Language learning strategies research in English as foreign language contexts: A systematic literature review

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Article Info

ABSTRACT

The specific processes, techniques, and actions that learners take to facilitate their language learning have been widely explored under the concept of language learning strategies (LLS); however, more exploration is needed about recent investigations in this area, as calls for new theorization of strategies research have emerged. This systematic literature review aimed at exploring the prevailing research methodologies and educational settings appertaining to LLS in English as foreign language (EFL) contexts. The study analyzed 42 articles published from 2017 to 2023 in journals in the field of social sciences in the Scopus and ERIC databases. The findings show how non-intervention quantitative approaches are predominant in LLS research, occasionally accompanied by qualitative data collection methods. Accordingly, most research has favored descriptive and correlational designs, identifying the relationships between the use of strategies and variables such as language proficiency, demographic aspects, motivation, and self-regulation. Grounded on the revision of existing evidence, this article advises future strategy-based research to focus on primary and secondary levels of education, strategy instruction, cultural aspects, and qualitative research designs.

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1. INTRODUCTION

The last five decades of research on second language development have revealed that learners' attitudes and strategic behaviors towards learning deserve recognition [1], [2]. Concerning this subject, Rubin [3] introduced a set of techniques and approaches that successful language learners employ to face the challenges of learning a second language. The idea of shifting the focus from teachers to learners and, more importantly, the desire to provide struggling learners with some of the tools used by good learners rapidly gained popularity [4], [5]. These studies concentrated on labeling high achievers' strategic behaviors and tried to classify them, aiming to connect those actions with language proficiency.

Oxford [5] claimed that language learning strategies (LLS) are "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations." The author suggested a taxonomy of learning strategies, which has been one of the most prominently accepted classifications of LLS because of its comprehensiveness, detailed organization, and connection to language skills. This typology classifies LLS into six groups, namely memory, cognitive, compensation, metacognitive, affective, and social strategies. Memory strategies are relevant to help learners store and retrieve information. In the case of cognitive strategies, they refer to how learners manipulate and process the target language. Compensation strategies are used to overcome gaps in knowledge.

Metacognitive strategies involve the planning, monitoring, and evaluation of students' learning. Concerning affective strategies, learners use them to manage emotions, for instance, to reduce anxiety. Finally, social strategies allow learners to interact with others to boost language learning. Other popular taxonomies include similar classification of strategies, for example, the one proposed by O'Malley and Chamot [6], who distinguish cognitive, metacognitive, and socio-affective strategies; and Rubin's [7] early grouping of LLS into learning, communication, and social strategies. Additionally, Cohen and Weaver [8] suggest a skill-based typology, which categorizes LLS according to the specific language skill they are applied to, including both receptive skills like listening and reading, and productive skills such as speaking and writing.

Despite becoming one of the most prominently sought subjects in applied linguistics, the concept of LLS has raised controversies. For example, Rubin's [3] definition of LLS as "the techniques or devices which a learner may use to acquire knowledge" has been criticized for its lack of specificity. In response to this, some theorists proposed to address the whole field of strategic behaviors in language learning under the notion of self-regulation [9], [10]. According to Dörnyei [10], self-regulation encompasses a broader array of processes and skills that extend beyond the scope of specific learning strategies, which should make it the primary focus for comprehending language learners' autonomy and control over their learning. Oxford [2], known for her extensive work on LLS, also acknowledged the importance of self-regulation in language learning. Interestingly, while some researchers and educators have advocated for the use of self-regulation as a more encompassing term, others have continued to use and study LLS [11]. Thus, collaborative endeavors in the advancement of LLS research have managed to harmonize the concept of LLS with self-regulation. Amid the ongoing debates, there seems to be no necessity to discard either self-regulation or learning strategies [12], [13].

