



What Error Analysis can still offer TESOL classrooms: A scoping review of research trends and pedagogical implications

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Abstract

Error Analysis (EA) has long been used in English language teaching to identify recurring learner difficulties and inform decisions about instruction and feedback. However, the research literature on EA has developed unevenly, making it difficult for TESOL practitioners to judge what this work can usefully offer in classroom settings.

This scoping review examines how EA has been used in English-language research and what it can reasonably contribute to TESOL classrooms. Guided by Arksey and O'Malley's framework and reported in line with PRISMA-ScR guidelines, the review included 106 peer-reviewed studies published up to February 2025. Analysis of the literature showed three recurring patterns: a strong emphasis on grammatical and lexical errors, continued reliance on small datasets and manual coding, and uneven connections between error description, theoretical explanation, and pedagogical application. Taken together, the findings suggest that EA remains most useful when treated as a diagnostic rather than a prescriptive classroom resource.

Keywords: *Error Analysis; TESOL classrooms; scoping review; pedagogical implications; learner writing.*

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Introduction

Background of the study

Since the publication of Corder's (1967) seminal paper, "The Significance of Learners' Errors", Error Analysis (EA) has provided a systematic way of interpreting learner language as evidence of development rather than as a collection of random mistakes. Corder's work reframed learner errors as an integral part of the language learning process, challenging earlier behaviourist views that treated errors primarily as failures or deficiencies. Building on this reconceptualisation, Richards (1971) proposed a non-contrastive approach to EA, arguing that many learner errors reflect internal processes of language development rather than being attributable solely to first-language interference. Together, these early contributions marked a significant shift in applied linguistics towards more cognitive and developmental understandings of second language learning.

Subsequent scholarship has consolidated EA as a recognised research approach in applied linguistics and language education. In its more traditional form, EA has commonly involved the identification, description, classification, and explanation of learner errors, often through taxonomies focusing on grammatical, lexical, and mechanical deviations (Ellis, 1994; James, 1998). These procedures have made learner difficulties more visible and analytically manageable, particularly in classroom contexts where teachers need to recognise recurrent patterns in student language. Feature-specific studies focusing on local error categories in learner writing have continued to appear in the literature (e.g., Alhaysony, 2012).

At the same time, EA has also been subject to sustained critique in applied linguistics and second language writing research. While its systematic procedures have made learner errors visible and pedagogically manageable, traditional EA has often been associated with a relatively form-focused view of learner difficulty, especially where analysis centres on grammatical, lexical, and mechanical deviations from target-language norms (Ellis, 1994; James, 1998). Scholars in second language writing and genre-oriented research have further argued that language development cannot be adequately understood through local accuracy alone, because effective communication also depends on discourse organisation, rhetorical purpose, genre expectations, and audience awareness (Hyland, 2004, 2015, 2019; Tardy, 2009). From this perspective, the limitation of traditional EA is not that it lacks pedagogical value, but that its established tools have historically been better suited to identifying sentence-level and word-level difficulties than to explaining broader communicative, pragmatic, and context-sensitive dimensions of learner performance.

Recent developments in learner corpus research, annotation practices, and computational approaches have further complicated this picture. Rather than disappearing from TESOL and

SLA research, error-related enquiry has been extended through corpus-informed and technology-supported methods that allow larger-scale, more transparent, and more replicable analyses of learner language (Dobrić, 2023; Götz & Granger, 2024). These developments have renewed attention to how errors are defined, located, coded, interpreted, and linked to pedagogical decisions. At the same time, discourse-, genre-, and multimodal-oriented approaches have highlighted aspects of learner performance that are not always captured by conventional error taxonomies. This broader methodological and conceptual expansion provides an important rationale for re-examining what contemporary EA research can still offer TESOL practice and where its explanatory limits remain.

Against this broader view of language use, EA remains relevant, but its contribution needs to be reconsidered more critically. Its continuing value lies in its capacity to identify patterned learner difficulties, while its limitations point to the need for more careful attention to discourse, genre, modality, communicative purpose, and pedagogical interpretation. This tension provides an important backdrop for re-examining how EA research has developed and what it can still offer TESOL practice today.

Research context and rationale

Over the past several decades, EA has been applied across a wide range of linguistic domains, including grammar, lexis, syntax, and discourse, as well as across diverse learner populations and educational settings. This body of research has generated substantial descriptive evidence concerning recurrent learner difficulties in English. From a TESOL classroom perspective, this literature can offer a useful descriptive basis for interpreting learner performance and considering possible instructional priorities in response to recurring patterns of error.

At the same time, the development of EA research has been uneven in ways that matter for classroom interpretation. A large proportion of existing studies continues to focus primarily on surface-level grammatical and lexical errors, while higher-order dimensions such as discourse organisation, genre-related conventions, and pragmatic appropriateness receive comparatively less systematic attention. These dimensions are not absent from EA research, but they have often been more consistently foregrounded in adjacent approaches such as genre analysis, discourse analysis, and pragmatics-oriented work. This broader orientation is reflected in L2 writing scholarship that emphasises rhetorical purpose, audience awareness, and disciplinary communication as central to writing development (Hinkel, 2002; Hyland, 2019). The implication for the present review is that the available EA literature offers a stronger descriptive basis for sentence-level learner difficulty than for broader communicative and genre-related aspects of performance. For TESOL teachers, this imbalance can make it difficult to draw on the EA

literature when addressing aspects of learner writing that are closely tied to communicative purpose, audience expectations, and academic norms, particularly at higher levels of proficiency.

Methodological practices within EA research also vary considerably. Many studies rely on manually coded data drawn from relatively small samples of learner writing, and details concerning coding procedures and inter-rater reliability are not always reported in a transparent manner (Granger, 2009; Dobrić, 2023). Such designs are not inherently problematic and may yield context-sensitive or exploratory insights that are pedagogically meaningful within specific settings. However, when coding procedures, reliability checks, and reporting conventions remain uneven, it becomes more difficult to compare findings across studies or to judge how robust and transferable particular claims may be across instructional contexts. In this sense, the challenge lies less in small-scale design itself than in the limited transparency, comparability, and cumulative synthesis of the literature.

Theoretical engagement across EA studies also remains uneven in ways that matter for classroom use. Although concepts such as interlanguage, transfer, and second language development are frequently invoked, explicit links between theoretical explanation and pedagogical interpretation are not always sustained. Consequently, teachers may be left with descriptive accounts of recurrent errors without sufficient guidance on how such patterns should be interpreted in relation to learner development or instructional decision-making. In practical terms, this affects decisions such as which error types should be prioritised, whether feedback should focus on local accuracy or broader communicative effectiveness, and how learner performance should be interpreted across tasks, levels, or instructional contexts (Ferris, 2010; Bitchener & Ferris, 2012; Hyland & Hyland, 2019).

Existing review and survey work has provided valuable insights into specific areas related to learner error, especially written corrective feedback, learner writing, grammatical error correction, and selected error categories (Khansir & Pakdel, 2018; Mohammadi & Mustafa, 2020; Bryant et al., 2023). For example, previous reviews have examined English writing errors among ESL/EFL learners and broader links between error analysis and English language teaching, while recent survey work on grammatical error correction has focused mainly on computational approaches to detecting and correcting learner errors. However, this body of work does not fully address the broader mapping purpose of the present review. It does not appear to have examined, within a single classroom-oriented synthesis, how EA research is distributed across linguistic focus, learner population, modality, methodological design, theoretical framing, and pedagogical orientation.

This gap is important because L2 writing and TESOL scholarship have increasingly emphasised that learner language development involves not only local accuracy but also discourse organisation, rhetorical purpose, genre expectations, and audience awareness (Hyland, 2004,

2019; Leki et al., 2010; Tardy, 2009). In addition, because much EA work has historically been associated with written learner texts, spoken and multimodal or digitally mediated learner data have received less integrated attention in classroom-oriented syntheses, despite the presence of error-related studies in spoken and technology-mediated contexts (Tarigan et al., 2023; Wang, 2024). Including these modalities is important for TESOL because learner difficulty is not limited to written accuracy. Spoken performance involves pronunciation, fluency, interactional repair, and real-time grammatical or lexical choices, while multimodal and digital communication involves meaning-making across written, visual, technological, and interactional resources.

Taken together, these patterns point to a specific rationale for the present scoping review. What remains limited is not the availability of EA studies, but the lack of a recent classroom-oriented synthesis that maps research trends, methodological practices, theoretical framings, pedagogical implications, and modalities together. The present review therefore maps the breadth and contours of this heterogeneous body of research and clarifies what EA can realistically offer TESOL classrooms.

