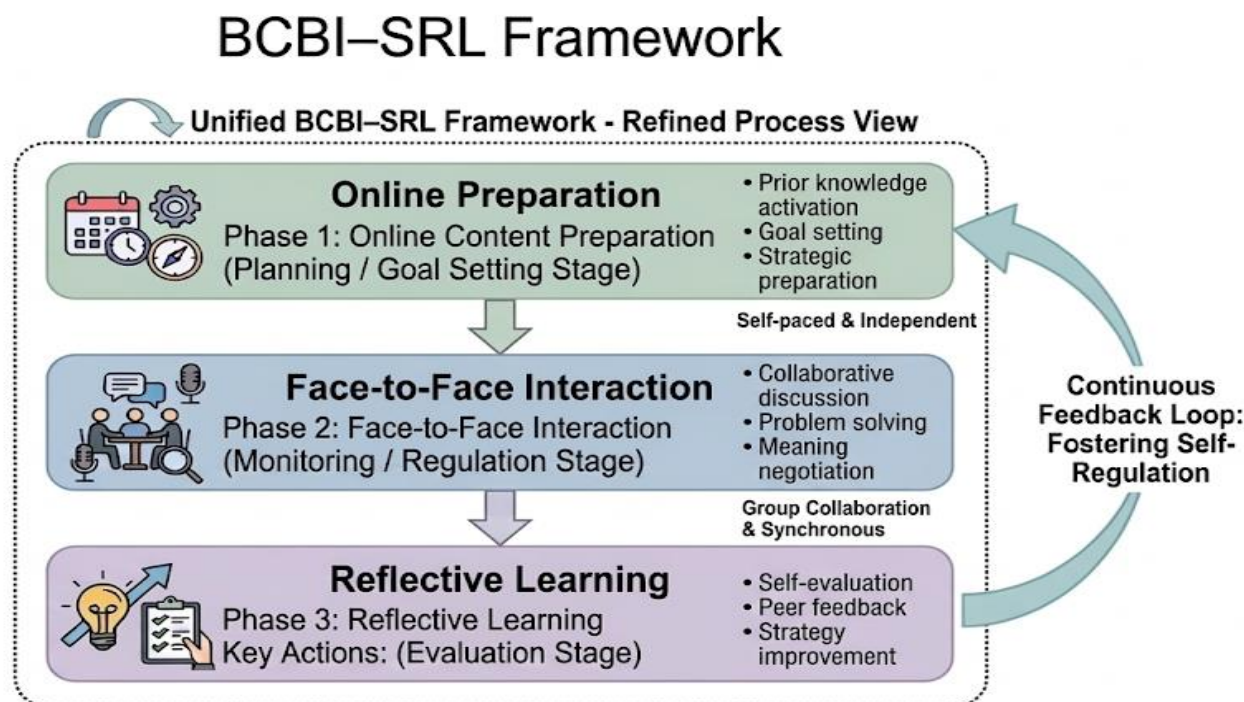
2.5. Example of the Model in Practice

To illustrate the practical application of the BCBI-SRL framework, a thematic unit on youth migration can be implemented. In the preparation stage, students access the course learning management system (e.g., Moodle) to watch a short documentary about youth career mobility and read a brief online article discussing reasons why young people seek opportunities abroad. Students then respond to guiding questions such as: What are the main factors influencing youth migration? and How do you evaluate such decisions? Online discussions can be facilitated through collaborative platforms such as "Padlet."

During the interaction stage, the instructor introduces real-life migration narratives using news materials and authentic examples. Students participate in group discussions, role-play debates, or collaborative problem-solving activities related to migration and career opportunities. These activities promote meaningful communication, critical reasoning, and negotiation of ideas.

In the reflection stage, students record short reflective responses related to current social media discussions and journal entries connected to the thematic topic. They may also share personal opinions or real-life stories on online discussion boards and provide feedback on their peers' contributions. These reflective tasks encourage students to evaluate their learning performance and identify strategies for improvement. The cyclical learning process of the BCBI-SRL model is illustrated in Figure 1.

Fig. 1 Conceptual Structure of the BCBI-SRL Model.



As seen above, figure 1 presents the conceptual learning cycle of the BCBI-SRL model, illustrating how students engage with thematic content across blended learning environments to develop self-regulated learning skills.

It is worth mentioning that the proposed model has been applied in a freshman-year ELT course focused on oral communication skills at a public university in Egypt. The participants were pre-service English language teachers with an intermediate level of English proficiency. The BCBI-SRL framework aligns with curriculum goals by promoting communicative competence, metacognitive awareness, and autonomous learning. It supports the development of speaking, listening, and reflective thinking skills while fostering student autonomy through engagement with meaningful thematic content.

