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ADDRESSING FRAGMENTATION: A SYSTEMATIC REVIEW OF RISKS AND REMEDIES ASSOCIATED WITH AI AND ENGLISH LANGUAGE TEACHING*

Introduction: Artificial Intelligence (AI) shows significant potential in English Language Teaching (ELT); however, its use presents diverse challenges, highlighting a gap in systematic reviews that have not yet fully synthesised these issues and their associated remedies.
Research Aim: Guided by PRISMA guidelines and Okoli's (2015) four-phase framework, this study critically reviews literature on AI-related risks and associated remedial strategies in ELT, with a focus on higher education contexts.
Evidence-based Facts: From an initial corpus of 350 studies, twenty peer-reviewed articles (2023–2024) were selected based on relevance, citation impact, and indexing in high-impact journals. A deductive thematic analysis informed by eleven predefined categories was conducted using reflexive thematic analysis (RTA) principles through MAXQDA 24. The synthesis indicates uneven conceptualisations of AI-related risks across studies. Ethical concerns, particularly academic integrity threats and risks linked to rapid AI adoption, dominate the literature and set the context for other challenges. These are closely followed by technical limitations and pedagogical shifts that involve insufficient digital literacy, teacher readiness, assessment-related constraints, and issues of access and equity. Learner responses vary in motivation, engagement, critical thinking, and emotional factors, although AI is generally associated with increased autonomy and participation. Skill development remains inconsistent across language domains. Proposed remedies cover pedagogical, ethical, technological, and governance dimensions, including training development, but remain largely conceptual with limited evidence of effectiveness.
Summary: AI integration in ELT is still formative, characterised by fragmented evidence and limited synthesis of risks and responses. Stronger empirical inquiry and integrated frameworks are required for effective implementation.

Keywords: Artificial Intelligence, English Language Teaching, higher education, fragmentation, risks, remedies

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INTRODUCTION

Reiterated across studies, the educational environment is entering a new era of transformation. From chalkboards to chatbots, Artificial Intelligence (AI) stands out as a transformative force, revolutionizing the foundations of higher education in particular and rapidly becoming integrated into everyday teaching and learning activities (Nuong Deri et al., 2024). In English Language Teaching (ELT), AI systems such as chatbots and adaptive learning platforms support personalized instruction, assessment, feedback, and self-paced learning. Empirical evidence shows that AI-driven chatbots can significantly enhance learners' oral communicative competence in EFL contexts (Kemelbekova et al., 2024). Broader findings further indicate that AI integration improves learning achievement, motivation, and self-regulated learning in language education (Wei, 2023). While these developments are widely regarded as promising, they raise important questions about the implications of AI for education as a human-centered practice (Kazimova et al., 2025).

The rapid growth of AI-related publications reflects a broader global shift in educational practices across diverse ELT contexts in higher education (Kavitha & Joshith, 2024). Systematic evidence highlights both the pedagogical affordances of AI in ELT and the importance of responsible implementation supported by ethical and pedagogical considerations (Al Samman, 2024; Crompton et al., 2024). Concerns have emerged regarding data privacy, algorithmic bias, and academic integrity (Maphalala & Ajani, 2025). Additional studies also suggest that extensive reliance on AI may influence students' cognitive engagement, communicative development, and critical thinking skills in language learning environments (Sasikala & Ravichandran, 2024). Institutional analyses further indicate variation in readiness for AI adoption, particularly in policy development, infrastructure, and staff training (Atkinson & Guo, 2024).

In response, the literature proposes several remedies, including pedagogical frameworks for AI integration in ELT, the development of AI literacy among educators and students, and technical approaches such as explainable and privacy-preserving AI systems (García-Peñalvo et al., 2024; Nguyen et al., 2025; Zary, 2024). However, these contributions are often examined independently, without consistent integration across ethical, pedagogical, technical, and governance dimensions.

Although existing studies provide valuable insights, much of the literature extends beyond specific ELT contexts, particularly higher education, or does not consistently focus on sector-specific challenges and responses (O'Dea & O'Dea, 2023; Selwyn, 2024). Consequently, there remains limited consolidated understanding of how AI-related challenges in ELT contexts, particularly in higher education, are systematically addressed through corresponding remedies across studies.

RESEARCH PROBLEM AND AIM

The integration of artificial intelligence into higher education ELT presents both opportunities and challenges, making its future direction simultaneously promising and uncertain (Escotet, 2024). AI has been increasingly explored in English language teaching contexts, particularly for its potential to enhance communicative competence, learner engagement, and instructional efficiency. However, empirical evidence suggests that its effectiveness is still developing and requires further validation in classroom practice (Al Twijri & Alghizzi, 2024). At the same time, AI in ELT raises important pedagogical and ethical concerns, particularly regarding digital literacy, responsible classroom use, and the risk of over-reliance on automated systems in language learning environments (Hockly, 2023). Within this context, ELT stakeholders are increasingly positioned between innovation and uncertainty.

