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STRATEGIES TO STRENGTHEN SELF-REGULATION IN EFL PRIMARY SCHOOL CLASSROOMS

**ESTRATEGIAS PARA FORTALECER LA
AUTORREGULACIÓN EN SALONES DE INGLÉS
EN ESCUELAS PRIMARIAS**

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Strategies to Strengthen Self-Regulation in EFL Primary School Classrooms

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ABSTRACT

This article presents a systematic review of research published between 2021 and 2025 on pedagogical strategies to strengthen Self-Regulated Learning (SRL) in primary education, with implications for English as a Foreign Language (EFL) classrooms. The PRISMA protocol guided identification, screening, and eligibility assessment across multiple academic databases. After screening, 28 studies were included. Findings were synthesized into five categories: (1) gamification and virtual learning environments, (2) explicit instruction and mnemonic supports, (3) process-oriented writing and monitoring, (4) differentiated motivational strategies, and (5) modeling and thinking-aloud practices. Overall, the evidence suggests that SRL is strengthened when classroom tasks include clear goals, scaffolded routines, opportunities for monitoring and formative feedback, and supports for students' emotional engagement and persistence. Practical implications are discussed for primary teachers and for adapting the strategies to EFL learning contexts.

Keywords: self-regulated learning, primary education, pedagogical strategies, english as a foreign language, metacognition

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Estrategias para Fortalecer la Autorregulación en Salones de Inglés en Escuelas Primarias

RESUMEN

Este artículo presenta una revisión sistemática de la literatura publicada entre 2021 y 2025 sobre estrategias pedagógicas para fortalecer el aprendizaje autorregulado en educación primaria, con implicaciones para aulas de inglés como lengua extranjera. Se siguió el protocolo PRISMA para identificar, seleccionar y evaluar estudios con diferentes bases de datos académicas. Tras el cribado, se incluyeron 28 estudios. Los hallazgos se organizaron en cinco categorías: (1) gamificación y entornos virtuales de aprendizaje, (2) instrucción explícita y recursos mnemotécnicos, (3) escritura como proceso y monitoreo, (4) estrategias motivacionales diferenciadas y (5) modelado y pensamiento en voz alta. En conjunto, la evidencia sugiere que la autorregulación se fortalece cuando las tareas incorporan metas claras, andamiaje, oportunidades de monitoreo y retroalimentación formativa, así como apoyos emocionales y motivacionales. Se discuten orientaciones prácticas para docentes de primaria y para la transferencia de estas estrategias a contextos del inglés como lengua extranjera.

Palabras clave: aprendizaje autorregulado, educación primaria, estrategias pedagógicas, inglés como lengua extranjera, metacognición

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INTRODUCTION

Self-regulation is the ability of students to direct their thoughts, emotions, and behaviors toward specific goals, adjusting their actions according to internal standards and contextual demands (Zimmerman, 2002). This competence is developed through strategies, practice, and feedback from teachers and peers, and in primary education it is essential for organizing tasks, maintaining attention, and making autonomous decisions. At this stage, children face significant developmental challenges such as separating from their parents, adapting to school routines, and building relationships with new peers'. These transitions require increasing cognitive control and emotional regulation (Piaget, 2001; Erikson, 1959; Denham et al., 2012).

Additionally, the classroom demands behaviors that are not natural for their age remaining seated, keeping silent, following rules which call for autonomy, emotional control, and responsibility. Promoting self-regulation therefore becomes a key condition for successful school adjustment and long-term academic achievement.

During an English as a Foreign Language (EFL) teaching practicum, carried out in a primary school in Bogotá, in the first semester of 2025, some class observations were conducted with 25 second grade students aged 8 to 10. These classes took place four times a week over a period of three months. It was noted that some students frequently became distracted, struggled to follow instructions, and showed low persistence when facing challenging tasks, such as filling worksheet based on listening exercises, reading for comprehension and vocabulary retention practices. Nevertheless, others displayed positive engagement and some self-monitoring behaviors, such as checking their work and asking for clarification. These observations revealed the importance of designing pedagogical strategies that foster self-regulation from the early years of schooling.

Although several literature reviews have examined Self-Regulated Learning (SRL), few focus specifically on pedagogical strategies for primary education or on how these strategies can be implemented in EFL classrooms. Existing reviews tend to address SRL broadly or at different educational levels, which leaves limited guidance on strategies that are feasible for younger learners in language lessons. This creates a need for a focused synthesis of strategies that are feasible for young learners in language classrooms.