Theoretical and methodological considerations

Several conceptual and methodological considerations further highlight the need for a broader mapping of Error Analysis (EA) research. Existing review-oriented work has tended to focus on narrower areas, such as written corrective feedback or particular linguistic features, rather than tracing how EA studies are distributed across linguistic domains, methodological designs, theoretical framings, and pedagogical orientations (Bitchener & Ferris, 2012). Consequently, broader patterns across the EA literature have been less consistently synthesised, particularly in ways that bring these dimensions together in relation to TESOL pedagogy. The present review therefore aims not simply to summarise findings on learner errors, but to map how EA research has been framed, conducted, and pedagogically interpreted across the literature as a whole.

Additional complexity arises from the variation in how the concept of “error” is defined and operationalised across studies. Some researchers adopt predominantly form-based classifications, distinguishing between morphological, syntactic, or lexical errors, whereas others employ function-based or communicative criteria. This variation is not only technical but also theoretical, because different definitions of error reflect different assumptions about language, communicative adequacy, and learner competence. As a result, studies may differ not only in what they count as an error, but also in what they implicitly treat as instructionally important or developmentally meaningful. Such variation complicates synthesis across studies, particularly when comparing pedagogical priorities, interpreting learner development, or evaluating how error patterns are linked to broader communicative performance. For classroom practitioners,

this means that apparently similar findings may not always be directly comparable or equally informative for instructional decision-making.

This variation also shaped how “error” was handled in the present review. Rather than applying a single fixed definition across all included articles, we followed the way each study identified and analysed learner difficulty. A study was included as EA-aligned when it examined learner deviations, difficulties, or non-target-like forms in English learner language and used these as a basis for classification, explanation, or pedagogical interpretation. In the charting process, the error categories reported in individual studies were first recorded in their original terms and were then grouped into broader review-level categories, including grammatical, lexical, discourse, mechanical, and phonological errors. This allowed the review to compare patterns across studies without erasing differences in how “error” was conceptualised in the original research.

At the same time, methodological developments in learner corpus research and related computational approaches have expanded the analytical possibilities available to EA research. Advances in corpus design, annotation, and natural language processing have enabled larger-scale and more replicable analyses of learner language. This matters for the present review not simply because such approaches represent a recent trend, but because their uneven uptake across the literature itself is part of the methodological variation that needs to be mapped. In other words, understanding how far EA research has incorporated corpus-informed and computational procedures is necessary for assessing how the field has developed, what kinds of evidence it now produces, and how transparently those findings can be interpreted for TESOL practice (Götz & Granger, 2024).

A scoping review is therefore well suited to addressing these conceptual and methodological challenges. The purpose of the present review is not to synthesise intervention effects or answer a narrowly delimited review question, but to map how errors have been conceptualised, what methodological tendencies have characterised the literature, and where underexplored intersections remain with approaches such as corpus linguistics, genre analysis, and discourse pragmatics. In this sense, the value of a scoping review lies in producing a descriptive and interpretive map of a heterogeneous field. Such mapping is particularly relevant in TESOL contexts, where teachers and teacher educators often encounter EA research indirectly and need syntheses that support informed professional judgement about learner difficulty, feedback priorities, and the classroom relevance of research findings.

Purpose and significance of the study

The purpose of this study is to map the breadth and major characteristics of English language Error Analysis (EA) research through a scoping review. Following a structured search and

screening process, 106 peer-reviewed studies published up to February 2025 were identified and included for analysis. The review examines recurring research trends, methodological practices, theoretical framings, and how pedagogical implications are articulated across the EA literature.

Beyond documenting patterns in existing research, this study also includes a bounded interpretive dimension. This interpretive layer does not involve evaluating intervention effectiveness, rejudging the quality of individual studies, or prescribing a universal model of error correction. Rather, it is limited to interpreting how the reviewed studies frame learner difficulty, how they connect error patterns to pedagogical relevance, what kinds of classroom implications they propose, and where these links remain underdeveloped. In this sense, the review remains primarily descriptive, while also offering a cautious classroom-oriented interpretation of how EA research positions error evidence in relation to TESOL practice.

The significance of this study lies in its practical and conceptual contributions to TESOL. For teachers, the review clarifies how EA evidence can be used to prioritise feedback on recurring and instructionally relevant errors rather than treating all errors as equally urgent. For teacher educators, it identifies how error patterns can be discussed as evidence of learner development, interlanguage, and context-sensitive language use. For curriculum designers, it shows how EA findings may supplement genre-based and discourse-oriented instruction by identifying local linguistic difficulties that interact with broader communicative demands. For researchers, the review maps methodological and theoretical gaps that need to be addressed if EA is to remain pedagogically useful in contemporary TESOL contexts.

Research objectives and questions

This scoping review was guided by four objectives. The first was to map the main research trends in English-language EA studies, including the types of language problems examined, the genres analysed, and the learner populations represented. The second was to examine the methodological designs, data characteristics, analytical tools, and reporting practices used across the literature. The third was to identify how learner errors are theoretically framed and how pedagogical implications are articulated in the reviewed studies. The fourth was to identify the conceptual, methodological, and contextual gaps emerging from this body of work and to consider the directions these gaps suggest for future research relevant to TESOL classrooms.

The review addressed the following research questions:

RQ1. What publication trends, types of language problems, genres, and learner populations characterise English-language EA research?

RQ2. What methodological designs, data sources, analytical tools, and reporting practices characterise this body of research?

RQ3. How are learner errors theoretically framed, and how are pedagogical implications articulated in the reviewed studies?

RQ4. What conceptual, methodological, and contextual gaps emerge from the reviewed literature, and what directions do these gaps suggest for future EA research relevant to TESOL classrooms?

Method

Review framework and reporting protocol

This scoping review design was informed by the framework proposed by Arksey and O'Malley (2005) and further elaborated by Levac et al. (2010). The review was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) guidelines (Tricco et al., 2018), which provide structured guidance for transparent and systematic mapping of research evidence.

A scoping review approach was selected because the primary aim of the study was to map the breadth of a conceptually and methodologically heterogeneous body of error analysis (EA) research. The literature varies considerably in how “error” is defined, which linguistic domains are examined, what kinds of data and analytical procedures are used, and how pedagogical implications are framed. For this reason, the present review was not designed to evaluate intervention effectiveness, synthesise effect sizes, or address a narrowly delimited review question in the manner of an effect-focused systematic review. Instead, it sought to identify recurring patterns, clarify conceptual and methodological variation, and map research gaps across the literature. This focus made a scoping review more appropriate for the present study.

Following Arksey and O'Malley's framework, the review proceeded through five stages: (1) identifying the research questions, (2) identifying relevant studies, (3) study selection, (4) data charting, and (5) collating, summarising, and reporting the results. These stages were applied in an iterative manner, allowing refinements to the search and charting procedures as familiarity with the literature increased, while maintaining overall methodological consistency.

Search strategy

A database search was conducted across three academic databases: Scopus, Web of Science (WoS), and PubMed. Scopus and Web of Science were selected because of their broad

interdisciplinary coverage of peer-reviewed research in applied linguistics, language education, and related social science fields. PubMed was also included because some English-language error-related studies appear in medical, health-professional, and English for Specific Purposes contexts. The search covered all records available up to 1 February 2025, and was limited to peer-reviewed journal articles published in English.

A focused Boolean search strategy centred on explicit Error Analysis (EA)-related terminology was applied across all databases. The search was designed to prioritise conceptual relevance rather than to capture every adjacent construct or feature-specific term used across the broader literature. It combined the core term “error analysis” with adjacent terms that appear in parts of the literature, including “error correction” and “error detection,” together with selected error-type descriptors commonly used in English-language learner research. The intention was to maintain retrieval specificity while reducing results from non-linguistic domains.

The common search string was as follows:

(“error analysis” OR “error correction” OR “error detection”) AND (“grammatical errors” OR “discourse errors” OR “lexical errors” OR “writing errors” OR “phonological errors”) AND NOT (“software errors” OR “technical fault” OR “engineering” OR “computer science”).

This search strategy was intentionally focused on explicit EA-related terminology rather than designed as an exhaustive retrieval of all studies that might examine specific error types under different labels. We recognise that studies using terms such as “article errors,” “preposition errors,” “morphosyntactic errors,” “collocation errors,” or other feature-specific labels may not have been retrieved if they did not also use broader EA-related terms. This choice increased conceptual specificity and reduced retrieval from unrelated domains, but it may also have led to under-retrieval of some relevant feature-specific studies. The search strategy is therefore treated as a focused EA-centered retrieval strategy, and this potential under-retrieval is acknowledged as a limitation of the review.

ERIC and LLBA were considered during protocol development but were not included in the final database search. The review focused on Scopus, Web of Science, and PubMed to maintain a manageable and clearly defined search scope while retaining coverage of interdisciplinary, language-education, and health-related educational contexts. We acknowledge that the non-inclusion of ERIC and LLBA may have limited the retrieval of some education- and linguistics-focused studies, particularly those indexed primarily in education or language-behaviour databases.