In this regard, though research has explored both opportunities and challenges of AI in ELT, much of this work remains fragmented and context specific. More importantly, there is a lack of systematic synthesis that integrates technical, ethical, pedagogical, and policy-related dimensions into a unified analytical framework capable of supporting coherent decision-making in ELT contexts. Against this backdrop, while the study does not disregard the positive aspects of AI in current literature, it addresses a gap by systematically mapping and synthesizing the key categories of AI-related challenges in ELT, along with the corresponding remedies proposed. This synthesis is intended to support a clearer understanding of how AI can be engaged in ELT in ways that are both effective and responsible. Accordingly, the study is guided by the following research questions:

1. What key categories of AI-related challenges and corresponding remedial strategies are reported in the ELT literature?
2. What gaps exist in the literature regarding the treatment of AI-related risks in ELT, and how sustainable are the proposed remedies across different ELT contexts?

METHODOLOGY

This systematic review was conducted to investigate the challenges and solutions related to the integration of Artificial Intelligence (AI) in English Language Teaching (ELT), with particular attention to higher education. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021) for transparency and replicability and was guided by Okoli's (2015) four-phase framework: planning, selection, extraction, and execution. The execution phase applied Reflexive Thematic Analysis (RTA) as outlined by Braun and Clarke (2020, cited in Byrne, 2022), using a deductive, data-driven ap-

proach across six stages: (1) familiarisation, (2) coding, (3) theme development, (4) theme review, (5) theme definition, and (6) reporting, in alignment with best-practice recommendations for educational systematic reviews (Wright et al., 2007).

The study is based on a *constructivist/interpretivist ontological stance,* seeing reality as socially shaped through the reported challenges and solutions in the existing literature on AI integration in higher education. Its epistemology is interpretive. It stresses that knowledge is generated through the researcher's reflexive interpretation of recurring patterns and themes present in the reviewed studies.

Planning and Selection Phases

The review commenced with two objectives. They were focused on identifying key challenges of AI integration in higher education and exploring proposed remedies and best practices. A review protocol was developed outlining the scope, research questions, and inclusion/exclusion criteria, with publications limited to 2023–2024 based on predefined criteria.

A systematic search strategy was designed to identify relevant conceptual and empirical studies. Boolean operators were used to combine key concepts and selected synonyms in order to capture variations in terminology across the literature. The search string included terms related to artificial intelligence (e.g., "artificial intelligence," AI, ChatGPT, "generative AI"), English Language Teaching contexts (e.g., ELT, English language teaching, EFL classrooms), and higher education settings (e.g., university, "tertiary education," "college students"), as well as AI-related issues and responses.

A problem-oriented set of keywords (e.g., challenge*, barrier*, risk*, limitation*, "ethical concern*") and a solution-oriented set (e.g., solution*, recommendation*, "best practice*", implementation strategy*, intervention*, framework*) were combined using Boolean operators (AND/OR) to retrieve studies addressing both challenges and responses in ELT across different contexts, particularly in higher education. Although not all synonyms were included, Boolean operators and truncation ensured coverage of relevant variations in terminology within the field.

Six major academic databases, Elsevier, Springer, SAGE, Taylor & Francis, Emerald, IEEE, and MDPI, were systematically searched. In addition, Google Scholar was queried via *Publish or Perish software* to capture supplementary sources. Search filters restricted results to peer-reviewed journal articles published in English during the defined period. The initial search identified 350 records. Following the removal of nine duplicates, 341 articles remained for screening. References were imported into Mendeley for management, sorted into sub-collections based on the inclusion and exclusion criteria, and exported to Excel for title and abstract screening. Final data extraction and coding system analysis were performed in MAXQDA 24, maintaining clarity and structure in workflow pro-

cesses from familiarisation to reporting in accordance with the stages of Reflexive Thematic Analysis.

The selection process followed three stages. First, titles and abstracts were screened to exclude articles not related to the use of AI and ELT in higher education. During this stage, in-text citations were also considered as an initial indicator of relevance and scholarly impact. In addition, a quality filter based on citation count (minimum of 10 citations in Google Scholar), applied using *Publish or Perish*, was used to maintain a basic level of scholarly impact and manageability of the dataset. While this criterion supported systematic screening, it is acknowledged that the 10-citation threshold is somewhat arbitrary and may exclude recent or emerging studies that have not yet accumulated citations.