By integrating SRL principles, the framework enables students to develop both linguistic competence and strategic learning abilities that are essential for their academic and professional development. SRL principles encompass cognitive, motivational, and behavioural dimensions that support students in managing and directing their own learning processes (Pintrich, 2000; Zimmerman, 1989). Based on this theoretical foundation, the following section provides a detailed breakdown of the SRL principles embedded within each stage of the BCBI-SRL framework.

2.6 SRL PRINCIPLES INCORPORATED INTO THE BCBI-SRL FRAMEWORK

The BCBI-SRL framework is operationalized across three instructional stages, each designed to support specific self-regulated learning processes including planning, performance monitoring, and reflective evaluation. The framework also adopts a gradual learning regulation cycle that moves from preparatory cognitive organization to interactive meaning construction and finally to metacognitive reflection.

1. Preparation Stage: Planning And Strategic Orientation

The preparation stage focuses on supporting students' planning and goal-setting abilities. Students are engaged with authentic thematic materials delivered through online learning platforms before classroom interaction. This can be done thorough exposure to documentaries, articles, or multimedia resources enables students to activate prior knowledge, identify core ideas, and develop preliminary understanding of the learning topic.

Consistent with Zimmerman's (1989) model of self-regulation, goal-directed preparation helps students allocate cognitive resources efficiently and reduces cognitive overload during subsequent interaction. To further support strategic learning organization, students complete a preparation worksheet designed for this stage. The worksheet is provided in Appendix A. Table 1 summarizes the

operational design of this stage.

Table 1: Preparation Stage in the BCBI-SRL Framework.

Stage	Preparation
Activities	Students engage with online thematic materials before class using platforms such as Moodle or Nearpod.
Objective	To activate prior knowledge, support goal setting, and prepare students for meaningful classroom interaction.
Guidelines	Students review thematic content, identify key ideas, and prepare short responses or opinions guided by instructor prompts.
Skills	Goal setting, strategic planning, information selection, and communication preparation.

2. Interaction Stage: Monitoring And Meaning Regulation

The interaction stage emphasizes collaborative knowledge construction and real-time learning monitoring. In this stage, classroom activities are designed to encourage students to negotiate meaning, exchange ideas, and regulate communication strategies during task performance.

Interactive discussions, debates, and problem-solving tasks provide opportunities for students to adjust their understanding based on peer input and instructor scaffolding. Feedback mechanisms supporting communication practice are presented in Appendix B. Table 2 illustrates the structure of this

stage.

Table 2: Interaction Stage in the BCBI-SRL Framework.

Stage	Interaction
Activities	Students participate in group discussions, debates, and collaborative problem-solving tasks related to the thematic topic.
Objective	To promote communicative competence, collaborative learning, and performance monitoring.
Guidelines	Teachers facilitate interactive tasks encouraging idea exchange, justification of opinions, and clarification questioning.
Skills	Self-monitoring, strategy regulation, collaborative reasoning, and oral communication competence.

3. Reflection Stage: Evaluation And Metacognitive Development

The reflection stage supports self-evaluation and metacognitive awareness. Students assess their performance, review learning outcomes, and refine communication strategies for future improvement.

Reflective activities may include digital journals, peer response tasks, or discussion-based reflection using online platforms. The reflection monitoring worksheet used in this stage is provided in Appendix Table 3 presents the operational outline of the reflection stage.

Table 3: Reflection Stage in the BCBI-SRL Framework.

Stage	Reflection
Activities	Students complete reflective tasks using online learning platforms.
Objective	To promote metacognitive awareness and encourage strategic evaluation of learning performance.
Guidelines	Students reflect on participation, identify improvement areas, and set future learning goals.
Skills	Self-evaluation, reflective thinking, and learning strategy improvement.

The BCBI-SRL framework focuses on planning, performance monitoring, and reflection, drawing on Zimmerman's (1989) cyclical model, Pintrich's (2000) emphasis on goal-setting, and socio-cultural perspectives (Vygotsky, 1978; Bandura, 1991) that highlight social scaffolding and feedback. These principles are particularly relevant for higher education EFL learners, as planning reduces cognitive overload from language and content, monitoring supports navigation of blended

environments, and reflection enhances metacognitive awareness (Hunutlu, 2023; Fayaza & Ahangama, 2024; Ojugo et al., 2023). Besides, the three-stage structure, preparation, interaction, reflection, operationalizes these principles in a scaffolded, manageable way, embedding self-regulation explicitly at each stage. Unlike the flipped learning cycle, which separates content delivery from practice, and Kolb's (1984) experiential cycle, which focuses on iterative experience, BCBI-SRL

emphasizes active cognitive, metacognitive, and social regulation within blended, content-rich contexts, ensuring learners progressively develop self-regulatory skills.