Because terms such as “error correction” and “error detection” may also appear in work that is not conceptually aligned with EA, records retrieved through the database search were treated as

potentially relevant at the retrieval stage only. They were subsequently screened at the title–abstract and full-text stages against the review’s inclusion criteria rather than being treated as automatically eligible.

The initial database search yielded 515 records (Scopus: $n = 353$; WoS: $n = 126$; PubMed: $n = 36$). After the removal of 109 duplicate records, 406 unique studies remained for title–abstract screening. The remaining screening and eligibility procedures are reported in Sections 2.3 and 2.4 and summarised in the PRISMA flow diagram.

Inclusion and exclusion criteria

The inclusion and exclusion criteria were defined prior to screening to ensure conceptual alignment with EA, relevance to English learner language, and sufficient methodological transparency for cross-study comparison. Studies were included if they examined learner errors in English and adopted an EA perspective, either explicitly or through clear conceptual alignment. The criteria applied in the review are summarised in Table 1.

Table 1. Inclusion and exclusion criteria.

Inclusion Criteria	Exclusion Criteria
1. The study examines learner errors in English language use.	1. The study does not examine learner errors in English language use.
2. The study adopts an Error Analysis (EA) framework or is conceptually aligned with EA.	2. The study is not informed by EA or is not conceptually aligned with an EA framework.
3. The study uses English-language learner data.	3. The study does not use English-language learner data.
4. The article is published in English.	4. The article is not published in English.
5. The study is published in a peer-reviewed journal.	5. The study is not published in a peer-reviewed journal.
6. The study provides sufficient methodological information for review purposes.	6. The study does not provide sufficient methodological information for review purposes.
7. The publication has not been retracted.	7. The publication has been retracted.

During screening, two criteria required more specific decision rules. A study was treated as conceptually aligned with EA when it examined learner errors, deviations, difficulties, or non-target-like forms in English learner language and used these forms as a basis for classification, explanation, or pedagogical interpretation. Studies were excluded when the term “error” was used only in a general or metaphorical sense, when errors referred to non-linguistic phenomena, or when the article did not analyse learner language as evidence of English language difficulty.

“Sufficient methodological information” referred to the minimum information needed for a study to be charted and compared with other studies. This included the learner group or data source, the language or modality examined, the error focus or categories, and the basic procedure used to identify or classify errors. Articles were excluded for insufficient methodological information when these details were absent, unclear, or too limited to determine how learner errors had been identified or analysed.

These decision rules were used to support conceptual coherence, methodological transparency, and consistency in applying interpretive exclusion grounds, such as conceptual misalignment and insufficient methodological detail.

Study selection and PRISMA flow diagram

The study selection process is summarised in a PRISMA flow diagram (Figure 1), reported in accordance with PRISMA-ScR guidelines (Tricco et al., 2018) and informed by updated guidance for transparent evidence synthesis (Page et al., 2021).

Study selection was conducted in two stages: title–abstract screening and full-text assessment. To improve consistency in applying the inclusion and exclusion criteria, two researchers independently screened a randomly selected calibration subset of approximately 20% of records at both stages. Agreement in the calibration subset was 100.0% at the title–abstract stage and 97.4% at the full-text stage, with only one disagreement during full-text assessment. The disagreement concerned a borderline case involving conceptual alignment with EA and was resolved through discussion before final eligibility decisions were made. The resulting decision rules were then applied to the records screened by one reviewer. Uncertain cases were discussed with the second researcher before a final decision was made. This remaining single-screening procedure is acknowledged as a methodological limitation, although the calibration procedure and discussion of uncertain cases were used to improve consistency.

The full-text exclusion categories reported in the PRISMA flow diagram represent the primary reason for excluding each article. Methodological sufficiency was assessed as part of the eligibility criteria described in Section 2.3, and each excluded article was assigned to one primary exclusion category to avoid double-counting. In cases where limited methodological detail occurred alongside weak conceptual alignment with EA, the primary exclusion reason was recorded as conceptual misalignment.

A total of 515 records were identified through database searching. After duplicate removal, 406 unique studies remained for title–abstract screening. At this stage, 218 records were excluded because they were not informed by EA or were not conceptually aligned with an EA framework

($n = 126$), did not use English-language learner data ($n = 78$), did not examine learner errors in English language use ($n = 11$), or had been retracted ($n = 3$). The remaining 188 articles were assessed in full text. Of these, 82 were excluded because they were not informed by EA or were not conceptually aligned with an EA framework ($n = 68$), did not use English-language learner data ($n = 13$), or did not examine learner errors in English language use ($n = 1$). The final sample comprised 106 studies included in the descriptive and qualitative synthesis.

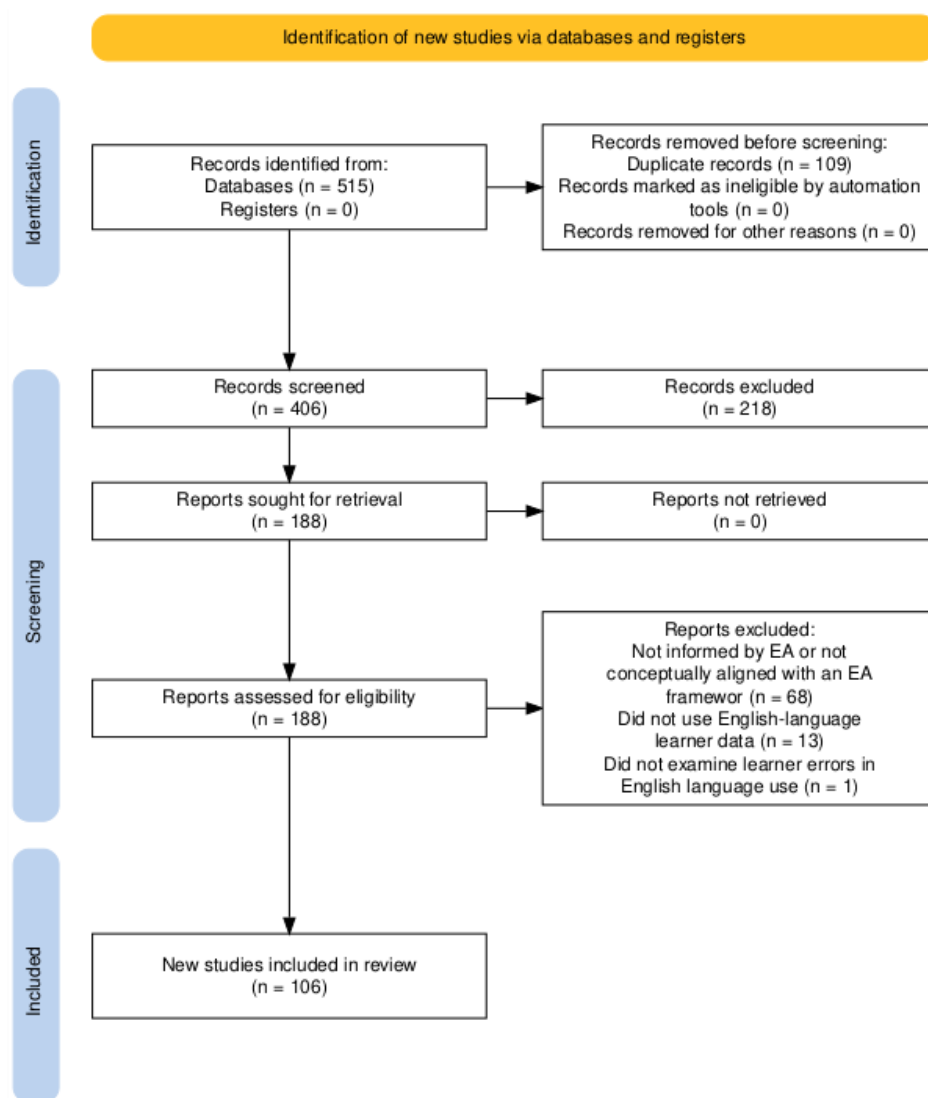


Figure 1. PRISMA flow diagram of the study selection process.

Data charting and analytical procedures

All included studies were charted using a structured extraction form developed for this review. The form recorded bibliographic details, including author, year, country or context, and publication outlet; research focus, including language problems examined, genre or modality, and learner population; methodological characteristics, including research design, data size, analytical tools, coding procedures, and reliability reporting; and interpretive information, including theoretical framing, stated limitations, and pedagogical implications. Consistent with recent work on learner corpus and error annotation practices, the charting process also noted whether studies clearly distinguished between error identification, classification, and interpretation, since this distinction affects analytical transparency and comparability across studies (Dobrić, 2023).