Based on this gap, this research aims to identify and analyze pedagogical strategies that promote and strengthen self-regulation in primary education based on the recent literature. Therefore, the research question that guides this study is: What strategies documented between 2021 and 2025 support Self-Regulated Learning (SRL) in primary education, and what implications do these strategies have for primary EFL learning contexts?

The contribution of this work can be understood on three levels. Locally, it provides teachers with tools to address their primary school learners' challenges such as low attention span, difficulties following instructions, limited emotional control, and dependence on teacher's guidance, frequently observed in EFL classrooms; the strategies proposed may help them create more engaging and autonomous environment. Nationally, it offers evidence to inform practices aligned with primary education, which emphasizes both academic achievement and socio-emotional development, which can provide meaningful insights that inspire new classroom policies. Internationally, it responds to UNESCO's (2017) call to promote autonomy and citizenship skills for the 21st century, reinforcing the need to raise children, who in future can become citizens of the world with strong values. These advantages confirm the relevance of this research.

Theoretical Framework

Children in Primary School Education

Primary education is widely recognized as the basis for lifelong learning and the development of essential competencies. UNESCO (2017) emphasizes that this stage goes beyond basic knowledge by promoting values, coexistence, and citizenship. In this sense, primary schooling also supports autonomy, responsibility, and self-regulation skills that help children adapt to complex social contexts and participate in democratic and diverse societies. In Colombia, primary education is guided by the General Education Law (Law 115 of 1994) and national standards issued by the (Ministerio de Educación Nacional [MEN], 2016). Within this framework, EFL has been prioritized as part of the national bilingual agenda since the launch of the National Bilingual Program (MEN, 2004), and its implementation has been guided through foreign-language competency standards (MEN, 2006). However, implementing these expectations in early grades remains challenging due to the cognitive and socio-emotional adaptations required to meet learners' needs.



Despite its importance, primary education faces barriers that limit its effectiveness in promoting academic and socio-emotional development. Inequalities in access, resource shortages, and insufficient teacher preparation are particularly visible in rural and vulnerable regions (MEN, 2023). In addition, curricular overload and the pressure of standardized assessments often reduce opportunities to strengthen socio-emotional competencies (Darling-Hammond, 2010; OECD, 2020), even though these skills including self-regulation predict school adjustment and long-term success (Denham et al., 2012). In the Colombian context, González-Rey and Mitjans Martínez (2016) highlight the need to balance cognitive and emotional learning, reinforcing the relevance of intentionally fostering self-regulation in primary schools.

Primary School Children Development

Children aged six to twelve experience key developmental changes that influence how they learn. Piaget (2001) associates this period with the development of concrete-operational thinking, while Vygotsky (1979) emphasizes learning through social interaction and the co-construction of knowledge. From a social learning perspective, Bandura (1986) explains that children develop self-regulation partly by observing and modeling adult behavior, and Bruner (1996) highlights scaffolding as support that gradually builds autonomy. At the same time, students must adapt to routines, meet classroom demands, and develop independence. For this reason, research indicates that explicit instruction in self-regulation strategies can improve academic performance and socio-emotional well-being (Becerra & Fernández, 2023; Restrepo & Álvarez, 2022), which makes teacher preparation and supportive classroom environments essential.

Self-Regulation in Primary Education

Self-regulation is a dynamic process in which learners set goals, monitor progress, and adjust strategies to improve performance. It includes behavioral control as well as the management of motivation and thoughts during learning (Zimmerman, 2013; Schunk & DiBenedetto, 2020), and it is linked to academic achievement and children's comprehensive development (Baumeister, 2018). This competence can be described through four connected components: standards, motivation, monitoring, and self-reinforcement/accountability. Standards refer to the goals or quality criteria that guide effort (Schunk & DiBenedetto, 2020), such as aiming to complete a reading task without distraction.



Motivation sustains persistence toward those standards, whether driven by interest or external incentives (Schunk & DiBenedetto, 2020). Monitoring involves checking performance, detecting errors, and adjusting strategies to remain aligned with goals (Dignath & Veenman, 2021), for example, noticing loss of attention and deliberately refocusing. Finally, self-reinforcement/accountability includes self-evaluation, small rewards, or assuming consequences that support responsibility and continuity (Schunk & DiBenedetto, 2020). When these components develop together in primary education, students strengthen autonomy, improve academic outcomes, and build socio-emotional skills relevant for school and daily life (Benick et al., 2021; Olivares, Fidalgo, & Torrance, 2023).