2.7. Practical Guidelines for The Implementation of the BCBI-SRL Framework

The implementation of the BCBI-SRL framework should follow a flexible instructional rhythm that allows students sufficient time to engage with thematic content, communicate ideas, and reflect on their learning experiences. Although the exact duration may vary depending on course organization, it is recommended that students be given adequate processing time across preparation, interaction, and reflection activities to support meaningful development of self-regulated learning skills.

To support self-regulated learning, reflection questions are integrated into the process. Students are encouraged to assess their progress by considering prompts such as: What are the main ideas I learned from the thematic material? How effectively did I express my opinion during classroom interaction? Which communication strategies helped me participate more confidently? What should I improve in future learning tasks? These reflective prompts help students monitor their learning progress and refine their language skills.

Peer interaction and feedback also play an important role in the framework. To ensure constructive learning exchange, instructors are encouraged to design evaluation activities that focus on communication clarity, idea organization, and participation quality. Structured feedback mechanisms, such as simple rubrics or guided response prompts, can help students provide meaningful comments while developing critical thinking and analytical skills.

Moreover, creating a supportive learning environment is essential for successful framework implementation. Feedback should be viewed as a developmental tool that promotes learning improvement rather than performance judgment. In this regard, encouraging a positive learning culture and growth mindset helps enhance student confidence, autonomy, and willingness to participate in communicative activities.

3. ASSESSMENT METHODOLOGY FOR THE BCBI-SRL FRAMEWORK

The assessment approach within the BCBI-SRL framework is designed to provide structured formative feedback while monitoring students'

development of self-regulated learning behaviors in content-based language learning environments. Assessment is integrated into the learning process and supports students in evaluating their engagement with thematic content, communication performance, and learning strategies.

To ensure systematic evaluation, students' performances are assessed using a rubric that captures key dimensions of learning within the BCBI-SRL framework. The instructor evaluates student participation and task performance based on the following criteria:

- The quality of engagement with thematic content
- The clarity and organization of expressed ideas
- The appropriateness and effectiveness of language use
- The ability to justify opinions and support ideas with examples
- The effectiveness of interaction with peers during collaborative tasks
- The use of communication strategies to maintain discussion
- The confidence and active participation in learning activities
- The ability to reflect on learning and identify areas for improvement

To ensure consistent evaluation across learning activities, a ten-point scoring scale (0-10) is used for each criterion. Each score represents a level of performance ranging from very limited to highly effective engagement with the learning task.

Additionally, to promote transparency and support self-regulated learning processes, students are introduced to the assessment criteria before participating in BCBI learning tasks. The rubric functions as a developmental guide that helps students set goals, monitor their participation, and refine their learning strategies.

The instructor incorporates these criteria into formative assessment by providing structured feedback during classroom interaction and reflection activities. In addition, peer feedback can be incorporated using the same rubric, enabling students to evaluate collaborative contributions and develop a deeper awareness of effective learning behaviours within the BCBI-SRL framework. The rubric is designed to capture key dimensions of self-regulated learning and content-based participation as discussed in the SRL literature (e.g., Zimmerman, 1989; Pintrich, 2000). Detailed performance descriptors are provided in Appendix D.

Example of the Model in Classroom Settings

To illustrate how the BCBI-SRL framework can be implemented in practice, consider a thematic unit on “youth migration” in a freshman-level EFL course. This example demonstrates how students engage with content, collaborate, and reflect across the three stages of self-regulated learning.

A. Preparation Stage (Planning Phase)

Before class, students access the learning management system (e.g., Moodle) to watch a brief documentary on youth career mobility and read a short article about why young people seek opportunities abroad. They respond to guiding questions such as:

- What are the main factors influencing youth migration?
- How would you evaluate the decisions made by young people in the documentary?

Students then post short reflections on a collaborative platform such as Padlet or a class discussion forum, where they can read and respond to their peers’ ideas. During this stage, the focus is on planning and goal-setting: students activate prior knowledge, identify key concepts, and organize their thoughts in preparation for classroom interaction.