The extraction form was piloted with 10 studies before full charting. These studies were selected to represent variation in publication year, modality, learner population, and methodological orientation. The purpose of this pilot stage was to refine the extraction form and standardise the interpretation of charting categories rather than to calculate a separate inter-rater agreement statistic. During piloting, the researchers checked whether the initial extraction categories captured the information needed to answer the review questions. Several categories were refined after piloting, including the distinction between primary genre and domain-specific context, the separation of methodological orientation from analytical tool, and the coding of reporting practices. Uncertainties identified during piloting were recorded and discussed before the revised categories were applied during full charting.

The first researcher carried out the full charting of the included studies. Uncertain cases were recorded during charting and discussed with the second researcher before final coding decisions were made. These cases included studies that combined written and digital data, studies that reported both frequency counts and qualitative interpretation, and studies whose theoretical framing or pedagogical implications were only weakly specified. In such cases, the final code was assigned according to the dominant data source, analytical emphasis, and the way the study reported its findings. This procedure was used to improve consistency while preserving the descriptive purpose of the scoping review. The fact that charting was not conducted in full duplicate across all included studies is acknowledged as a methodological limitation.

Descriptive statistics were used to summarise key study characteristics, including publication year, geographical context, linguistic focus, genre or modality, learner population, methodological orientation, data size, analytical tools, and reporting practices. Recurring qualitative patterns in theoretical framing, methodological tendencies, and pedagogical interpretation were then examined through thematic synthesis informed by Braun and Clarke's (2006) six-phase framework. In the present review, this framework was adapted to the analysis

of published studies rather than primary interview or observational data. Each article was treated as the unit of analysis.

The thematic synthesis moved from article-level extraction to review-level themes. For example, when an article reported frequent grammatical or lexical errors and recommended that teachers focus instruction or feedback on these recurring forms, it was coded under form-focused diagnostic use. When a study linked errors to cohesion, rhetorical organisation, genre expectations, or disciplinary communication, it was coded under discourse- or genre-oriented interpretation. When pedagogical implications were brief, general, or not clearly connected to the analysis, this was coded as weakly specified pedagogical implication. These article-level codes were compared across the dataset and grouped into broader themes concerning form-focused representations of learner difficulty, diagnostic uses of EA, methodological transparency, and context-sensitive extensions of EA.

The full extraction form and the list of included studies are provided as [Supplementary Material](#).

Results

Characteristics of the included studies

A total of 106 studies met the inclusion criteria and were included in the final synthesis. These studies represent English error analysis research published from the early 1990s to 1 February 2025, reflecting both the coverage of the selected databases and the eligibility decisions applied during the screening process. Figure 1 summarises the study selection procedure, while this section outlines the key characteristics of the included studies in terms of publication period, research context, methodological design, and theoretical orientation.

With respect to publication trends, the literature is clearly concentrated in more recent decades. Publication was concentrated in the later periods of the dataset, with relatively few studies appearing before 2000 and a clear increase after 2010, particularly after 2020 (see Figure 2). The 2025 count should be interpreted cautiously because the search covered records only up to 1 February 2025. This pattern indicates sustained publication interest in Error Analysis research over time, especially in the more recent periods represented in the dataset.

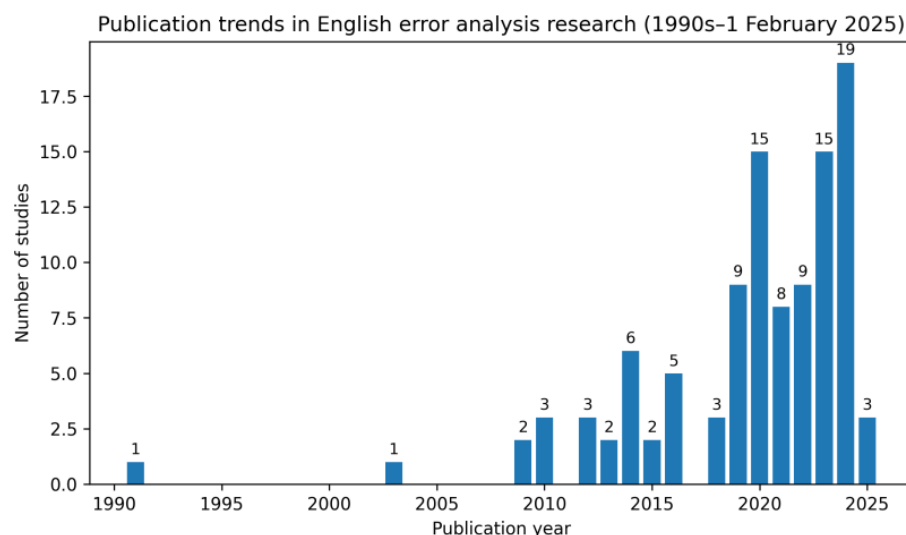


Figure 2. Publication trends in English EA research across the 106 included studies (1990s–1 February 2025).

Note. The 2025 bar represents records published or indexed up to 1 February 2025 only and should therefore be interpreted as a partial-year count.

In terms of geographical distribution, the included studies were concentrated most strongly in Asian contexts outside the Middle East ($n = 47$, 44.3%), followed by Middle Eastern contexts ($n = 23$, 21.7%) (see Table 2). European contexts accounted for 12 studies (11.3%), while studies from Africa ($n = 3$, 2.8%) and Latin America ($n = 2$, 1.9%) were less frequently represented. A further 19 studies (17.9%) were classified as transregional, unspecified, or borderline contexts because they used global datasets, multiple-country datasets, multi-regional evidence, or did not provide a single clearly assignable geographical context. These frequency data support the interpretation that the retrieved EA literature is concentrated in Asian and Middle Eastern contexts, while also showing that a noticeable proportion of the dataset is transregional or geographically unspecified.

Table 2. Geographical distribution of the included studies by region/context.

Region/context	n	%
Asia, excluding Middle East	47	44.3
Middle East	23	21.7
Europe	12	11.3
Africa	3	2.8
Latin America	2	1.9
Transregional, unspecified, or borderline contexts	19	17.9
Total	106	100.0

Note. Percentages are calculated based on the total number of included studies ($n = 106$). Each study was assigned to one primary region/context category for summary purposes. Middle Eastern contexts were reported separately because they formed a distinct regional cluster in the dataset. Transregional, unspecified, or borderline contexts include studies using global datasets, multiple-country datasets, multi-regional evidence, or records for which a single geographical context could not be clearly assigned. Percentages are rounded to one decimal place.

From a methodological perspective, quantitative designs accounted for the largest proportion of studies, typically reporting error frequencies, rates, or category distributions. Mixed-method studies combined numerical summaries with qualitative interpretation, whereas qualitative studies more often focused on contextual influences such as rhetorical purpose, task demands, or discourse organisation. Theoretical orientations also varied across the dataset, with many studies drawing on traditional Error Analysis and interlanguage frameworks, while others incorporated perspectives from second language acquisition or discourse- and genre-informed approaches.

Linguistic focus, genre, and learner populations

Across the included studies, grammatical errors were the most frequently examined category ($n = 92$), followed by lexical errors ($n = 78$). Discourse-level issues, including cohesion, coherence, rhetorical organisation, and text-level meaning relations, were examined in 41 studies, while mechanical errors, such as spelling, punctuation, and capitalisation, were represented in 27 studies. These categories were not treated as mutually exclusive because a single study could examine more than one type of learner error. For example, many writing-focused studies analysed both grammatical and lexical errors, while some also included mechanical or discourse-level categories. Figure 3 presents the number of studies addressing each error type rather than a set of categories that add up to the total number of included studies.

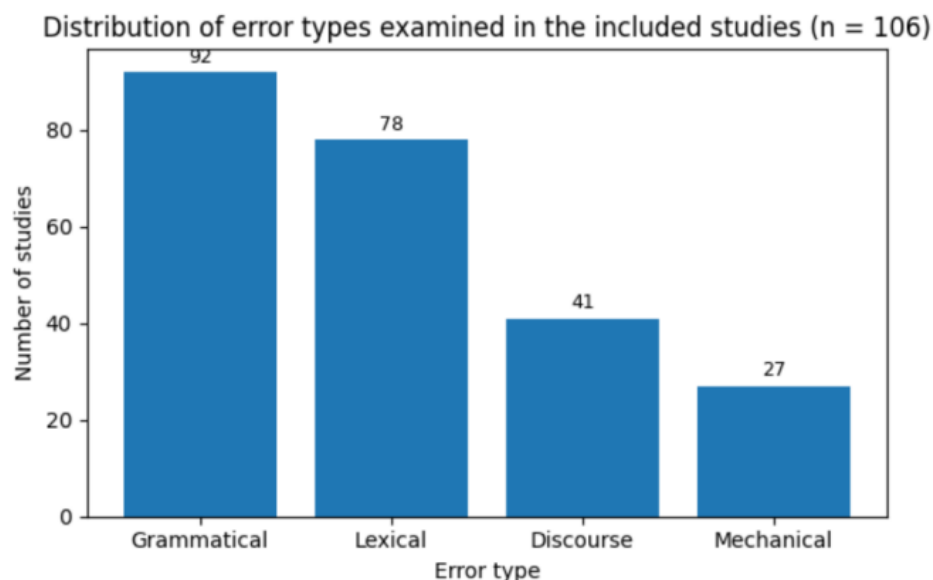


Figure 3. Distribution of error types examined in the included error analysis studies.