Even though the field of LLS has generated lots of criticisms and faces the abovementioned challenges, it has the potential to contribute to our understanding of second language acquisition if a healthy balance between the previous body of empirical evidence and the new theoretical positions is found [11]. Griffiths and Cansiz [14] addressed the challenge of defining LLS and proposed the following definition: "LLS are actions chosen (either deliberately or automatically) for the purpose of learning or regulating the learning of language." The authors emphasized that "successful strategy use may be related to a complex amalgamation of how many strategies are employed, how often, and how well they are orchestrated" [14]. Additionally, the authors highlighted important characteristics of learning strategies, including being active, deliberate, automatic, and goal-oriented. In pursuance of agreement among experts on LLS and specialists on language learning, Oxford [2] attempted to encompass the definitions suggested by other studies, mainly from the sphere of second language learning:

> L2 learning strategies are complex, dynamic thoughts and actions, selected and used by learners with some degree of consciousness in specific contexts in order to regulate multiple aspects of themselves (such as cognitive, emotional, and social) for the purpose of: a) accomplishing language tasks; b) improving language performance or use; and/or c) enhancing long-term proficiency. Strategies are mentally guided but may also have physical and therefore observable manifestations. Learners often use strategies flexibly and creatively; combine them in various ways, such as strategy clusters or strategy chains; and orchestrate them to meet learning needs. Strategies are teachable. Learners in their contexts decide which strategies to use. Appropriateness of strategies depends on multiple personal and contextual factors.

Oxford's explanation of LLS has yet to be adopted as a general point of reference. In this respect, this study attempts to bring together the top international research on LLS and to discuss the views of current studies, particularly after Oxford's retheorization. Therefore, the following objectives have been set: a) to explore the research methodologies of LLS investigations in English as foreign language (EFL) contexts; and b) to identify the educational settings that have been explored more with regard to LLS in EFL contexts.

2.   METHOD

This study analyzed a collection of 42 articles published from 2017 to 2023 in Scopus and Education Resources Information Center (ERIC), two databases with high-impact factors and referee systems, based on the characteristics of educational research. The preferred reporting items for systematic reviews and meta-analyses (PRISMA) diagram was adopted to ascertain the quality of the systematic literature review [15].

The starting point was the identification of 617 documents with the keywords "LLS" OR "Strategies-based instruction", within the article titles and keywords, via a thorough search in the Scopus and ERIC databases. After removing the duplicates, 489 documents were considered for the screening phase. In

this part, reviews, book chapters, opinion papers, and conference papers, among others, were excluded; only empirical studies available in academic journals belonging to the social sciences subject category were sought for retrieval. In this way, the sample was narrowed to 174 documents published from 2017 to 2023 with the intent to ensure the exploration of the most recent characteristics of LLS research. Based on the research objectives about LLS posed in this investigation, the screening of titles and abstracts was convenient to filter reports and assess their inclusion in the review. In this part, 99 articles with no relation to English as a foreign language learning and teaching were not considered for inclusion in this review. Finally, 75 records were assessed for eligibility, documents considered 'false positives' (papers where the construct was mentioned to retrieve the article but happened to identify an unrelated topic) were excluded, and only articles with full-text availability on the databases were considered. As a result, 42 studies were included in the systematic review for in-depth analysis. The selection process and the generation of the shortlist of 42 articles for this review are depicted in Figure 1, following the PRISMA diagram.