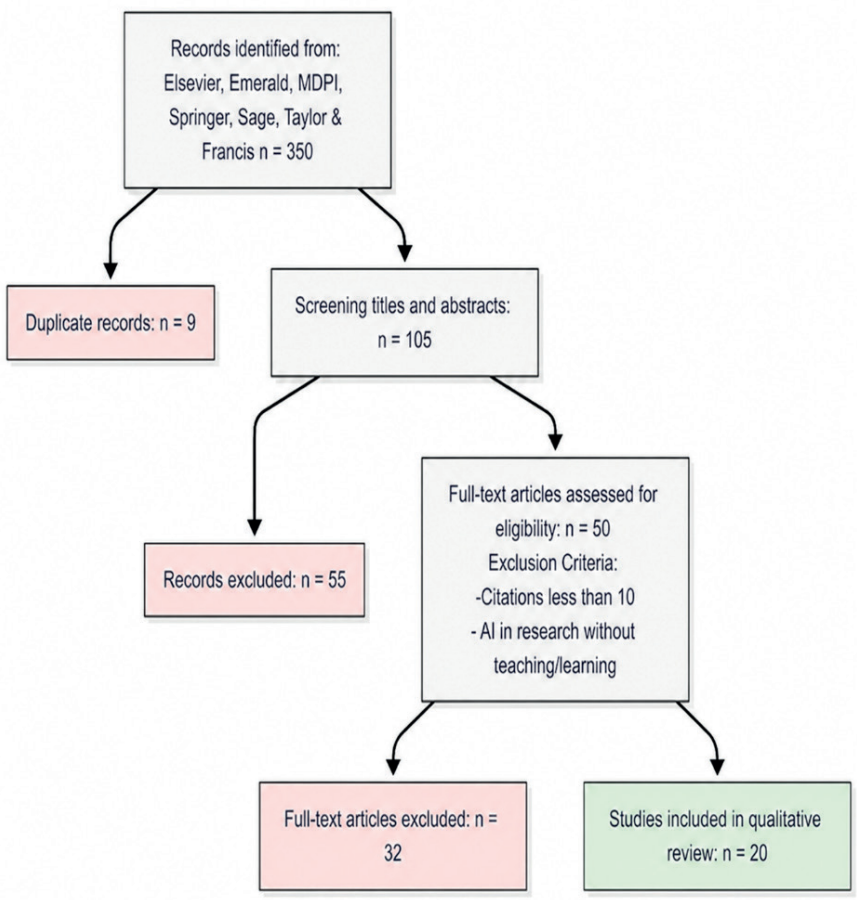
Second, full-text articles were assessed for eligibility according to the final predefined inclusion and exclusion criteria (see Table 1).

Table 1
Inclusion and exclusion criteria

Paradigm	Inclusion Criteria	Exclusion Criteria
Language	English	Non-English
Publication Year	2023–2024	Before 2023 and after 2024
Publication Type	Peer-reviewed journal articles & Conference proceedings	dissertations, books, and non–peer-reviewed reports
Focus Area & Theme	AI-related challenges and solutions in teaching and learning in higher education and ELT (English Language Teaching), with a primary focus on higher education contexts (university teachers, students' perspectives…)	Studies not related to teaching and learning in ELT were excluded
Citation Count	≥10 citations	<10 citations

This rigorous selection process reduced the dataset from 341 to 105 studies after relevance screening, then to 50 studies after applying the citation threshold, and ultimately to 20 studies that met all inclusion criteria. These final studies were all peer-reviewed, published between 2023 and 2024, and written in English. Studies not situated in higher education but related to ELT (English Language Teaching) were also included if they demonstrated high citation impact. All selected studies addressed at least one of the review's research questions. The process is summarised in Figure 1 below, which illustrates the PRISMA flow diagram for search and screening.

Figure 1
PRISMA declaration for the process of searching and filtering



Extraction Phase: Descriptive Analysis of Included Studies

Data from the 20 eligible studies were systematically recorded in a structured spreadsheet. The extracted variables included:

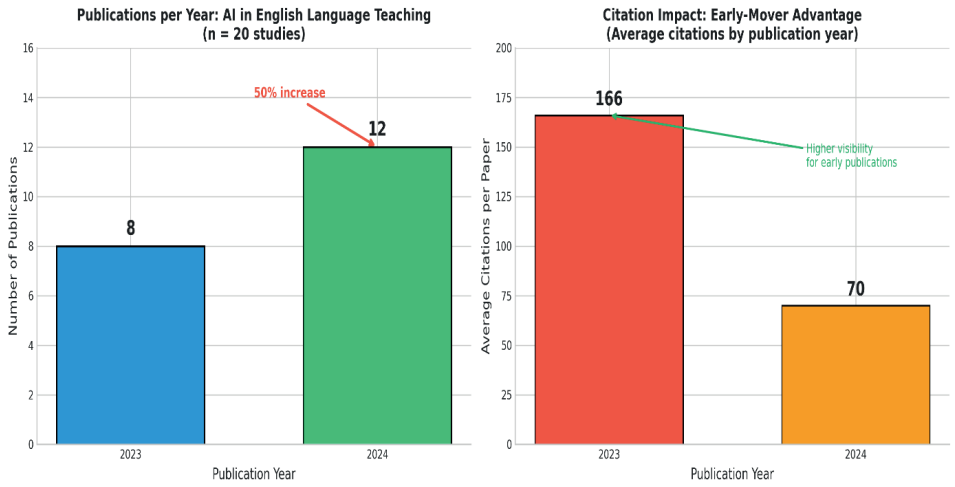
a. Author(s) and year of publication
b. Titles, Theme & Focus
c. Citation count
d. Publisher
e. Study design
f. Identified challenges
g. Proposed solutions or best practices
h. Evidence of sustainability

Reflexive thematic analysis (RTA), as outlined by Braun and Clarke (2020, cited in Byrne, 2022), was used to group findings into overarching themes that represent the main categories of challenges and remedies. While grounded in Braun and Clarke's original framework, Byrne (2022) was adopted as the primary methodological reference because it offers a more applied, step-by-step operationalisation of the approach, which was particularly suitable for guiding the coding and theme development process in this review. The analysis followed a primarily deductive approach, whereby predefined thematic categories derived from the research questions, study scope, and existing literature informed the initial coding framework, while allowing for refinement of subthemes during the analytical process, as shown in Figure 5.

This analysis examines 20 research papers on Artificial Intelligence (AI) in English Language Teaching (ELT) published between 2023 and 2024. The field demonstrates rapid growth, increasing from 8 (40%) papers in 2023 to 12 (60%) in 2024, alongside a strong citation impact (average of 105 citations per paper = total citations ÷ 20). Citation patterns further show that 2023 papers achieved higher visibility, with an average of 166 citations per paper compared to 70 for 2024 papers, reflecting an early-mover advantage in this emerging field. Taken together, these trends indicate both increasing scholarly attention and the maturation of the research area, as shown by Figure 2 .

Figure 2

Distribution of publications by year and citation impact of the reviewed studies

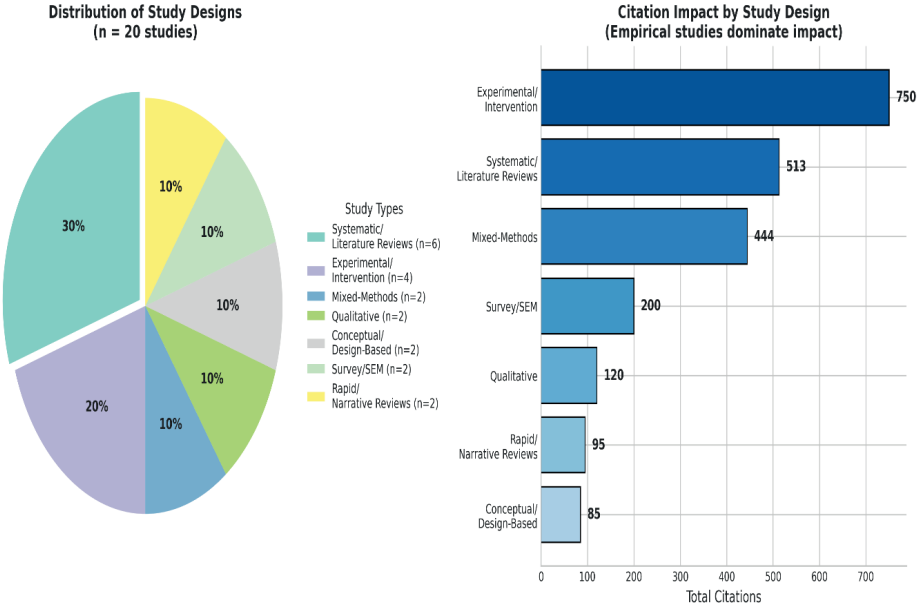


The 20 studies in this review show a clear diversity in research designs. Systematic and literature reviews are the most common (6 studies), followed by experimental or intervention-based studies (4 studies). Mixed-methods, qualitative,

conceptual/design-based, and survey or SEM studies are less frequent, with 2 studies each. Rapid or narrative reviews also account for 2 studies.