Note. Error-type categories were coded as non-mutually exclusive because individual studies could examine more than one type of learner error. Therefore, the counts represent the number of studies addressing each error type rather than percentages of exclusive categories.

For coding purposes, grammatical errors referred to morphosyntactic problems such as tense, agreement, word order, articles, prepositions, and sentence structure. Lexical errors referred to problems of word choice, collocation, word formation, semantic appropriateness, and lexical transfer. Mechanical errors included spelling, punctuation, capitalisation, and formatting-related surface features. Discourse errors referred to cohesion, coherence, rhetorical organisation, paragraphing, and genre-related textual relations. Phonological errors referred to pronunciation, segmental or suprasegmental features, and spoken-form difficulties, where these were analysed as learner errors. These review-level categories were used to group the terminology reported in individual studies while preserving the original study-level labels during charting.

With respect to genre and modality, written texts accounted for 72 of the 106 studies (67.9%), compared with spoken data ($n = 18$, 17.0%) and multimodal or digitally mediated data ($n = 16$, 15.1%) (see Table 3). This pattern reflects the close historical association between Error Analysis and writing instruction, in which written texts are often treated as the primary basis for diagnosing learner language.

A similar concentrated pattern was observed in the learner populations. Undergraduate learners accounted for 71 studies (67.0%), followed by postgraduate or professional groups ($n = 23$, 21.7%) and secondary-school learners ($n = 12$, 11.3%). Domain-specific contexts, such as

medical, engineering, scientific, technical, or professional communication, appeared in 19 studies (17.9%), but this coding dimension could overlap with the main learner-population categories. An overview of these distributions is presented in Table 3.

Table 3. Distribution of genres and learner populations in the included studies (n = 106).

Category	n	%
Primary genre		
Written	72	67.9
Spoken	18	17.0
Multimodal / digital	16	15.1
Learner population		
Secondary school	12	11.3
Undergraduate	71	67.0
Postgraduate / professional	23	21.7
Domain-specific contexts		
Discipline-specific contexts (e.g., medical, engineering)	19	17.9

Note. Percentages are calculated based on the total number of included studies (n = 106). For summary purposes, each study was assigned to one primary genre category and one main learner-population category. Domain-specific context could overlap with learner-population categories.

Taken together, these findings indicate that much of the existing evidence on EA is grounded in undergraduate EFL writing and remains strongly oriented towards grammatical and lexical features. This body of research provides a useful descriptive foundation for classroom-focused diagnosis, but discourse- and genre-related insights are drawn from a more limited evidence base within the current dataset.

Methodological approaches and analytical practices

The included studies employed a range of methodological approaches. Quantitative designs accounted for 69 of the 106 studies (65.1%), followed by mixed-method designs (n = 24, 22.6%) and qualitative approaches (n = 13, 12.3%) (see Table 4 and Figure 4). Quantitative studies typically reported error frequencies, rates, or category distributions, often with the aim of identifying recurrent learner difficulties across learner groups or task types. Mixed-method

studies combined numerical summaries with qualitative interpretation, whereas qualitative studies more often focused on contextual factors such as rhetorical purpose, task demands, or discourse organisation.

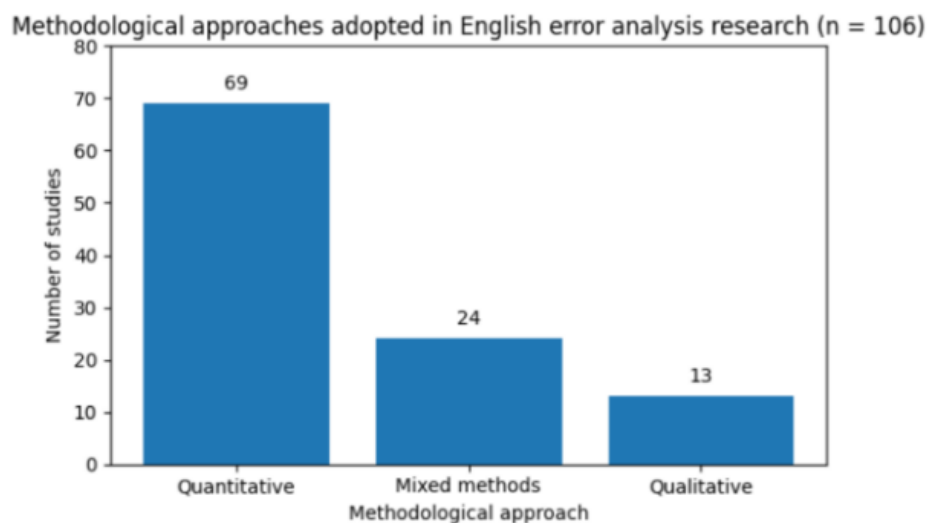


Figure 4. Methodological approaches adopted in English error analysis research (n = 106).

Table 4 also shows that small-scale datasets were more common (n = 72, 67.9%) than large-scale datasets or learner corpora (n = 34, 32.1%). Manual coding was reported in 81 studies (76.4%), whereas corpus-assisted or software-supported analysis appeared in 25 studies (23.6%). Reporting practices were separated into two dimensions: whether the study described its coding procedure and whether it reported reliability or agreement. Coding procedures were described in 67 studies (63.2%), while 39 studies (36.8%) provided limited, unclear, or no description of coding procedures. Reliability or agreement was reported in 44 studies (41.5%), whereas 62 studies (58.5%) did not report reliability or reported it only unclearly. This distinction clarifies that some studies described how errors were identified or classified without reporting a formal reliability or agreement procedure. Taken together, these distributions suggest that much of the reviewed literature remains based on relatively small datasets and manual coding practices, with uneven reporting of coding procedures and reliability across studies. Although the present review did not conduct formal cross-tabulations among these characteristics, the overall pattern indicates that methodological variation in the literature extends beyond research orientation alone and also involves differences in dataset size, analytical support, coding transparency, and reliability reporting.

Table 4. Methodological characteristics of the included studies (n = 106).

Category	n	%
<i>Methodological orientation</i>		
<i>Quantitative</i>	69	65.1
<i>Mixed methods</i>	24	22.6
<i>Qualitative</i>	13	12.3
<i>Data size</i>		
<i>Small-scale datasets (e.g., limited scripts, classroom samples)</i>	72	67.9
<i>Large-scale datasets / learner corpora</i>	34	32.1
<i>Analytical tools</i>		
<i>Manual coding</i>	81	76.4
<i>Corpus-assisted / software-supported analysis</i>	25	23.6
<i>Coding procedure reporting</i>		
<i>Coding procedure described</i>	67	63.2
Coding procedure limited, unclear, or not reported	39	36.8
Reliability reporting		
Reliability or agreement reported	44	41.5
<i>Reliability not reported or unclear</i>	62	58.5

Note. Percentages are calculated based on the total number of included studies (n = 106). Each study was assigned to one primary category for methodological orientation, data size, and analytical tools. Coding procedure reporting and reliability reporting were coded as separate reporting dimensions.

Theoretical frameworks and pedagogical orientation

Across the included studies, theoretical engagement was uneven and was often presented at different levels of explicitness. Some studies clearly located their analysis within Error Analysis, interlanguage theory, SLA-informed explanation, or genre- and discourse-based perspectives, while others referred to such concepts more generally or implicitly. For this reason, the theoretical orientations reported in this section are presented as an interpretive thematic synthesis

rather than as mutually exclusive frequency categories. The orientations in Table 5 were identified by comparing the theoretical framing, analytical focus, methodological tendencies, and pedagogical implications charted across the included studies. Studies could contribute to more than one orientation when their theoretical framing, analytical focus, or pedagogical interpretation crossed categories; therefore, the table should be read as a conceptual synthesis rather than as a count-based classification.

Table 5. Interpretive synthesis of theoretical orientations and pedagogical emphases in the reviewed EA studies.