To sum up, for the inclusion of documents in this study, articles must fulfill these criteria: a) make reference to the constructs of LLS or strategies-based instruction in titles and keywords; b) be published in an academic journal available through the Scopus and ERIC databases; c) Have been published from 2017 to 2023 in the social sciences subject category; d) refer to empirical research in EFL contexts; and e) have full-text availability.
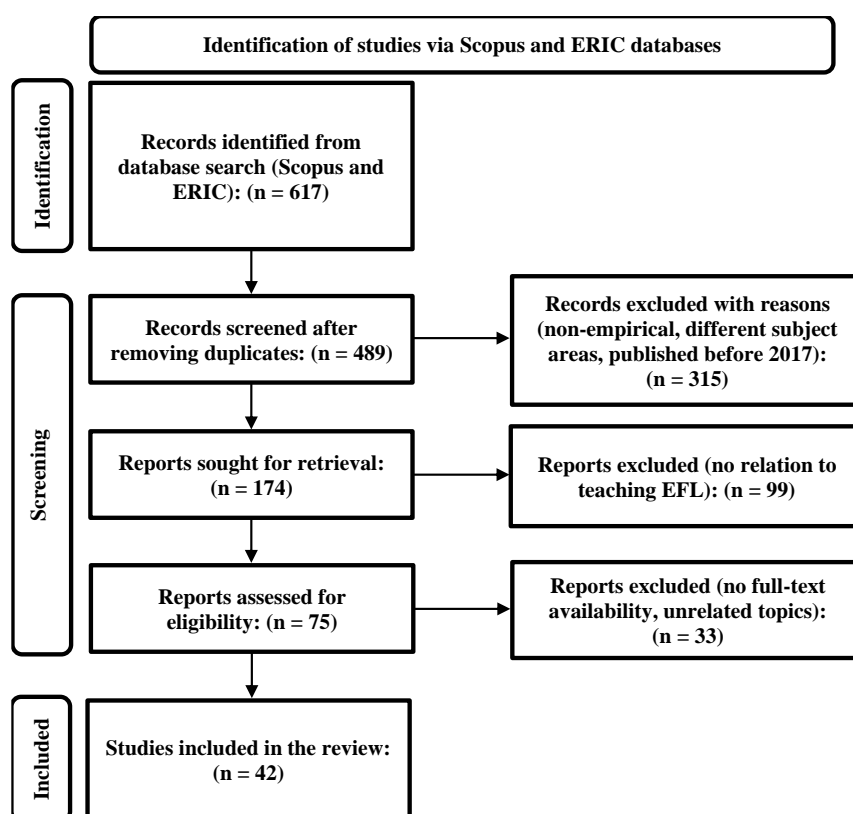

Figure 1. PRISMA diagram of reports included in the review

3. RESULTS AND DISCUSSION

A shortlist of 42 articles published from 2017 to 2023, including empirical research carried out in EFL settings, was produced in this investigation to identify prevailing characteristics of research methodologies in the exploration of LLS. The main aspects, educational settings, research designs, and instruments to collect data related to learning strategies from the 42 articles identified in this research are summarized in Table 1. According to the objectives set in this investigation, two main aspects could be acknowledged in this systematic review: a) the description of the research methodologies of LLS studies in EFL contexts, and b) the identification of the educational settings that have been explored more with regard to LLS in EFL contexts.