METHODOLOGY

Research Worldview, Approach, and Design

This research is framed from a constructivist and interpretivist perspective, since knowledge is seen as something that is built and interpreted by people in their own contexts (Creswell & Poth, 2018). The interest of the study is not to provide exact measurements or statistical generalizations, but rather to explore how self-regulation strategies are described and used in primary education throughout the literature from 2021 to 2025. Based on this, this research follows a qualitative systematic literature review design, which helps to collect and organize studies in a structured way (Snyder, 2019), aiming to identify useful strategies that may strengthen self-regulation in school contexts.

This researcher implements a systematic review of the literature based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach (Page et al., 2021), a widely recognized methodological framework for the development of high-quality reviews in scientific research. This approach allows the process of identification, selection, evaluation of eligibility and inclusion of studies to be structured in a clear and exhaustive manner, guaranteeing transparency, replicability and clarity in the documentation of the results. By using this PRISMA method, the researcher can minimize biases, systematically record methodological decisions, and strengthen the reliability and credibility of their findings (Page et al., 2021).

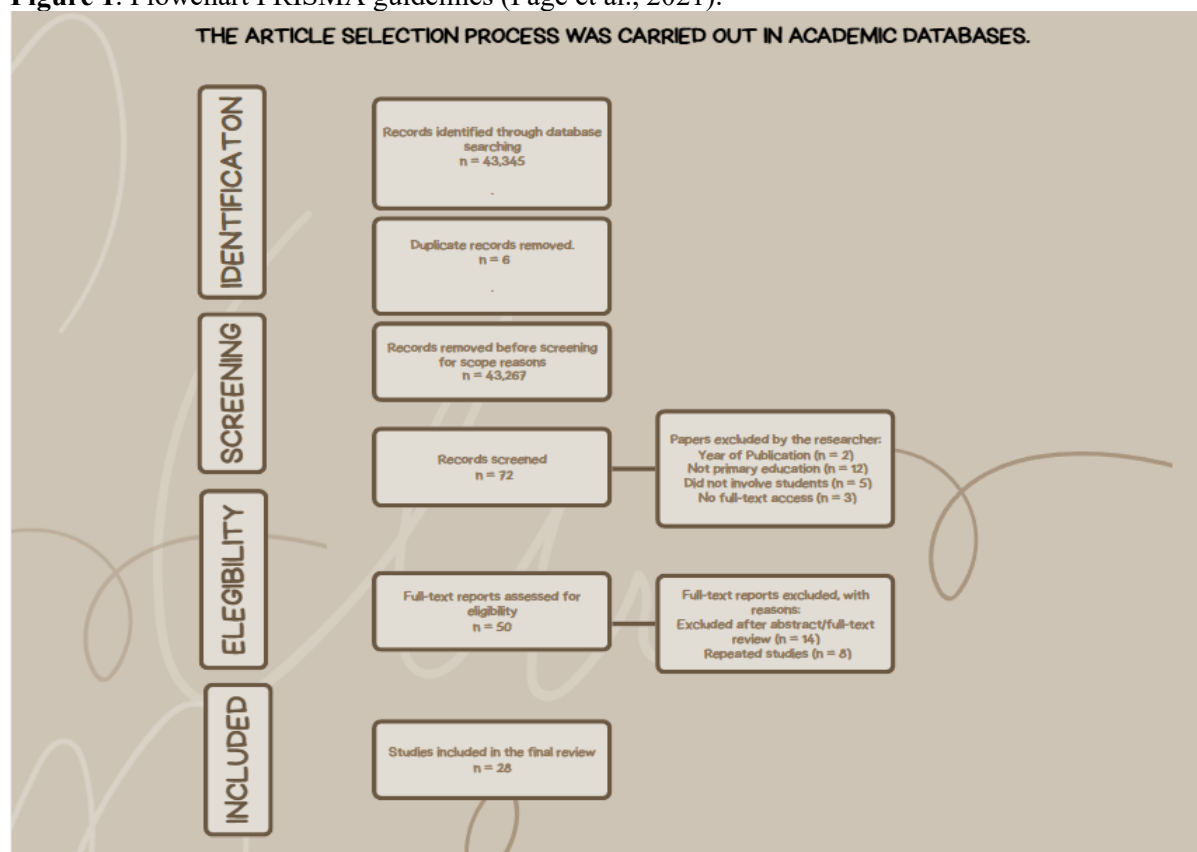
The PRISMA protocol was employed to structure the process of identifying and selecting relevant literature on self-regulation in primary education published between 2021 and 2025. This strategy optimized the search process and ensured the inclusion of relevant studies.