Theoretical orientation	Core theoretical concepts / references	Typical analytical focus	Common research designs	Pedagogical orientation
Error Analysis and Interlanguage	Corder (1967); Selinker (1972); Interlanguage theory	Grammatical and lexical errors; developmental patterns in learner language	Predominantly quantitative and descriptive	Brief, frequency-based recommendations; emphasis on error correction and form accuracy
SLA-informed perspectives	Transfer theory; noticing hypothesis; communicative competence	Error sources; cognitive and developmental explanations of error emergence	Quantitative and mixed-methods	Awareness-raising and form-focused instruction; limited linkage to longitudinal pedagogy
Genre- and discourse-based frameworks	Genre theory; discourse analysis	Rhetorical organisation, cohesion, and genre expectations in academic writing	Mainly qualitative or mixed-methods	Academic literacy and genre-informed instruction; pedagogical application unevenly developed

Note. The table provides an interpretive synthesis of recurring theoretical orientations and pedagogical tendencies identified through article-level charting. It is not intended as a quantitative classification of individual studies, and the orientations should not be read as mutually exclusive categories.

To make the interpretive derivation of the orientations more transparent, exemplar records from [Supplementary Table S2](#) are noted here. Classic Error Analysis and interlanguage-oriented examples included studies focusing on syntactic and morphological errors, frequent EFL writing errors, grammatical errors in ESL writing, and cross-L1 writing error patterns, such as records No. 18, No. 48, No. 82, and No. 94. SLA-informed examples included studies examining interlanguage development, L1-related sources of grammatical errors, implicit and explicit error correction, and oral corrective feedback preferences, such as records No. 24, No. 30, No. 41, and No. 77. Genre- and discourse-oriented examples included studies focusing on EAP oral presentation errors, written discourse errors, scientific or discipline-specific writing, and domain-specific translation texts, such as records No. 35, No. 40, No. 75, and No. 86. These examples

are illustrative rather than exhaustive and are used to show how recurring orientations were identified across the dataset.

The first recurring orientation involved classic Error Analysis and interlanguage-based approaches. In studies aligned with this orientation, learner errors were typically interpreted as evidence of developmental processes, hypothesis testing, or transitional language systems rather than as random or deficient forms. Analytical attention in these studies was directed mainly towards grammatical and lexical errors, with findings often presented through frequency counts or categorical descriptions. While such analyses provided a clear overview of recurrent learner difficulties, their theoretical engagement often remained largely descriptive, with only limited extension into broader explanatory or pedagogical frameworks.

Another identifiable strand of studies incorporated perspectives from second language acquisition (SLA), including concepts such as transfer, noticing, and communicative competence. These studies moved beyond surface-level description by offering cognitive or developmental explanations for why particular error patterns emerge. However, engagement with SLA theory was often broad rather than tightly specified. In many cases, theoretical constructs were referenced at a general level, with limited explicit linkage between specific SLA concepts and the error categories identified in the analysis.

A third strand was represented by genre- and discourse-based frameworks. Studies adopting these perspectives were more likely to interpret errors in relation to rhetorical organisation, textual cohesion, or genre expectations, particularly in academic writing contexts. Errors were thus treated as context-sensitive phenomena shaped by communicative purpose and audience rather than solely as deviations from linguistic norms. Within the dataset, these approaches appeared less prominently than classic Error Analysis and interlanguage-oriented work and were more often associated with qualitative or mixed-method designs than with large-scale quantitative analyses.

Pedagogical orientation across the reviewed studies varied considerably. Many studies included pedagogical implications in the form of brief recommendations, often suggesting that teachers prioritise instruction or feedback on the most frequent error types identified. In such cases, the connection between Error Analysis and pedagogy tended to remain implicit, with limited discussion of how findings might be systematically integrated into classroom practice over time. Other studies adopted a more explicitly diagnostic stance, framing Error Analysis as a tool for informing feedback strategies, syllabus design, or task sequencing. These studies were more likely to emphasise the interpretive value of errors for understanding learner needs rather than treating errors solely as targets for correction.

Clear and sustained links between theoretical orientation and pedagogical application were not commonly articulated in the reviewed literature. For example, although interlanguage theory foregrounds developmental progression, this perspective was not consistently reflected in longitudinal or process-oriented teaching recommendations. Similarly, genre-based analyses did not always translate into explicit genre-informed instructional practices. Taken together, these patterns suggest that, despite growing theoretical diversity, Error Analysis research has not yet consistently aligned its analytical frameworks with differentiated pedagogical approaches.

From a TESOL classroom perspective, these findings reinforce the view that EA is most valuable when theoretical explanations are explicitly connected to instructional decision-making. Strengthening the alignment between analytical frameworks and pedagogical applications may enhance the interpretability and practical relevance of EA research for teachers and teacher educators.

Discussion

How contemporary EA research represents learner difficulty

The mapped findings suggest that contemporary EA research tends to represent learner difficulty through local and form-focused features of learner language. This interpretation is supported by the distribution of studies in the review dataset: grammatical errors were examined in 92 studies and lexical errors in 78, compared with 41 studies that examined discourse-level issues and 27 that examined mechanical errors. The evidence base was also strongly writing-oriented, with 72 studies using written data and 71 focusing on undergraduate learners. These patterns indicate that the current EA literature offers its strongest descriptive account of learner difficulty in relation to sentence-level accuracy, especially in undergraduate EFL writing contexts.

This emphasis has clear value for TESOL teachers. Local grammatical and lexical patterns are relatively visible in learner production and can help teachers identify recurring areas of difficulty, compare common problems across learners or tasks, and decide which issues deserve instructional attention. In classroom terms, EA can support focused feedback, short remedial activities, and more informed decisions about whether a recurring problem should be addressed individually, in small groups, or at the whole-class level. Its classroom value therefore lies less in prescribing correction for every error than in helping teachers recognise patterned local difficulties in a more systematic way.

The predominance of form-focused findings is also understandable in methodological terms. As reported in the Results section, quantitative designs were common in the dataset ($n = 69$), and small-scale datasets ($n = 72$) and manual coding procedures ($n = 81$) were also frequent. Under

these conditions, grammatical and lexical errors are more readily identified, classified, and counted than discourse-, pragmatic-, or genre-related difficulties, which often require more interpretive judgement and closer attention to task context. The dominant representation of learner difficulty in EA research therefore reflects both recurring learner problems and the kinds of features that EA studies have been methodologically well positioned to capture (James, 1998; Granger, 2009).

At the same time, this form-focused representation is necessarily partial. When learner difficulty is mainly described through sentence-level accuracy, other dimensions of performance may receive less attention. These include cohesion, rhetorical organisation, genre expectations, interactional appropriateness, audience awareness, and multimodal meaning-making. A learner text may contain relatively few grammatical errors but still be weak in argument development, coherence, disciplinary positioning, or communicative effectiveness. Conversely, a text with frequent local errors may still show some control of genre purpose or meaningful engagement with the task. Read alongside scholarship in L2 writing, this imbalance is pedagogically important because writing development involves more than local correctness; it also depends on discourse organisation, rhetorical control, and communicative appropriateness (Hyland, 2004; Hinkel, 2002; Leki, Cumming, & Silva, 2010). For this reason, EA findings need to be interpreted as one source of evidence about learner development, not as a complete account of communicative ability.

Spoken and multimodal or digitally mediated data further complicate a writing-centred interpretation of EA. Although written studies formed the largest part of the dataset, spoken and multimodal/digital studies show that learner difficulty is not limited to written accuracy. Spoken performance involves real-time grammatical and lexical choices, pronunciation, fluency, repair, and interactional management. Multimodal or digitally mediated communication may involve written language together with visual, technological, and interactional resources. These forms of learner production are not always easily captured by conventional written-error categories, suggesting that EA research needs broader analytical tools when difficulty emerges through speech, interaction, or multimodal communication.

The mapped evidence therefore points to both the strength and boundary of contemporary EA research. Its strength lies in making recurrent local difficulties visible and usable for classroom diagnosis. Its boundary lies in the fact that it provides a fuller account of surface-level accuracy than of how learners manage coherence, rhetorical purpose, audience expectations, spoken interaction, or multimodal communication. This does not diminish the continuing value of EA. Rather, the review findings suggest that EA remains most useful when it is treated as a descriptive and diagnostic resource for identifying patterned learner difficulties. From a TESOL perspective, EA makes a substantial but partial contribution: it gives teachers a grounded basis for recognising recurrent local problems, but it needs to be interpreted alongside broader

understandings of writing development, spoken interaction, genre performance, and communicative purpose when discourse-, audience-, and modality-related challenges are at stake (Corder, 1967; Richards, 1971; Ellis, 1994; Hyland, 2019).

Diagnostic interpretations of EA in TESOL

The findings of the present review suggest that EA research is most useful for TESOL pedagogy when learner errors are interpreted diagnostically rather than prescriptively. A diagnostic orientation treats errors as indicators of learners' developing interlanguage systems and emerging control over linguistic and functional resources, rather than as deficiencies requiring comprehensive elimination. This interpretation aligns with foundational perspectives in second language acquisition, which conceptualise errors as evidence of developmental processes rather than simple failure (Corder, 1967; Ellis, 1994; Selinker, 1972; Gass & Selinker, 2008).