Citation distribution shows that experimental and quasi-experimental studies dominate the field, receiving the highest impact (750 citations), indicating strong interest in empirical classroom-based interventions. Systematic and literature reviews follow with 513 citations, reflecting their key role in synthesizing and consolidating AI and ELT knowledge. Mixed-methods studies account for 444 citations, showing moderate influence by integrating quantitative and qualitative insights into AI applications in language teaching. Figure 3 below reviews citation distribution.

Figure 3
Citation distribution by study type



Execution Phase

The execution phase synthesised the extracted data into reflexive thematic categories, using Braun and Clarke's (2020, cited in Byrne, 2022) Reflexive Thematic Analysis (RTA) with a deductive approach. Each article was read in full, relevant segments were coded, and descriptive themes were developed to address the review questions, integrating both challenges and remedies. MAXQDA24 software was used to query, code, and identify key themes as the basis for presenting the findings.

To provide an overview of the conceptual landscape, Figure 4 below displays a word frequency cloud generated from the abstracts of all included studies.

Figure 4
Word frequency cloud from included study abstracts

EVIDENCE BASED-FACTS

This section presents the obtained findings, beginning with a code matrix that provides a structured overview of the overarching themes and their subcodes, developed in relation to the research questions and the researcher's hypothesised framework as part of a deductive approach. Following this, a thematic summary table of AI- and ELT-related challenges and remedies identified in the reviewed literature (20 studies) is presented, based on the code matrix, to help organise and clarify the study themes. Finally, a challenge–remedy mapping matrix is provided to illustrate the relationships between the identified challenges and the proposed remedies across the included studies.

Figure 5
Prior thematic coding scheme and code occurrence matrix

Figure 5 presents a coding framework developed using a primarily deductive approach derived from the scope of the study, the research questions, and the existing literature. The resulting coding scheme comprised eleven (11) overarching themes, each subdivided into more specific subcodes that represent distinct but related issues. The bubble visualization was generated using MAXQDA software. In this representation, bubble colours distinguish between different themes and subthemes, enabling clear visual separation of categories, while bubble size reflects

their frequency and dominance. This allows higher-frequency topics to be more easily identified within the reviewed literature

Based on this deductive coding framework, ethical concerns constituted the most frequently coded thematic category in the reviewed studies. This theme encompassed subcodes related to privacy and data protection, academic integrity and plagiarism, and the rapid adoption of AI without sufficient oversight. The subtheme privacy and data protection demonstrated the highest coding density, indicating considerable attention in the literature to ethical governance, data security, and responsible AI use. Other frequently coded themes included technical limitations and risks, such as accuracy, bias, and misinformation, as well as skills gaps associated with AI literacy and ethics, reflecting the literature's emphasis on competency development and the reliability of AI-generated outputs. Less frequently coded themes included cultural factors surrounding AI disclosure, equity and accessibility issues, and adoption barriers related to awareness and readiness; however, these themes still highlight important contextual and institutional dimensions influencing AI integration.

Table 2
Thematic summary of ELT and AI challenges and remedies in the reviewed literature

Code	Challenge	Remedy	Key Authors
Ethical concerns (privacy, bias)	Privacy violations, surveillance issues, and ethical risks in AI use	Establishment of ethical standards and data governance frameworks	Hockly (2023); Crompton et al. (2024); Rusmiyanto et al. (2023)
Academic integrity	Plagiarism, academic dishonesty, and misuse of AI tools	Responsible AI use and assessment redesign	Kostka & Toncelli (2023); Meniado (2023); Kristiawan et al. (2024); Rusmiyanto et al. (2023)
AI adoption	Early-stage AI integration in EFL contexts	Further empirical investigation	Shi et al. (2023); AlTwijri & Alghizzi (2024); Alshumaimeri & Alshememry (2024); Yeh (2024); Liu & Wang (2024)
Overreliance on AI	Reduced independent thinking and learner dependency	Controlled pedagogical use of AI tools	Rusmiyanto et al. (2023)
Technical limitations	Inaccurate outputs and system constraints	Continuous technological improvement	Crompton et al. (2024); Meniado (2023)
Pedagogical transformation	Changing teacher roles and instructional models	AI as a support tool, not a replacement for teachers	Wei (2023); Kohnke et al. (2023); Hockly (2023)