Table 1 Eligibility Criteria

Criteria	Descriptors
Inclusion	Pedagogical strategies that foster attention, autonomy, and self-regulated learning among primary school students (ages 6–12). Empirical studies, theses, or intervention projects conducted in any country, with relevance to school contexts. Languages: English or Spanish. Published between 2021 and 2025. Full-text availability.
Exclusion	Articles outside the focus of self-regulation or executive functions. Studies at non-primary levels (secondary, tertiary, preschool). Theoretical commentaries or reviews without empirical data. Publications prior to 2021 or repeated entries across database.
Boolean operators	("self-regulation" OR "self-regulated learning") AND ("primary education" OR "elementary school" OR "primary students") AND ("pedagogical strategies" OR "teaching practices" OR "instructional strategies" OR "learning strategies") AND ("EFL" OR "English as a foreign language" OR English OR bilingual OR "foreign language").

Note. Search strings applied in Redalyc, Dialnet, Scielo, ERIC, and Google Scholar databases. Adapted from PRISMA inclusion and exclusion standards (Page et al., 2021).

Figure 1. Flowchart PRISMA guidelines (Page et al., 2021).

Data Analysis Methodology

In this study, grounded theory principles were applied to identifying, organizing and interpreting the data. Open coding was first used to break down information from the reviewed studies into key concepts

related to self-regulation strategies. Then, axial coding helped identify relationships between these concepts, grouping them into sub-categories based on their context and connections. Finally, selective coding allowed the sub-categories to be integrated into broader categories that explain how pedagogical strategies support self-regulation in primary school students. This process ensured that the analysis went beyond description and provided an interpretative understanding of the evidence (Charmaz, 2006; Strauss & Corbin, 1998).

To strengthen the validity and reliability of the findings, methodological triangulation was carried out. Information from different types of sources, including journal articles and theses, from varied geographical and methodological contexts, was compared and integrated. This approach helped minimize bias and provided a more complete understanding of how self-regulation strategies are applied in primary education (Flick, 2018; Polit & Beck, 2013).

Duplicate records were removed, and titles and abstracts were screened to exclude irrelevant studies. Subsequently, full-text articles were assessed for eligibility according to predefined inclusion and exclusion criteria. The PRISMA flowchart summarizes this process, indicating the total number of studies initially retrieved, the number excluded at each stage, and the final set of 28 studies included in the qualitative synthesis.

Table 2. Data Collection Summary of Selected Studies (2021–2025)

No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
1	Álvarez-Agudelo, A. M., Sierra-Miranda, N. E., Insuasti-Muñoz, Y. B., & Osorio-Muñoz, R. E. (2023). El portafolio del estudiante como estrategia didáctica y su incidencia en la conciencia metacognitiva y la autorregulación del aprendizaje. <i>Revista Electrónica en Educación y Pedagogía</i> , 7(12), 56-68. https://doi.org/10.15658/rev.electron.educ.pedagog23.05071205	2023	Colombia	4th–5th grade (Social Sciences).	Redalyc / Dialnet
2	Arias Gallegos, W. L., Llorente Castro, C. A., & Rivera Calcina, R. (2022). Análisis psicométrico del inventario de estrategias metacognitivas en niños de 4.º y 5.º de primaria de Colombia. <i>Educación</i> , 28(2), 1-14. https://doi.org/10.33539/educacion.2022.v28n2.2658	2022	Colombia	220 (4th–5th grade).	Journal site



No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
3	Bai, B., & Guo, W. (2021). Motivation and self-regulated strategy use: Relationships to primary school students' English writing in Hong Kong. <i>Language Teaching Research</i> , 25(3), 378-399. https://doi.org/10.1177/1362168819859921	2021	Hong Kong	Primary school students.	SAGE
4	Benick, M., Dörrenbächer-Ulrich, L., Weißenfels, M., & Perels, F. (2021). Fostering self-regulated learning in primary school students: Can additional teacher training enhance the effectiveness of an intervention? <i>Psychology Learning & Teaching</i> , 20(3), 271-289. https://doi.org/10.1177/14757257211013638	2021	Germany	607 4th-grade students.	Publisher
5	Ceballos-Marón, N. A., Sevilla-Vallejo, S., & Ceberio, M. (2022). Vínculo entre la regulación emocional y la comprensión lectora en estudiantes de escuela primaria y la perspectiva de los docentes de Argentina. <i>Revista Científica Arbitrada de la Fundación MenteClara</i> , 7(294), 1-21. https://doi.org/10.32351/rca.v7.294	2022	Argentina	65 students (4th–6th grade).	Journal site
6	Coque Quispe, L. M., Tapia Paredes, M. S., Aucatoma Gómez, A. B., Chango Paz, G. M., & Tapia Paredes, T. M. (2025). Desarrollo de la autorregulación emocional en estudiantes de Educación Básica y su influencia en el rendimiento académico. <i>Prosperus</i> , 2(4), 337-355. https://doi.org/10.63535/tn1hp787	2025	Ecuador	120 basic education students.	Journal site
7	Cunha, J., Martins, J., Peseta, R., & Rosário, P. (2023). A self-regulation intervention conducted by class teachers: Impact on elementary students' basic psychological needs and classroom engagement. <i>Frontiers in Psychology</i> , 14, 1220536. https://doi.org/10.3389/fpsyg.2023.1220536	2023	Portugal	181 4th-grade students (Exp=90; Comp=91).	Frontiers
8	de la Barreda Angón, F. P. (2024). Programa de regulación emocional en línea para nivel primaria durante el confinamiento por Covid-19. <i>Revista Internacional de Educación Emocional y Bienestar</i> , 4(1), 45-65. https://doi.org/10.48102/rieecb.2024.4.1.67	2024	Spain	Primary-level students.	Journal site