Within this diagnostic framework, the descriptive strength of EA research remains pedagogically valuable. Recurrent grammatical and lexical error patterns identified across diverse learner populations and instructional settings can assist teachers in anticipating common difficulties and planning targeted instructional support (James, 1998; Granger, 2009). However, such information does not translate directly into uniform classroom practices. Pedagogical decisions require selective judgement, taking into account learner readiness, task demands, communicative purpose, and instructional priorities, a point also noted in second language writing research on pedagogical response to learner error (Ferris, 2010). This interpretation is also consistent with the mapped findings of the present review, which showed that explicit links between theoretical framing and pedagogical application were often uneven across the reviewed studies.

A diagnostic use of EA can be translated into several classroom principles. First, teachers may consider frequency: recurrent errors across several learners or tasks may warrant class-level attention, while isolated errors may be better addressed individually or left temporarily untreated. Second, developmental relevance matters, because teachers need to consider whether an error reflects a pattern that learners are beginning to control or one that requires further input, modelling, or practice. Third, communicative impact should be considered: errors that interfere with meaning, argument development, disciplinary clarity, or reader interpretation may require more immediate attention than errors that are locally noticeable but do not seriously affect communication. Fourth, teachability is important, because some errors can be addressed through focused explanation or short practice activities, whereas others require longer-term exposure, task redesign, or genre-based support. Finally, learner readiness matters because feedback is more likely to be useful when it matches learners' current proficiency, task demands, and capacity to act on the feedback.

These principles do not mean that all frequent errors should automatically be corrected, nor that infrequent errors should always be ignored. Rather, they suggest that EA findings can help teachers make principled decisions about what to prioritise, when to intervene, and how to connect feedback with broader learning goals. For example, a recurrent article or preposition error may be suitable for short form-focused instruction if learners are ready to notice and revise it. By contrast, recurring problems in cohesion, rhetorical organisation, or genre control may require modelling, guided text analysis, or task-based support rather than correction alone. In this sense, the diagnostic value of EA lies in helping teachers interpret error patterns in relation to instructional purpose, not in turning frequency counts into automatic correction priorities.

Although the EA literature reviewed here is not equivalent to the written corrective feedback literature, feedback research provides a useful comparative perspective for understanding why pedagogical intervention is often selective and context-sensitive (Bitchener & Ferris, 2012; Hyland & Hyland, 2019). The present review does not use written corrective feedback studies as direct evidence for the effectiveness of EA. Instead, this literature is used to contextualise why classroom responses to learner errors need to be selective, staged, and sensitive to learners' needs and instructional conditions. From this perspective, the diagnostic use of EA findings supports informed instructional decision-making by helping teachers determine which error patterns warrant attention, when feedback is most appropriate, and how corrective practices can be aligned with broader learning goals.

While the present review does not aim to prescribe specific classroom techniques, it highlights principles that can inform teachers' prioritisation and timing of feedback in written, spoken, and multimodal learning contexts. For TESOL practitioners, this means treating EA findings as interpretive resources that support context-sensitive judgement, rather than as a basis for blanket correction.

Feedback feasibility and recurring methodological limitations

The methodological patterns identified in the review help explain not only what EA research has tended to examine but also what kinds of pedagogical claims it can reasonably support. As reported in Section 3.3, quantitative designs were common, small-scale datasets were frequent, manual coding predominated, and reliability reporting was uneven. These features do not invalidate the reviewed studies. Many small-scale and manually coded studies offer useful, context-sensitive accounts of learner difficulty. However, they affect the extent to which findings can be compared across studies and translated into classroom recommendations.

Studies based on smaller datasets and manually coded error categories are particularly useful for identifying recurrent local problems in learner language, especially grammatical and lexical

errors. Consequently, their pedagogical implications often point towards selective and targeted forms of instructional response. Researchers are more likely to recommend that teachers prioritise frequent error types, attend to salient recurring patterns, or direct feedback towards problems that can be identified relatively consistently across learner texts. In this sense, the pedagogical usefulness of such studies is real, but it is shaped by the kinds of evidence their methods are designed to produce (James, 1998; Granger, 2009; Dobrić, 2023).

During charting, pedagogical implications were interpreted in relation to several recurring types, including selective attention to frequent local errors, diagnostic uses of EA for identifying learner needs, curriculum- or task-related suggestions, and weakly specified recommendations that were only loosely connected to the analysis. These coded patterns help explain why many EA studies offer useful classroom-oriented observations while still stopping short of specifying detailed feedback procedures or longer-term pedagogical pathways.

At the same time, these methodological tendencies limit the strength of broader pedagogical claims. When studies rely on narrow error taxonomies, limited samples, or incompletely reported coding procedures, they provide a firmer basis for describing sentence-level difficulty than for making strong claims about discourse organisation, genre performance, feedback effectiveness, or longer-term writing development. This does not make such studies unhelpful. Rather, it suggests that their classroom relevance is often strongest at the level of diagnostic awareness and local instructional prioritisation, rather than at the level of comprehensive guidance for writing development across contexts.

This distinction is important for interpreting feedback feasibility. The reviewed EA literature can help teachers identify which error patterns may deserve attention, but it does not by itself establish which feedback approaches will be most effective, for whom, or under what instructional conditions. Although written corrective feedback scholarship provides a useful comparative perspective on why classroom intervention is often selective and context-sensitive, conclusions from feedback studies are not treated here as direct evidence of what EA itself demonstrates. Instead, they help contextualise why the pedagogical implications reported in EA research frequently emphasise prioritisation, salience, and instructional selectivity rather than comprehensive correction (Sheen, 2011; Truscott, 2007; Bitchener & Ferris, 2012; Hyland & Hyland, 2019).

From this perspective, the recurring generality of pedagogical implications in EA research should not be understood simply as a weakness of individual studies. It is more appropriately viewed as a consequence of prevailing methodological practices within the field. Where the evidence base is strongest, recommendations tend to concern frequent and identifiable local errors; where the evidence becomes less consistent or less readily operationalised, pedagogical implications tend to become more cautious, context-bound, or deferred. For TESOL

practitioners, this means that EA findings are most useful when treated as informed reference points for selective decision-making rather than as direct prescriptions for comprehensive correction.

Pedagogical decision-making therefore benefits from combining published EA findings with locally grounded evidence, such as learner drafts, revision trajectories, classroom tasks, and learners' responses to feedback. In this sense, teachers function not as passive recipients of research conclusions, but as contextual interpreters who mediate between published patterns and the practical realities of classroom instruction.

Extending EA towards domain-specific and modality-sensitive contexts

One contextual gap identified in the present review concerns the limited attention given to domain-specific and modality-sensitive uses of English. In this review, “domain-specific” refers to English use shaped by particular academic, professional, disciplinary, or institutional purposes. It therefore includes English for Academic Purposes (EAP), English for Specific Purposes (ESP), disciplinary writing, professional communication, and specialised educational settings in which language choices are influenced by field-specific expectations. Although many of the reviewed studies focused on general EFL writing, discipline-specific contexts accounted for only 19 studies (17.9%), suggesting that areas such as medical, engineering, scientific, technical, and professional communication were less frequently represented in the dataset.

This gap matters pedagogically because learner difficulty in academic and professional settings is not determined by surface-level accuracy alone. It is also shaped by the purposes, audiences, genres, and communicative conditions of a particular domain. In written contexts, this may involve disciplinary conventions, rhetorical organisation, and genre expectations. In spoken contexts, it may involve oral presentations, interactional management, pronunciation, fluency, and audience awareness. In multimodal or digitally mediated contexts, it may involve meaning-making across written, visual, technological, and interactional resources. A more domain-sensitive application of EA would therefore ask not only whether a form is accurate, but also how learner language functions within the communicative demands of a particular task, field, or mode.

Read alongside scholarship on genre and disciplinary communication, the reviewed literature points to a useful direction for future EA research: not a move away from form-focused analysis, but a more context-sensitive extension of it into settings where communicative effectiveness depends on how linguistic choices function within particular discourse communities (Hyland, 2004; Tardy, 2009; Hyland, 2015; Hyland, 2019). From this perspective, extending EA towards

domain-specific and modality-sensitive contexts would strengthen the interpretive reach of error analysis without replacing its diagnostic function.

The present review does not suggest that the reviewed literature already demonstrates a fully developed shift in this direction. Rather, it indicates that domain-specific and modality-sensitive analysis remains an underdeveloped area within the current evidence base. This is especially relevant given the limited representation of discipline-specific contexts and the comparatively narrower treatment of discourse-, genre-, spoken-, and multimodal dimensions in the reviewed studies. From a TESOL perspective, future EA research could usefully examine how recurrent linguistic difficulty relates to the communicative and rhetorical demands of particular tasks, disciplines, professional settings, and modes of communication. In this sense, a domain-aware and modality-sensitive application of EA is best understood not as an external agenda imposed on the review, but as a future direction grounded in identifiable limitations and uneven areas of development within the current literature.