Table 1. A simplified table of studies included in the systematic review

No.	Study	Context	Methods	Data collection
1	Almusharraf and Bailey [16]	175 undergraduates in Saudi Arabia	Quantitative	Strategy inventory for language learning (SILL), student characteristics as learners (SCL)
2	Sukying [17]	1,523 undergraduates in Thailand	Quantitative	SILL, questionnaire
3	Becirovic et al. [18]	206 high schoolers in Bosnia and Herzegovina	Quantitative	SILL
4	Zhan et al. [19]	693 undergraduates in China	Quantitative	SILL, motivation questionnaire
5	Afshar and Bayat [20]	40 undergraduates in Iran	Quantitative	Cognitive academic language learning approach (CALLA)
6	Irgatoğlu [21]	184 undergraduates in Turkey	Quantitative	SILL, stereotypical thoughts towards foreign language scale
7	Alfian [22]	18 undergraduates in Indonesia	Qualitative	Interview
8	Canbay [23]	264 high schoolers in Turkey	Quantitative	SILL, self-regulation skills scale
9	Tran and Tran [24]	147 high schoolers in Vietnam	Mixed methods	Questionnaire, interview
10	Khonamri et al. [25]	177 undergraduates in Iran	Mixed methods	SILL, interview
11	Iamudom and Tangkiengsirisin [26]	300 high schoolers in Thailand	Mixed methods	SILL, learner autonomy questionnaire, Interview
12	Taheri et al. [27]	120 undergraduates in Iran	Mixed methods	SILL, interview
13	Kovacevic [28]	152 undergraduates in Bosnia and Herzegovina	Quantitative	SILL
14	Šafranj and Gojkov-Rajić [29]	382 undergraduates in Serbia	Quantitative	SILL, international personality item pool (IPIP)
15	Fithriyah et al. [30]	70 undergraduates in Indonesia	Quantitative	SILL
16	Taheri et al. [31]	188 undergraduates in Iran	Quantitative	SILL
17	Bailey and Cassidy [32]	41 undergraduates in South Korea	Mixed methods	SILL, second language writing anxiety inventory, reflection papers
18	Kosasih [33]	82 open and distance higher education learners in Indonesia	Quantitative	SILL
19	Batang [34]	in-service elementary school teachers in the Philippines	Quantitative	SILL, communicative competence test
20	Thomas [35]	301 undergraduates in Thailand	Quantitative	SILL
21	Psaltou-Joycey et al. [36]	92 teachers in Greece	Quantitative	SILL
22	Huang [37]	12 undergraduates in Taiwan	Qualitative	Interviews, classroom observations
23	Ghahari and Ebrahimi [38]	40 undergraduates in Iran	Quantitative	Intrapersonal skill inventory (IS-I)
24	Erdogan [39]	860 undergraduates in Turkey	Quantitative	Scale on self-regulation in learning (SSRL), SILL
25	Gürsoy ans Eken [40]	1,116 primary school students in Turkey	Quantitative	Children's strategy inventory for language learning (CHILLS)
26	Alfian [41]	288 undergraduates in Indonesia	Quantitative	SILL
27	Karimi and Dastgoshadeh [42]	45 undergraduates in Iran	Quantitative	Learner autonomy questionnaire in EAP reading
28	Kavani and Amjadiparvar [43]	55 undergraduates in Iran	Quantitative	Foreign language motivation questionnaire, self-regulation questionnaire (SRQ)
29	Pawlak and Kiermasz [44]	107 undergraduates in Poland	Mixed methods	SILL, interviews
30	Moussa and Ghasemi [45]	50 undergraduates in Iran	Quantitative	SILL, MI survey
31	Shyr et al. [46]	50 undergraduates in Taiwan	Quantitative	SILL, achievement goal orientation scale (AGOS)
32	Pei [47]	44 doctoral students in China/US	Mixed methods	language strategy use inventory (LSUI
33	Hasa et al. [48]	46 high schoolers in Albania	Quantitative	SILL
34	Lee [49]	891 undergraduates in Taiwan	Quantitative	Digital natives' assessment scale (DNAS)
35	Cancino et al. [50]	47 undergraduates in Chile	Quantitative	SILL, questionnaire of English self-efficacy (QESE)
36	Daflizar et al. [51]	76 undergraduates in Indonesia	Quantitative	SILL
37	Duong and Nguyen [52]	238 high schoolers in Vietnam	Mixed methods	SILL, interview
38	Montaño-González and Cancino [53]	62 undergraduates in Chile	Mixed methods	SILL, self-efficacy questionnaire, interview
39	Rahman [54]	30 undergraduates in Saudi Arabia	Quantitative	SILL
40	Al-Khaza'leh and Alrefaee [55]	60 undergraduates in Saudi Arabia	Quantitative	SILL
41	Abdul-Ghafour [56]	70 undergraduates in Yemen	Quantitative	SILL
42	Uysal and Tezel [57]	26 undergraduates in Turkey	Quantitative	The Kolb learning style inventory

3.1. Methodology of research on LLS in EFL contexts

Quantitative data collection methodologies were used exclusively in 31 studies. Sukying [17] investigated the LLS used by 1523 Thai EFL undergraduates and identified the association between learners' selection of strategies and their levels of English proficiency. Becirovic et al. [18] investigated whether the utilization of learning strategies could predict significantly 206 high-school learners' achievement, and explored their strategy awareness, as well as the variations in the selection of strategies with respect to gender, grade level, and grade point average. Similarly, Shyr et al. [46] identified a significant correlation

between Taiwanese students' learning strategies and AGOs, employing an entirely quantitative path. As a further example, Kovacevic [28] examined the hypothesis that the language proficiency of 152 undergraduates and their writing outputs are affected to an extent by their selection of LLS. Questionnaires were the preferred instruments to collect data in the aforementioned studies.