No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
9	Dermitzaki, I. (2025). Fostering Elementary School Students' Self-Regulation Skills in Reading Comprehension: Effects on Text Comprehension, Strategy Use, and Self-Efficacy. <i>Behavioral Sciences</i> , 15(2), 101. https://doi.org/10.3390/bs15020101	2025	Greece	109 (grades 5–6; exp=54, ctrl=55).	MDPI
10	Diamond, K. (2024). Mindfulness as an intervention for self-regulation and school reintegration. <i>Mindfulness</i> , 15(2), 01. https://doi.org/10.1007/s12671-024-02408-4	2024	United States	Students in school reintegration.	Springer
11	Fabri, N. B., Silva, M. A., & Oliveira, K. L. (2022). Autorregulação, estratégias de aprendizagem e compreensão de leitura. <i>Psicologia: Teoria e Pesquisa</i> , 38(e38423), 1-10. https://doi.org/10.1590/S1413-24782022270068	2022	Brazil	Basic education students.	SciELO / Journal
12	González-Cortez, N. A., & Lagos-San Martín, N. (2022). Efectividad de un programa de intervención basado en mindfulness para autorregular la atención en niñez de educación primaria. <i>Revista Electrónica Educare</i> , 26(1), 129-143. https://doi.org/10.15359/ree.26-1.7	2022	Chile	46 3rd-grade students (8–9 years).	Journal site
13	González-Suárez, R. (2022). Autorregulación del aprendizaje y motivación académica: Un estudio mixto secuencial explicativo en Educación Primaria [Tesis doctoral, Universidade da Coruña]. Repositorio Institucional. http://hdl.handle.net/2183/31247	2022	Spain	Primary education (doctoral thesis).	UDC Repository
14	Guamán, J. L., & Rivera Guamán, Y. V. (2024). Fomentando el pensamiento reflexivo: estrategias para mejorar las habilidades de metacognición. <i>Esprint Investigación</i> , 3(1). https://doi.org/10.61347/ei.v3i1.63	2024	Ecuador	Not applicable (documentary review).	Dialnet
15	Leites, V. R., Trías Seferian, D., & Huertas Martínez, J. A. (2024). Assessing self-regulated processes: What do primary school students do, say and think in the process of understanding a text? <i>European Journal of Psychology of Education</i> , 39(3), 2531-2550. https://doi.org/10.1007/s10212-024-00830-9	2024	Spain	9 primary students.	Springer