B. Interaction Stage (Monitoring Phase)

In face-to-face sessions, the instructor introduces real-life migration narratives drawn from news articles or interviews. Students work in small groups to:

- Discuss the reasons for youth migration using evidence from the materials.
- Participate in role-play debates, taking opposing viewpoints (e.g., staying vs. moving abroad).
- Collaboratively design solutions, such as programs to support young migrants.

This stage emphasizes real-time monitoring and collaborative regulation. Students check their understanding, negotiate meaning with peers, and adjust their communication strategies as needed. They also receive immediate feedback from the instructor, helping them refine both their arguments and reasoning skills.

C. Reflection Stage (Evaluation Phase)

After class, students reflect on their learning through digital journals or discussion board posts. They consider prompts such as:

- What strategies helped me communicate more effectively?
- Which aspects of my reasoning or argumentation could I improve?
- How can I better plan for future discussions?

At this stage, students engage in metacognitive reflection, evaluating their own performance and

identifying areas for improvement. This process supports long-term development of self-regulation, helping students become more aware of their strengths, weaknesses, and strategies for future learning.

4. ANTICIPATED OUTCOMES AND EDUCATIONAL IMPLICATIONS

This BCBI-SRL framework is expected to promote self-regulated learning (SRL) by integrating preparation, collaborative interaction, and reflective evaluation. In the preparation stage, students engage with thematic materials, set goals, and plan their learning strategies. During the interaction stage, they monitor comprehension, adjust communication, and refine ideas through group discussions and problem-solving. The reflection stage supports self-evaluation and metacognitive awareness, enabling students to identify strengths, weaknesses, and strategies for future tasks. Repeated engagement across these stages helps students develop stronger SRL skills and greater autonomy.

Beyond SRL, the framework enhances engagement with authentic, meaningful content. Students develop not only linguistic competence but also critical thinking, analytical reasoning, and reflective skills through collaborative discussions and thematic problem-solving. By preparing independently, participating actively, and reflecting on their learning, students gradually assume responsibility for their progress, fostering autonomy, motivation, and effective learning behavior.

From a curriculum perspective, the framework offers practical guidance for designing EFL courses around thematic units, combining language practice with real-world content. Instructors act as facilitators, guiding engagement, providing feedback, and supporting self-regulation through reflective tasks, peer evaluation, and formative assessment. The model’s flexibility allows adaptation across diverse higher education contexts, combining online preparation, face-to-face interaction, and reflective activities to support sustained learner autonomy in blended and hybrid learning environments.

5. CONCLUSION

This paper proposed a Blended Content-Based Instruction (BCBI) framework designed to foster self-regulated learning (SRL) in EFL higher education contexts. The framework responds to the growing need for learners to manage the dual demands of disciplinary content and foreign language acquisition, addressing the “double burden” (Sriram & Anburaj, 2024) that can overwhelm working

memory and impede effective regulation. By integrating blended learning strategies with content-focused instruction, the framework structures learning across three stages, preparation, interaction, and reflection, enabling students to plan, monitor, and evaluate their learning processes within authentic, technology-mediated environments.

5.1. Implications of the Study

5.1.1. Theoretical Implications

The study extends SRL theory by operationalizing classical models (Zimmerman, 1989; Pintrich, 2000) and socio-cultural perspectives (Vygotsky, 1978; Bandura, 1991) within blended, content-rich contexts. The framework illustrates how cognitive, motivational, and social regulatory processes can be systematically scaffolded in EFL learning, linking metacognitive, affective, and socially mediated regulation. In doing so, it addresses gaps in prior research that focused mainly on language outcomes rather than regulatory processes.

5.2. Pedagogical Implications

The framework provides practical guidance for multiple stakeholders in higher education. For instructors, it offers structured approaches to design learning activities that foster active engagement, strategic planning, collaborative monitoring, and reflective evaluation. For students, it supports the development of autonomy, metacognitive awareness, and lifelong learning skills by embedding SRL principles into meaningful, content-driven tasks. For content creators and curriculum designers, the framework demonstrates how to organize thematic materials and scaffold learning experiences that integrate cognitive, social, and motivational regulation. At the institutional level, universities can use the framework to inform policy and training programs that promote student-centered, technology-enhanced, and strategically guided learning environments.

5.3. Methodological Implications

The framework offers a clear, staged operational model for integrating SRL into curriculum design, specifying tasks, skills, and guidance to scaffold learners' self-regulatory development. This structured approach distinguishes it from other models, such as the flipped learning cycle or Kolb's experiential learning, by embedding SRL explicitly within each stage rather than treating it as an auxiliary process.