Conversely, two studies collected data using a completely qualitative track. Alfian [22] interviewed 18 Indonesian undergraduate students to explore their LLS choice. Data gathered were analyzed by thematic analysis and classified into six categories according to Oxford's taxonomy [5]. Similarly, Huang [37] compared how 12 Taiwanese students used strategies in response to the different contexts they experienced for EFL learning. Students and teachers were interviewed to gather data, along with classroom observations, and examinations of the syllabus, learning materials, and textbooks to triangulate the findings.

A total of nine articles used a mixed methods approach to study in more detail the particularities of LLS. Khonamri et al. [25] studied the relationships among language learning beliefs, LLS, and learner autonomy. Two surveys were implemented to collect quantitative data: Oxford's [5] SILL and Horwitz's [58] beliefs about language learning inventory (BALLI). Additionally, the study used interviews and learners' self-reflection notes to gather supplementary qualitative data. A similar methodological path was followed by Taheri et al. [27], who examined the links between language achievement and the strategies used by 120 Iranian undergraduates. The authors gathered data utilizing the SILL and semi-structured interviews. Another case in point is Bailey and Cassidy [32] study's, which investigated the incidence of an online-delivered peer-to-peer feedback process on levels of students' second language writing anxiety, their awareness, and the use of appropriate LLS. Data collected using the SILL and a writing anxiety inventory were triangulated with pre- and post-treatment reflection papers. Other studies that benefited from quantitative and qualitative data simultaneously, using questionnaires and interviews, are Montaño-González and Cancino's [53] exploration of LLS and self-efficacy beliefs of 62 Chilean learners, Duong and Nguyen's [52] identification of the favored LLS of high school students, and the investigation of patterns of LLS use in L2 and L3 of 120 undergraduate learners by Pawlak and Kiermasz [44].

Most studies included in this revision of literature can be grouped as cross-sectional research given that they collected data at one specific point, thus taking a snapshot of what was happening at that moment. Few studies (N = 6) used longitudinal tracks to explore dynamically possible changes in the choice of strategies. This, in turn, might lead to a research gap in information about language learners' performance throughout the different stages of their learning process. In this regard, further research should be carried out from exploratory longitudinal views that provide information on how students' LLS influence their performance in their daily learning activities, how long-term proficiency is impacted by the conscious use of certain strategies, or how teachers' instructions can affect students' use of strategies.

With regard to the instruments or protocols to gather data in the investigations included in this review, questionnaires were predominantly present. 76% of the studies entrusted the identification of students' LLS to Oxford's [5] SILL (v7.0), a 50-item structured tool with multiple-choice questions, rated on a 5-point scale, to self-assess the frequency of LLS use of English as a second or foreign language learners. Other included questionnaires were the CALLA [59], Gürsoy's [60] CHILLS, and the LSUI used by Pei [47] with 44 doctoral students in two different learning contexts. It is evident that most research has been conducted with the predominant aid of Oxford's [5] SILL (either the original questionnaire or adapted versions), which gives this 50-item questionnaire a role of great reputation in small and large-scale LLS studies. Alternatively, nine out of eleven studies with qualitative or mixed methods approaches relied heavily on interviews to collect qualitative data. These characteristics were also described expansively in other reviews of LLS [61], [62].

It could be evinced that Oxford's views of LLS are considered in most studies included in this literature review. Oxford's interpretations of LLS are considered in 40 of the 42 articles included in this review. Most studies (N = 36) were positioned based on Oxford's [5] comprehension of LLS, which has proven to be a frame of reference in the field of language learning; while the adoption of Oxford's [2] theoretical insights, where the author enhances her considerations about self-regulation, are moderately evinced in eleven studies. Authors who have contributed significantly to the field of LLS are shown in Figure 2.