No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
16	Mena Montoya, A. F., Zapata Cano, L. J., Castro Camelo, A., & Conejo Carrasco, F. (2021). Estrategias de autorregulación para la habilidad de escritura en inglés: Un proyecto de aula en primaria. <i>Boletín Redipe</i> , 10(1), 125-133. https://doi.org/10.36260/rbr.v10i1.1166	2021	Colombia	Primary school students.	Dialnet / Redipe
17	Menéndez Santurio, J. I. (2025). Efectos de una intervención de aprendizaje autorregulado en Educación Primaria sobre la responsabilidad, la motivación y la autorregulación. <i>Revista Fuentes</i> , 27(1), 1-14. https://doi.org/10.12795/revistafuentes.2025.25958	2025	Spain	125 students (grades 4–6; ages 9–12).	Revista Fuentes / Journal site
18	Monge Moreno, D. G., Balsamo Vega, M. G., & Serna Antelo, M. L. (2025). Diferencias en habilidades de autorregulación en niños de primaria alta en Sonora, México. <i>Universidad y Sociedad</i> , 17(2), e5046. https://rus.ucf.edu.cu/index.php/rus/article/view/5046	2025	Mexico	393 upper primary students.	Universid ad y Sociedad
19	Noriega Cortes, M. A., & Carreño-Bolivar, L. (2024). Virtual game-based learning environments to promote self-regulated learning skills in foreign language learners (Version 1). <i>F1000Research</i> , 13, 1541. https://doi.org/10.12688/f1000research.157746.1	2024	Colombia	6 (grades 2–4; ages 8–10).	F1000Research
20	Olivares, F., Fidalgo, R., & Torrance, M. (2023). Efectos de una instrucción estratégica-autorregulada en el proceso de comprensión y autoeficacia lectora del alumnado de educación primaria. <i>Revista Española de Pedagogía</i> , 81(285), 271-290. https://doi.org/10.22550/REP81-2-2023-02	2023	Spain	Primary school students.	Dialnet
21	Rojas Chacaltana, S. A. (2021). Aprendizaje autorregulado en estudiantes del quinto grado de primaria de una institución educativa pública y privada de Ica, 2020 [Tesis de maestría, Universidad César Vallejo]. Repositorio Institucional UCV. https://hdl.handle.net/20.500.12692/56878	2021	Peru	5th-grade primary students.	UCV Repositorio y



No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
22	Ronqui, V., Sánchez, M. F., & Seferian, D. T. (2021). La enseñanza de la autorregulación en aulas de educación primaria. Cuadernos de Investigación Educativa, 12(2). https://www.redalyc.org/journal/275/27570174048/27570174048_2.pdf	2021	Uruguay	5th-grade primary students.	Journal site
23	Sáez-Delgado, F., Mella-Norambuena, J., Bizama, M., & Gatica, J. (2024). Autorregulación del aprendizaje en estudiantes chilenos de educación primaria: Validación de un instrumento y diferencias por sexo y grado. Revista Española de Pedagogía, 82(288), 311-333. https://doi.org/10.22550/2174-0909.4057	2024	Chile	514 (3rd–8th grade).	Dialnet
24	Santiago Soriano, D. L. (2025). Estrategias para fomentar la autorregulación en estudiantes de un aula de cuarto grado en primaria [Professional practice report]. Repositorio BECENE SLP. https://repositorio.beceneslp.edu.mx/jspui/handle/20.500.12584/1751	2025	Mexico	29 4th-grade students.	Institutional repository
25	Tobón Villada, J. E., Marín Buitrago, O., Tapia Llanos, R. C., & Martín García, M. A. (2021). Estrategia didáctica de aprendizaje basada en inteligencias múltiples predominantes y procesos autorregulatorios en estudiantes rurales de primaria. INNOVA Research Journal, 6(3), 34-57. https://doi.org/10.33890/innova.v6.n3.2021.1751	2021	Colombia	13 primary students (5th grade).	Dialnet
26	Trías, D., Huertas, J. A., Mels, C., Castillejo, I., & Ronqui, V. (2021). Autorregulación en el aprendizaje, desempeño académico y contexto socioeconómico al finalizar la escuela primaria. Revista Interamericana de Psicología/Interamerican Journal of Psychology, 55(2), e1509. https://doi.org/10.30849/ripijp.v55i2.1509	2021	Uruguay / Spain	60 primary students (7–11 years).	Redalyc / Dialnet
27	Tse, S. K., Lin, L., & Ng, W. H. R. (2022). Self-regulated learning strategies and reading comprehension among bilingual primary school students in Hong Kong. International Journal of Bilingual Education and Bilingualism, 25(9), 3258-3273. https://doi.org/10.1080/13670050.2022.2049686	2022	Hong Kong	Bilingual primary students.	Publisher / ERIC



No	Reference (APA 7 + DOI/link)	Year	Country	Participants	Database
28	Vieites Lestón, T. (2022). Diseño e implementación de propuestas de prescripción de deberes escolares que mejoren el compromiso y la autorregulación del estudiante [Tesis doctoral, Universidade da Coruña]. Repositorio Institucional. http://hdl.handle.net/2183/31240	2022	Spain	Primary education (doctoral thesis).	UDC Repositor y

RESULTS AND DISCUSSION

Following the systematic search and screening process, the included studies were synthesized into five thematic categories: (1) Gamification and Virtual Learning Environments (VLEs), (2) Explicit Instruction and Mnemonic Devices, (3) Process-Oriented Writing and Monitoring, (4) Differentiated Motivational Strategies, and (5) Modeling and Thinking Aloud.