Conclusion, limitations, and implications for TESOL practice

This scoping review examined how EA has been conceptualised and applied across English-language research, with particular attention to its relevance for TESOL classrooms. Drawing on 106 peer-reviewed studies published up to February 2025, the review mapped research trends, methodological practices, theoretical orientations, and pedagogical implications across a heterogeneous body of literature. The findings show that EA research continues to be strongly oriented towards grammatical and lexical errors, especially in written texts produced by undergraduate EFL learners. Much of the literature also relies on small-scale datasets and manual coding, with uneven reporting of coding procedures and reliability. Pedagogically, the review suggests that EA remains most useful when treated as a diagnostic resource rather than as a prescriptive model for correcting all learner errors.

Several limitations should be acknowledged. First, the search strategy was intentionally focused on explicit EA-related terminology and selected error-type descriptors. This helped maintain conceptual specificity, but it may have under-retrieved studies that examined feature-specific errors, such as article, preposition, morphosyntactic, or collocation errors, without using broader EA-related terms. Second, the database coverage was limited to Scopus, Web of Science, and PubMed; the non-inclusion of databases such as ERIC and LLBA may have limited the retrieval of some education- and linguistics-focused studies. Third, the review included only peer-reviewed journal articles published in English, which may have excluded relevant book chapters, dissertations, conference papers, practitioner-oriented publications, and non-English studies. Fourth, although calibration procedures were used during screening and uncertain cases were discussed, the remaining records were not screened and charted in full duplicate. Finally, because

the review was designed as a scoping review, it mapped patterns and interpreted pedagogical tendencies rather than evaluating intervention effectiveness or making causal claims about teaching outcomes.

The implications of the review can be considered for several TESOL stakeholders. For teachers, the findings suggest that EA evidence can support more principled feedback prioritisation. Rather than treating all errors as equally urgent, teachers can use recurring error patterns as one source of evidence for deciding which issues deserve attention, when feedback is appropriate, and how local language difficulties relate to broader communicative goals. Such decisions should take into account error frequency, developmental relevance, communicative impact, teachability, learner readiness, and the specific demands of classroom tasks.

For teacher educators, the review highlights the importance of preparing teachers to interpret errors developmentally and contextually. EA can be used in teacher education to help prospective and practising teachers distinguish between error identification, error explanation, and pedagogical response. It can also support critical discussion of how learner errors relate to interlanguage development, genre expectations, spoken interaction, multimodal communication, and classroom feedback practices.

For curriculum designers, the findings suggest that EA can inform the design of targeted language support within broader curricula. Error evidence may help identify recurring areas of learner difficulty and guide the sequencing of grammar, lexis, discourse, and genre-focused instruction. However, curriculum planning should not rely on error frequency alone. EA findings are most useful when combined with genre-based, discourse-oriented, and task-sensitive approaches that connect local language forms with communicative purpose.

For researchers, the review points to several priorities for future work. Greater transparency is needed in the reporting of error identification, coding procedures, reliability or agreement checks, and data charting decisions. Future EA research would also benefit from broader engagement with spoken, multimodal, digital, and domain-specific contexts, as well as clearer links between theoretical framing and pedagogical interpretation. Larger learner corpora, corpus-assisted approaches, and carefully reported small-scale classroom studies can all contribute to this agenda, provided that their methodological choices and pedagogical claims are clearly aligned.

Overall, this review positions EA as a continuing but partial resource for TESOL practice. Its value lies in making patterned learner difficulties visible and usable for diagnostic reflection, feedback prioritisation, and instructional planning. At the same time, its classroom relevance depends on careful interpretation. EA findings need to be read alongside evidence from learners' actual tasks, revisions, communicative needs, and instructional contexts. Used in this way, EA

can support informed professional judgement without reducing language teaching to the correction of isolated errors.

Declaration of competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

AI and generative AI disclosure

The authors used AI-assisted tools during the drafting and language-editing stages to support language editing, clarity, and organisation. All analytical decisions, interpretations, and final wording were reviewed and approved by the authors, who take full responsibility for the content of the manuscript.

References

- Alhaysony, M. (2012). An analysis of article errors among Saudi female EFL students: A case study. *Asian Social Science*, 8(12), 55–66. <https://doi.org/10.5539/ass.v8n12p55>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Bitchener, J., & Ferris, D. R. (2012). *Written corrective feedback in second language acquisition and writing*. Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bryant, C., Yuan, Z., Qorib, M. R., Cao, H., Ng, H. T., & Briscoe, T. (2023). Grammatical error correction: A survey of the state of the art. *Computational Linguistics*, 49(3), 643–701. https://doi.org/10.1162/coli_a_00478
- Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics in Language Teaching*, 5(1–4), 161–170. <https://doi.org/10.1515/iral.1967.5.1-4.161>
- Dobrić, N. (2023). Identifying errors in a learner corpus—The two stages of error location vs. error description and consequences for measuring and reporting inter-annotator agreement. *Applied Corpus Linguistics*, 3(1), 100039. <https://doi.org/10.1016/j.acorp.2022.100039>

- Ellis, R. (1994). *The study of second language acquisition*. Oxford University Press.
- Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA. *Studies in Second Language Acquisition*, 32(2), 181–201. <https://doi.org/10.1017/S0272263109990490>
- Gass, S. M., & Selinker, L. (2008). *Second language acquisition: An introductory course* (3rd ed.). Routledge. <https://doi.org/10.4324/9780203932841>
- Götz, S., & Granger, S. (2024). Learner corpus research for pedagogical purposes: An overview and some research perspectives. *International Journal of Learner Corpus Research*, 10(1), 1–38. <https://doi.org/10.1075/ijlcr.00039.got>
- Granger, S. (2009). The contribution of learner corpora to second language acquisition and foreign language teaching. In K. Aijmer (Ed.), *Corpora and language teaching* (pp. 13–32). John Benjamins.
- Hinkel, E. (2002). *Second language writers' text: Linguistic and rhetorical features*. Lawrence Erlbaum Associates.
- Hyland, K. (2004). *Genre and second language writing*. University of Michigan Press.
- Hyland, K. (2015). Genre, discipline and identity. *Journal of English for Academic Purposes*, 19, 32–43. <https://doi.org/10.1016/j.jeap.2015.02.005>
- Hyland, K. (2019). *Second language writing* (2nd ed.). Cambridge University Press.
- Hyland, K., & Hyland, F. (Eds.). (2019). *Feedback in second language writing: Contexts and issues* (2nd ed.). Cambridge University Press.
- James, C. (1998). *Errors in language learning and use: Exploring error analysis*. Longman.
- Khansir, A. A., & Pakdel, F. (2018). Study of errors and English language teaching: A systematic review. *The Journal of Social Sciences Research*, 4(12), 531–538.
- Leki, I., Cumming, A., & Silva, T. (2010). *A synthesis of research on second language writing in English*. Routledge.
- Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5(69), 1–9. <https://doi.org/10.1186/1748-5908-5-69>
- Mohammadi, T., & Mustafa, H. R. (2020). Errors in English writing of ESL/EFL students: A systematic review. *Theory and Practice in Language Studies*, 10(5), 520–526. <https://doi.org/10.17507/tpls.1005.05>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>

- Richards, J. C. (1971). A non-contrastive approach to error analysis. *English Language Teaching Journal*, 25(3), 204–219. <https://doi.org/10.1093/elt/XXV.3.204>
- Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics in Language Teaching*, 10(1–4), 209–232. <https://doi.org/10.1515/iral.1972.10.1-4.209>
- Sheen, Y. (2011). *Corrective feedback, individual differences and second language learning*. Springer.
- Tarigan, K. E., Stevani, M., Ginting, F. Y. A., Prayuda, M. S., Sari, D. W., & Lumbanraja, B. (2023). Oral corrective feedback and error analysis: Indonesian teachers' beliefs to improve speaking skill. *World Journal of English Language*, 13(6), 140–150. <https://doi.org/10.5430/wjel.v13n6p140>
- Tardy, C. M. (2009). *Building genre knowledge*. Parlor Press.
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M18-0850>
- Truscott, J. (2007). The effect of error correction on learners' ability to write accurately. *Journal of Second Language Writing*, 16, 255–272. <https://doi.org/10.1016/j.jslw.2007.06.003>
- Wang, N. (2024). Multimodal robot-assisted English writing guidance and error correction with reinforcement learning. *Frontiers in Neurorobotics*, 18, 1483131. <https://doi.org/10.3389/fnbot.2024.1483131>

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