Regarding the research designs identified, 34 investigations covered in this literature review can be considered non-intervention research. In this respect, 22 correlational studies attempted to associate LLS and other variables, such as learning characteristics [16], language proficiency [17], [18], [21], [27], [28], [41], [56], self-efficacy [19], [50], [53], self-regulation [23], [24], language learning beliefs [25], personality traits [29], learning styles [31], among others. Moreover, a total of 12 investigations can be categorized as survey research for they emphasize depicting the participants' use of LLS (e.g., [26], [30], [33], [35], [36], [40], [44], [48]). Moreover, six studies are classified as experimental research, thus involving an intervention [20], [32], [38], [42], [43], [57]. Two studies used grounded theory research to explore the favored LLS of learners [22], [37].
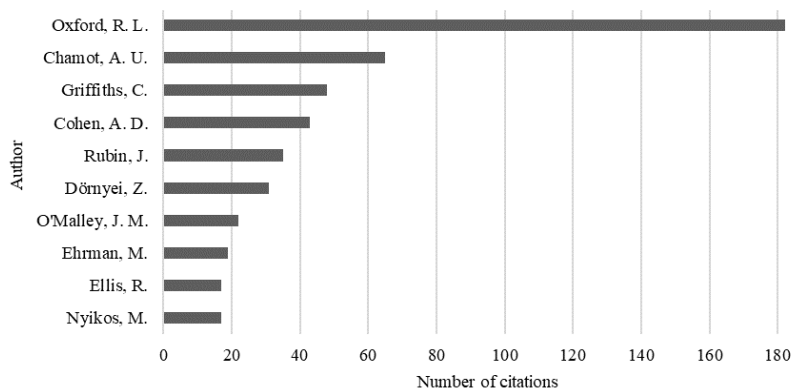
Figure 2. Top 10 most relevant authors in LLS research

These findings hold potential significance for future research concerning some key aspects. Firstly, as shown in Table 1, LLS research has leaned toward a quantitative path; however, an integrated approach that amalgamates both quantitative and qualitative data could yield a more comprehensive and nuanced comprehension of LLS. Mixed methods research could enable the collection of data on the frequency and types of strategies used, for instance, with the aid of the SILL, and facilitate the exploration of the reasons behind strategy choices, the contextual dynamics that influence their use, and their impact on learning through qualitative protocols. In addition to the identification of patterns and relationships between LLS and other variables, qualitative methods could give voice to participants, allowing them to express their perspectives, motivations, and challenges related to learning strategies. Secondly, given the importance of the SILL in LLS research, future researchers are advised to adapt the SILL to fit specific research needs [63]. To assure comprehensibility, concentration on the participants' age and target language proficiency is required (in some cases, translation into the participants' first language might be needed). Also, depending on the learning settings (EFL or English as a second language (ESL)), some aspects might be added, revised, or omitted. As a further example, other items that could not be considered when this instrument was designed, more than three decades ago, might be included for exploration (e.g., regarding computer-assisted education, and individual or collaborative online learning). Thirdly, in line with the belief that learning is not static, it is worth studying the dynamics of learners' strategy use in response to shifting learning settings over time. The understanding of LLS can be fostered if these dynamic thoughts and actions are explored lively.

3.2. Educational settings in LLS in EFL contexts

This review aimed at exploring the settings where the investigations on LLS have been carried out, specifically based on the 42 articles identified in the Scopus and ERIC databases. Most studies included in this review took place at a university level (N = 33). Erdogan [39] analyzed the relationship between 860 undergraduate students' self-regulation and their LLS. The findings suggest a medium positive correlation between the two main constructs. In the same way, 301 undergraduate students participated in Thomas' [35] exploration of LLS, which allowed the segmentation of non-native English speakers into the six dimensions evaluated by the SILL. Moussa and Ghasemi [45] studied the interrelations between the strategies 50 undergraduate language learners take, their levels of self-efficacy, and their types of intelligence, where a significant correlation between LLS and self-efficacy was identified. As a further illustration, 382 undergraduates participated in an investigation of the relationships between LLS and personality traits [29]. The study claims that the selection of strategies varies depending on students' personality traits. Other studies described the use of LLS in settings such as open and distant education [33]; or with entirely online instruction [16], where the relationships between strategies and learning characteristics were explored.