Category 1: Gamification and Virtual Learning Environments (VLEs)

Gamified virtual learning environments (VLEs) stand out in the recent literature as a practical way to keep primary learners engaged while also encouraging self-regulation during language tasks (Noriega Cortes & Carreño-Bolívar, 2024). In EFL settings, that matters because everyday practice vocabulary, short readings, listening requires students to sustain attention and check themselves repeatedly. When the digital environment offers a clear sequence and visible goals, it becomes easier for children to “stay with the task” instead of working randomly.

Beyond engagement, what seems most valuable is the structure of the experience. Noriega Cortes and Carreño-Bolívar (2024) describe mission-like sequences that move through asking, exploring, creating, discussing, and reflecting, which naturally pushes learners to make choices and then evaluate what worked. In that sense, reflection is not an add-on; it becomes part of the task. This connects well with reflective thinking work showing that students improve regulation when they are guided to explain what they did and why it helped (Guamán & Rivera Guamán, 2024).

Finally, game mechanics such as progress indicators, rewards, and feedback can support persistence, especially when tasks become difficult (Noriega Cortes & Carreño-Bolívar, 2024). However, the key is that these elements reinforce strategic behaviour rather than distraction.



Overall, the evidence suggests that gamified VLEs work best when teachers actively connect the “game” to strategy use and guided reflection, so learning transfers beyond the platform (Guamán & Rivera Guamán, 2024).

Category 2: Explicit Instruction and Mnemonic Devices

A consistent point across the studies is that self-regulated learning does not usually develop “by itself” in primary school; it improves when strategies are taught in a direct and visible way. In practice, that means explaining what to do, when to do it, how to apply the steps, and why the strategy is useful (Benick et al., 2021; Tse et al., 2022; Sáez-Delgado et al., 2024). This is why structured teaching protocols are recommended: they help students internalize cognitive, metacognitive, and motivational strategies as routines rather than isolated tips (González-Suárez, 2022).

Olivares et al. (2023) provide a clear classroom example through mnemonic routines that guide students before, during, and after reading. IPOD organizes preparation (identifying the text type, thinking, setting an objective, and planning), ECO supports monitoring and problem-solving during reading, and END promotes evaluation and planning for the next task (Olivares et al., 2023). The strength of this approach is its simplicity: it turns strategy use into steps children can actually follow, while teachers can observe and support the process.

The same logic appears in related evidence emphasizing modeling and scaffolding. Benick et al. (2021) highlight that explicit teaching can be strengthened through teacher preparation and structured materials for goal setting and planning, while Dermitzaki (2025) links explicit instruction and modeling to better performance in more complex tasks. Measurement-focused work also reinforces the importance of making strategies teachable and assessable in primary contexts (Arias Gallegos et al., 2022). Overall, explicit instruction supported by mnemonic cues helps students treat SRL as actionable behavior rather than abstract advice (Cunha et al., 2023; Sáez-Delgado et al., 2024).

Category 3: Process-Oriented Writing and Monitoring

When writing is taught as a process, SRL becomes easier to develop because students are guided through planning, drafting, revising, and evaluating instead of being judged only on the final product (Mena Montoya et al., 2021; Bai & Guo, 2021). This process perspective naturally brings monitoring to the center: learners are expected to check progress, notice difficulties, and choose how to respond



while working (Tse et al., 2022). In EFL, that ongoing regulation can make the difference between giving up early and improving through revision.

Several studies frame monitoring as part of the performance phase, where students need self-observation and adjustment in real time. Rojas Chacaltana (2021) emphasizes that learners should modify behaviour when they realize they are not meeting goals, and González-Suárez (2022) describes a control/performance moment in which instructions are recalled and quality is checked while the product is still being built. In classroom terms, guiding questions and teacher feedback help students pause, verify, and correct their work before it is “too late” to improve (Ronqui et al., 2021). Homework research supports this view by showing that informative feedback helps students recognize difficulties and revise more effectively (Vieites Lestón, 2022).

Monitoring becomes more realistic when students use tools that make progress visible. Portfolios, for example, help learners track advances and difficulties across reading and writing tasks (Álvarez-Agudelo et al., 2023), and Olivares et al. (2023) show how a reading log supports real-time strategy monitoring. Evidence also suggests that noticing the need to reformulate writing is a meaningful predictor of success, which highlights the value of monitoring and control (Leites et al., 2024). Finally, emotional regulation is not separate from this process: students’ ability to manage frustration and confidence can shape persistence and comprehension during demanding literacy tasks (Ceballos-Marón et al., 2022; Bai & Guo, 2021).