5.4. Directions For Future Research

Future research should move beyond assessing general outcomes and focus on how and why the BCBI-SRL framework influences learners' regulatory processes. Empirical studies could combine process-oriented measures, such as digital trace data, learning analytics, and real-time self-monitoring logs, with traditional outcome measures to capture dynamic SRL behaviors in blended content-rich contexts. Longitudinal designs could examine the trajectory of SRL development, exploring how learners progressively internalize metacognitive, motivational, and social regulatory skills across semesters. Comparative studies could evaluate the framework against alternative models, such as flipped learning or experiential cycles, to determine its unique contribution to managing the "double burden" of language and disciplinary content. Further innovation could include investigating adaptive and AI-mediated scaffolds that personalize the BCBI-SRL experience, examining how technology can dynamically support planning, monitoring, and reflection. Additionally, cross-cultural studies could explore how contextual factors, such as institutional policies, instructor training, and digital infrastructure, moderate the framework's effectiveness, offering insights to refine implementation strategies for diverse EFL higher education settings.

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Appendix A

Presentation Performance Rubric: Planning and Communication Stage

Dimension	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Content Organization	Ideas are logically structured with clear introduction, development, and conclusion	Minor organizational issues	Basic idea presentation but lacks coherence	Ideas are unclear or poorly organized
Conceptual Understanding	Main concepts are accurately explained with supporting examples	Mostly accurate with minor gaps	Limited explanation of key ideas	Misunderstanding of core content
Oral Fluency	Speech is smooth, natural, and well-paced	Minor hesitation	Frequent pauses affecting fluency	Speech is fragmented
Pronunciation	Words are clearly pronounced	Occasional pronunciation errors	Pronunciation sometimes affects comprehension	Pronunciation significantly impedes understanding
Expressiveness	Appropriate tone, eye contact, and confidence	Moderate expressiveness	Limited expressive communication	Very low engagement and confidence

Self-Reflection Prompts

- What aspects of my presentation were effective?
- What should be improved in future performance?
- What communication strategy should I adopt next?

Appendix B

Peer Feedback Rubric: Collaborative Interaction Stage

Dimension	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Idea Clarity	Ideas are clearly expressed and supported	Mostly clear with minor ambiguity	Basic understanding conveyed	Ideas are unclear
Argumentation	Evidence and reasoning are used effectively	Some supporting explanation	Limited justification	No logical support
Interaction Quality	Actively engages in discussion and responds to peers	Moderate participation	Minimal interaction	Passive participation
Communication Confidence	Demonstrates strong communicative confidence	Acceptable confidence	Some hesitation	Very low confidence
Respectful Feedback Behavior	Provides constructive and respectful feedback	Mostly appropriate feedback	Limited feedback quality	Feedback is unclear or negative

Open-Ended Peer Feedback

- One strength of the performance was: _____
- One suggestion for improvement is: _____
- One question that emerged during observation is: _____

Appendix C

Self-Regulated Learning Monitoring Rubric: Reflection and Improvement Stage

Dimension	Achieved (Yes = 1)	Not Achieved (No = 0)	Comments
Added explanations or examples	☐	☐	_____
Improved speech clarity	☐	☐	_____
Used appropriate pacing and pauses	☐	☐	_____
Demonstrated improved confidence	☐	☐	_____
Reduced unnecessary hesitation	☐	☐	_____
Responded to feedback	☐	☐	_____
Set future learning goals	☐	☐	_____

Final Metacognitive Reflection

1. The most important improvement I achieved during this cycle was
2. The learning strategy that helped me most was:
3. Future learning objective:

Appendix D
BCBI-SRL Performance Assessment Rubric

Criterion	Description
Engagement with Content	Demonstrates understanding of thematic content and actively contributes relevant ideas during learning tasks
Clarity of Ideas	Expresses ideas in an organized and understandable manner
Language Use	Uses appropriate vocabulary and language structures to communicate meaning effectively
Argument Development	Provides explanations, examples, or justification when expressing opinions
Peer Interaction	Engages constructively with peers through responding, questioning, and idea exchange
Communication Strategies	Uses strategies such as clarification, elaboration, or paraphrasing to maintain communication
Participation and Confidence	Demonstrates willingness to participate actively in discussions and collaborative tasks
Reflective Awareness	Shows ability to evaluate personal learning performance and identify strategies for improvement

Scoring Scale (0-10)

Score Range	Performance Level
0-2	Very limited performance
3-4	Basic engagement with significant difficulties
5-6	Moderate performance with partial effectiveness
7-8	Strong performance demonstrating effective engagement
9-10	Highly effective performance demonstrating advanced engagement