Findings also revealed that 7 of 42 studies were held at a school level. Gürsoy and Eken [40] examined the English LLS use of 1116 Turkish 4th and 5th graders employing an adapted version of the SILL. In this study, significant differences in strategy preferences were evinced regarding gender, geographical region, academic achievement, and grade level. In the same way, 200 high schoolers participated in an inquiry about learners' autonomy and LLS [26]. Canbay [23] described the relationship between self-regulation and LLS of 264 secondary school students. Irgatoğlu [21] analyzed the usage of LLS and stereotypical thoughts of 184 preparatory school students, regarding gender and language marks. Other studies that assessed learners' selection of LLS at the school level are Duong and Nguyen's [52] exploration of LLS with 238 participants and Hasa *et al.*'s [48] identification of strategies of 46 Albanian students. These

studies could be regarded as continuing the tradition of LLS research since they relied on the SILL to identify students' use of strategies and explored the relationships with other variables.

Teachers' behaviors toward the promotion of LLS also took part in some studies. A total of two studies concentrated on exploring the links between teachers' furtherance of LLS and their levels of communicative competence [34], [36]. These studies agreed that teachers tend to encourage affective and social strategies to a lesser extent. On the contrary, memory, metacognitive, and cognitive strategies are promoted the most. Furthermore, no substantial interaction between LLS uses and teachers' academic qualifications was recognized. These findings suggest that the responsibility for developing LLS lies primarily with learners rather than with teachers. Since strategies are teachable, further research should be undertaken to analyze the importance of teachers' roles and the specific activities they do to help their students use appropriate LLS in EFL settings should be undertaken. Furthermore, the examination of the possible relations between the students' reported use of LLS and teachers' reported teaching of LLS might provide a productive understanding of learning strategies, enriching the field of language learning.

These findings suggest that there is a need to explore LLS in various contexts. The studies included in this review showed a tendency toward sampling undergraduate participants more than mentees from other academic levels, which might lead to a lack of diversity in terms of academic proficiency, age, levels of autonomy, language learning beliefs, and learning styles, among other variables. The study of LLS across different age groups, from children to adults, could provide insights into how strategy choices change as individuals develop cognitively over time. Additionally, this literature review identified that most studies were held in on-site classes, under traditional scenarios. Language learners need to adjust their strategies based on their learning environment, for instance, whether it's a traditional classroom, immersion program, or online course. Therefore, analyzing LLS in various settings could allow future research to identify strategies that work well in a wide range of learning contexts. This fact reinforces the importance of undertaking research with other educational levels and settings where more exploration is needed.

4.   CONCLUSION

The systematic literature review carried out in this study, on research published from 2017 to 2023 in Scopus and ERIC, delved into the general research methodologies and educational settings appertaining to LLS in EFL contexts. The findings revealed that LLS research has favored quantitative approaches to explore the underlying processes related to the choice of strategies for learning English. In this respect, future research should consider that, along with quantitative data collection, qualitative foci could enrich the understanding of the nuances of learners' specific selection of strategies within each category of LLS. Additionally, this review highlights the importance of exploring LLS in various settings, learning environments, and different age groups, considering that valuable insights might emerge. This study also underscores the need to examine the role of language teachers and their effective performance in the promotion of LLS to develop different communication skills in the target language, as only two studies focused on language teachers' knowledge and the promotion of learning strategies through their instructions.

Given the overall research design and methodological choices of this systematic review, some aspects of learning strategies research might not have been covered comprehensively. It is beyond the scope of this study to explore the widespread views and analysis of LLS research in other learning contexts such as ESL, distance education, and online and blended learning environments, among other possible elements. A further debate might be needed since this revision concentrated essentially on methods, instruments, and settings of LLS research in EFL contexts rather than the findings. The analysis presented in this study, considering its rigorous methodology and procedures, should be taken into account when researching LLS.

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