Category 4: Differentiated Motivational Strategies

Motivation shapes whether SRL strategies are actually used when tasks become challenging, so several studies argue for differentiated support rather than a single motivational approach for all students (Tobón Villada et al., 2021; Coque Quispe et al., 2025). This makes sense in primary classrooms, where engagement can change quickly and self-regulation is still developing. In other words, strategy instruction works better when classrooms also protect students’ willingness to persist.

A strong theme within this category is emotional and attentional regulation as a foundation for sustained effort. González-Cortez and Lagos-San Martín (2022) report benefits of mindfulness-oriented work aimed at improving attentional regulation, and Diamond (2024) discusses mindfulness as a route to strengthen broader self-regulation and school functioning.



Likewise, de la Barreda Angón (2024) presents an online emotional regulation program designed for primary students, illustrating how emotional support can be incorporated into educational practice. From this angle, students regulate learning more effectively when they also learn to regulate emotional responses to difficulty.

Differentiation can also be achieved through pedagogy that connects with students' strengths and contexts. Tobón Villada et al. (2021) propose a didactic strategy grounded in multiple intelligences especially ecological and interpersonal to increase motivation, confidence, and commitment through meaningful tasks and social interaction. The relationship between emotional self-regulation and academic performance further supports this integrated view (Coque Quispe et al., 2025). Overall, motivational and emotional supports make SRL more sustainable because they help students remain engaged long enough to practice, monitor, and improve (Monge Moreno et al., 2025).

Category 5: Modeling and Thinking Aloud

For primary learners, SRL strategies can remain abstract unless teachers show what those strategies look like during real tasks. Modeling and thinking aloud make planning, monitoring, and evaluation visible, so students can observe the process behind successful performance (Ronqui et al., 2021; Rojas Chacaltana, 2021). This is particularly helpful in EFL tasks, where students can lose track easily if they do not know how to respond when comprehension breaks down.

This category is strongly supported by observational learning perspectives. Fabri et al. (2022) describe modeling as a key interaction level: by observing significant adults and listening to verbalized routines, students form an image of the performance they want to achieve and begin exercising self-control. Benick et al. (2021) similarly note that imitation often precedes internalization, meaning that demonstration is a realistic starting point for young learners. In addition, research linking SRL to performance and context reinforces why modeling matters: it can make strategic learning more accessible across different classroom realities (Trías et al., 2021).

Modeling becomes more powerful when it is paired with guided practice and feedback that gradually builds independence. Dermitzaki (2025) connects explicit instruction and modeling with better outcomes on complex tasks, and Leites et al. (2024) highlight monitoring and control as predictors of success precisely the “invisible” moves that thinking aloud can reveal.



Classroom interventions also show that structured guidance and teacher-led routines can strengthen responsibility and strategic behaviour (Menéndez Santurio, 2025; Santiago Soriano, 2025), and reflective thinking helps students explain what they did and why it worked (Guamán & Rivera Guamán, 2024). Overall, modeling and thinking aloud provide a practical bridge between SRL theory and everyday classroom action (González-Suárez, 2022).

CONCLUSIONS

This systematic review analyzed and synthesized 28 studies published between 2021 and 2025 to identify pedagogical strategies that support Self-Regulated Learning (SRL) in primary education, with implications for EFL classrooms. The findings were organized into five categories: gamification and virtual learning environments, explicit instruction and mnemonic supports, process-oriented writing and monitoring, differentiated motivational strategies, and modeling through thinking-aloud practices. Together, these results show that SRL can be strengthened through classroom practices that understand regulation not as an individual trait learners simply process, but as a group of skills that can be intentionally taught, practiced, and reinforced through everyday teaching.

Across categories, the same idea appears repeatedly: SRL is more likely to develop when classroom tasks are structured in ways that help students set goals, monitor their progress, and reflect on what to do next. Clear routines, formative feedback, and teacher guidance make the learning process visible and give younger learners practical tools to stay engaged and persist, especially during common EFL tasks such as short readings, listening activities, and writing practice. In addition, the studies suggest that SRL works best when cognitive supports (e.g., strategy instruction and monitoring tools) are combined with motivational and emotional supports that help students manage frustration, sustain attention, and maintain confidence when they face difficulty. This review has limitations. The included studies vary in design and context, and many interventions were short-term, which limits how broadly the results can be generalized. In some cases, the focus was placed on specific skills (e.g., reading or writing), which may not fully capture how SRL develops across subjects or over time. Future research could examine longer classroom implementations and explore how combining strategy instruction with motivational and emotional supports influences SRL development across diverse student groups and educational contexts, including sustained work in EFL classrooms.



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