Assessment challenges	Difficulty evaluating AI-assisted work	Alternative and structured assessment strategies	Meniado (2023)
Digital literacy gap	Insufficient teacher readiness for AI integration	Digital literacy development and professional training	Idham et al. (2024); Kohnke et al. (2023); Hockly (2023)
Motivation & engagement	Mixed effects on learner engagement	AI enhances engagement and learner autonomy	Wei (2023); Huang et al. (2024)
Skill development variation	Uneven development across language skills (e.g., speaking, pronunciation)	Skill-specific AI applications	Kemelbekova et al. (2024); Wei (2023)
AI acceptance factors	AI acceptance influences learning effectiveness	Improved acceptance supports learner well-being and efficacy	Huang et al. (2024)
Writing skill development	Need for improvement in academic writing skills	AI supports coherence, grammar, and feedback	Dong (2023); Tran (2024); Idham et al. (2024)
Communication development	Need for communicative competence	Personalized and interactive AI-supported learning	Rusmiyanto et al. (2023)
Blended learning implementation	Weak integration of AI into pedagogy	AI-supported blended learning models	Shi et al. (2023); Rusmiyanto et al. (2023); Yeh (2024)
Access & equity issues	Inequality in access to AI tools and resources	Inclusive and equitable access strategies	Kristiawan et al. (2024)
Critical thinking development	Need for higher-order thinking skills	Leverage AI to enhance critical thinking performance	Liu & Wang (2024)
Emotional/affective factors	Anxiety, motivation, and emotional variability	AI-supported emotional engagement strategies	AlTwijri & Alghizzi (2024)
Personalization need	Limitations of one-size-fits-all instruction	AI-enabled adaptive learning systems	Li (2024); Wei (2023)
Teacher workload & readiness	Need for teacher preparedness and support	Professional development and institutional support	Kohnke et al. (2023); Idham et al. (2024)

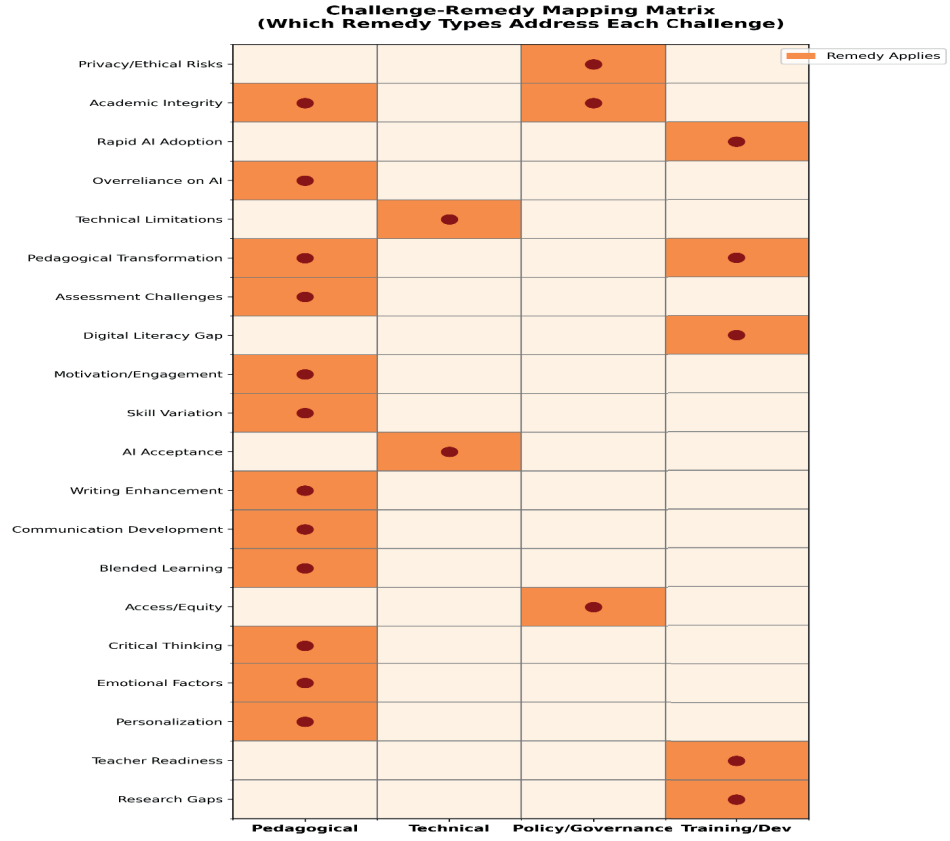
Research gaps	Lack of longitudinal and empirical evidence	Call for further empirical research	Kostka & Toncelli (2023); Alshumaimeri & Alshememry (2024); AlTwijri & Alghizzi (2024); Wei (2023)

Table 2 synthesises AI-related risks in English Language Teaching (ELT) and maps them to corresponding remedies identified in the reviewed literature, as further illustrated in Figure 6 below. The thematic organisation follows a primarily deductive approach to AI integration in ELT, with particular emphasis on higher education contexts. While the reviewed studies also highlight the potential benefits of AI in ELT, the present analysis focuses specifically on reported risks and proposed remedies in line with the study objectives.

Accordingly, the literature reveals a range of key challenges, particularly such ethical concerns as privacy violations, surveillance issues, threats to academic integrity, and challenges associated with the rapid adoption of AI technologies. These risks represent the most extensively discussed category across the studies. In response, the literature proposes several remedies, including the establishment of ethical guidelines, promotion of responsible AI use, and calls for further empirical investigation. Technical limitations, including inaccurate outputs and system constraints, are associated with recommendations for continuous technological improvement. Pedagogical challenges, such as evolving teacher roles and assessment difficulties, highlight the importance of AI-supported instructional models and alternative assessment strategies. Themes related to digital literacy and teacher readiness underscore the need for professional development and training initiatives. Learner-related themes, including motivation, critical thinking, engagement, and emotional factors, reflect varied responses to AI integration, although the reviewed studies generally associate AI-supported learning with increased engagement and learner autonomy. Similarly, skill-development themes indicate uneven improvement across language domains, suggesting the need for more targeted, skill-specific AI applications. Access and equity issues draw attention to disparities in AI availability and accessibility.

Less frequently addressed themes include cultural considerations related to AI use and disclosure. They also include adoption barriers linked to institutional awareness and readiness. Research-gap themes further highlight the limited availability of longitudinal and empirically robust studies examining AI integration in ELT contexts.

Figure 6
Challenge-Remedy Mapping Matrix



SUMMARY

Based on a deductive approach, findings from the thematic analysis of the reviewed literature indicate that AI in English Language Teaching (ELT), with a primary focus on higher education, is still in a formative stage, characterised by fragmented inquiry and uneven methodological rigour. The analysis synthesises coded themes across ethical, pedagogical, technical, and learner-related areas, structured according to the most predefined categories derived from the study's scope, research questions, and existing literature. This fragmentation limits comparability between studies and constrains the development of coherent, evidence-based frameworks for AI integration in ELT.

Some contributions in the reviewed literature remain at a conceptual or descriptive level, focusing primarily on challenges such as privacy concerns, academic integ-

rity issues, and broader risks associated with AI use in education. Within the present analysis, these issues are interpreted as thematic patterns organised within a deductively developed coding framework rather than empirical findings generated by this study. Proposed remedies, including ethical standards, responsible use of AI tools, training, and further empirical research, are largely limited with empirical validation, highlighting a gap between proposed solutions and demonstrated effectiveness.

The coding matrix further indicates a strong emphasis, within the predefined analytical categories, on ethical and integrity-related concerns, alongside pedagogical and technical challenges. Simultaneously, the studies that highlight the positive effects of AI and propose various solutions, they draw attention to digital literacy, motivation and engagement, skill development, personalisation, as well as access and equity issues. Within the reviewed corpus, AI is predominantly framed through both risk mitigation and pedagogical support perspectives, rather than as a fully transformative educational paradigm.

CONCLUSIONS

This review, while explicitly framed around risks and remedies, reveals an overarching pattern in the literature. Although AI is widely recognised as a transformative force in higher education, the current evidence base remains fragmented across disciplines, predominantly conceptual, and methodologically uneven. Without a systematic synthesis that groups challenge corresponding remedies within an integrative framework, there is a risk of reinforcing a defensive orientation in the literature. The strong emphasis on risks and mitigation strategies reflects this tendency, which may limit engagement with AI's broader pedagogical and transformative potential and constrain the development of robust, evidence-based frameworks.

It should be noted that, while this review foregrounds risks as an analytical lens through a deductive approach, other strands of the literature emphasise more transformative applications of AI in education. These include AI-enhanced pedagogy, AI-enabled open learning, AI-supported collaboration, AI-empowered education, and human AI creative engagement. However, these perspectives were less visible in the analysed corpus due to the focus of the study at hand.

The thematic analysis further identifies a broad range of ethical, pedagogical, technical, and governance challenges, yet the effectiveness of most proposed remedies remains largely underexplored empirically. In the absence of a unified, interdisciplinary, and methodologically rigorous evidence base, AI integration risks being driven more by adoption trends than by demonstrated educational effectiveness. Advancing the field therefore requires a shift from descriptive and conceptual accounts towards sustained, empirical, and context-sensitive research that can inform ethical and effective AI adoption in higher education.

In parallel, higher education governance requires adaptive and forward-looking policies that anticipate the evolving nature of AI rather than merely reacting to it. Rather than focusing on "AI-proofing" education, the literature increasingly advocates "AI-enriching" approaches. They would integrate AI into curricula, assessment, and learning design, supported by balanced investment in training, infrastructure, and pedagogical innovation.

The reviewed literature also indicates limited theoretical integration, with relatively weak engagement with established educational theories such as constructivism, transformative learning, and self-determination theory. This under-theorisation contributes to fragmented and often opportunistic implementation of AI tools. Methodologically, most studies rely on qualitative, case-based designs and self-reported data, while longitudinal, experimental, and cross-cultural studies remain limited, raising concerns about transferability and long-term impact.

LIMITATIONS

Several limitations should also be acknowledged. First, the inclusion criteria, particularly the citation threshold (≥10 citations in Google Scholar), may have excluded recent or emerging studies. Second, the dataset is limited to 20 peer-reviewed studies published between 2023 and 2024, which may not fully capture earlier or non-indexed contributions.

Third, methodologically, this study adopts Reflexive Thematic Analysis (RTA), following Braun and Clarke's framework as operationalised by Byrne (2022). A deductive and reflexive orientation was employed, which may constrain interpretation by pre-structuring coding categories based on existing literature and research questions, while also requiring ongoing researcher reflexivity throughout the analytic process. To support comparative interpretation of findings, a Risk–Remedy Integration Index (RRII) was developed during the analysis:

$$\text{RRII} = \frac{R+S+E}{3},$$

where R represents risk severity, S represents solution strength, and E represents evidence density, each scored on a three-point scale (1 = low, 2 = moderate, 3 = high). The RRII provides an aggregated indicator of the balance between challenges and proposed remedies across thematic categories. While this index enables structured comparison across ethical, pedagogical, technical, and governance dimensions, its application is limited by the absence of established benchmarks for scoring risks, solutions, and evidence strength. This represents a methodological gap and suggests that future research could refine and validate the index through quantitative or mixed method approaches.

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ZWALCZANIE FRAGMENTACJI: SYSTEMATYCZNY PRZEGLĄD RYZYK I ŚRODKÓW ZARADCZYCH ZWIĄZANYCH ZE SZTUCZNĄ INTELIGENCJĄ I NAUCZANIEM JĘZYKA ANGIELSKIEGO

Wprowadzenie: Sztuczna inteligencja (AI) wykazuje znaczący potencjał w nauczaniu języka angielskiego jako języka obcego (ELT); jednak jej wykorzystanie wiąże się z różnorodnymi wyzwaniami, co ujawnia lukę w przeglądach systematycznych, które nie zsyntetyzowały jeszcze w pełni tych zagadnień oraz powiązanych z nimi strategii zaradczych.
Cel badań: Kierując się wytycznymi PRISMA oraz czteroetapowym modelem Okoliego (2015), niniejsze badanie dokonuje krytycznego przeglądu literatury dotyczącej ryzyk związanych z AI oraz powiązanych strategii zaradczych w ELT, ze szczególnym uwzględnieniem kontekstu szkolnictwa wyższego.
Stan wiedzy: Spośród początkowego zbioru 350 badań wybrano dwadzieścia recenzowanych artykułów (2023–2024) na podstawie ich adekwatności, wpływu cytowań oraz indeksowania w czasopismach o wysokim współczynniku wpływu. Zastosowano dedukcyjną analizę tematyczną opartą na jedenastu wcześniej zdefiniowanych kategoriach, wykorzystując zasady refleksyjnej analizy tematycznej (RTA) w programie MAXQDA 24. Synteza wskazuje na nierówne konceptualizacje ryzyk związanych z AI w różnych badaniach. Kwestie etyczne, w szczególności zagrożenia dla integralności akademickiej oraz ryzyka związane z szybkim wdrażaniem AI, dominują w literaturze i wyznaczają kontekst dla innych wyzwań. Następnie pojawiają się ograniczenia techniczne oraz zmiany pedagogiczne obejmujące niewystarczającą kompetencję cyfrową, gotowość nauczycieli oraz ograniczenia w ocenianiu, a także problemy dostępu i równości. Reakcje studentów są zróżnicowane w zakresie motywacji, zaangażowania, krytycznego myślenia i czynników emocjonalnych, choć AI ogólnie wiąże się ze wzrostem autonomii i uczestnictwa. Rozwój umiejętności pozostaje niespójny w różnych obszarach językowych. Proponowane rozwiązania obejmują wymiary pedagogiczne, etyczne, technologiczne i zarządcze, w tym rozwój szkoleń, jednak pozostają one głównie koncepcyjne i mają ograniczone potwierdzenie empiryczne.
Podsumowanie: Integracja AI w ELT pozostaje na etapie formacyjnym, charakteryzując się rozproszonymi dowodami i ograniczoną syntezą ryzyk oraz reakcji. Konieczne są silniejsze badania empiryczne oraz zintegrowane ramy wdrażania.

Słowa kluczowe: sztuczna inteligencja, nauczanie języka angielskiego, szkolnictwo wyższe, fragmentacja, ryzyka, środki zaradcze