Lorestan University

Qualitative Inquiry as Praxis in L2 Studies

Journal homepage: https://quipls.lu.ac.ir/

Discursive Constructions of AI in Research Article Abstracts: A Corpus-Based Faircloughian CDA of Enhancement, Disruption, and Tensions in Applied Linguistics and Beyond

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ARTICLE INFO

Article Type

Research Paper

Article History

Received: 2025-09-20

Received in Revised Form: 2025-09-30

Accepted: 2025-10-01

Available Online: 2025-10-01

Keywords:

Academic discourse

Applied linguistics

Artificial intelligence

Enhancement and Disruption

Faircloughian CDA

ABSTRACT

With the advent of ChatGPT, scholarly articles on artificial intelligence (AI) have increased dramatically, yet there remains a paucity of studies exploring how researchers, especially in the field of applied linguistics and L2-related fields, conceptualize the opportunities and threats of AI in the compact genre of research article abstracts. This study drew on a corpus of 360 research article abstracts from six disciplines, such as Applied Linguistics and other hard and soft sciences, to reveal how AI is discursively represented in the field of L2/applied linguistics and, in comparison, to other disciplinary contexts. The variety of disciplines allowed a critical contrastive approach that revealed how the differences in the academic traditions, rhetorical norms, and ideological orientations shaped the discourse of AI and, consequently, informed L2 research and pedagogy. Enhancement framings, which focused on efficiency, innovation, and accessibility, were adopted by more than 80 percent of the abstracts, and disruption framings, which were associated with ethics, integrity, and equity, were less common and were often in reactive relation to enhancement narratives. The two cross-cutting tensions that were apparent in the disciplines were: Innovation vs. Integrity and Equity vs. Inequality, which were articulated through specific lexical and rhetorical tools. Drawing on a corpus-based Faircloughian Critical Discourse Analysis (CDA) combined with a reflexive thematic analysis (RTA), this study revealed how fine-grained (micro-level) linguistic choices evolved into overarching (macro-level) ideological orientations and reproduced specific power dynamics, which manifested a form of sedimented techno-optimism that constrained the possibilities of critical reflection. The findings carry implications for L2 teacher education, multilingual equity, and AI literacy in applied linguistics, as well as for policy, pedagogy, and AI tool design across the broader academy.

1. Introduction

The fast development of artificial intelligence (AI) tools is transforming knowledge production, representation, and sharing particularly in practices of academic writing, L2 pedagogy, and

Cite this article: Ahmadi, M. (2025). Discursive Constructions of AI in Research Article Abstracts: A Corpus-Based Faircloughian CDA of Enhancement, Disruption, and Tensions in Applied Linguistics and Beyond. *Qualitative Inquiry as Praxis in L2 Studies, 1* (2), 57-83

Publisher: Lorestan University

DOI: https://doi.org/10.22034/quipls.2025.2072216.1018

teacher education. Within this transformative context, research article abstracts have become an important venue where researchers negotiate the potentials and dangers of AI, thereby shaping how educators, learners and researchers conceptualize the role of AI in the educational process. Such discussions are of prominent importance in L2, as they can contribute to the development of linguistic justice (see Hyland, 2016) and access, or alternatively, perpetuate linguistic hierarchies and epistemological disparities. However, AI discussion in applied linguistics does not occur in isolation. A close investigation of AI within the context of applied linguistics and situating it in the broader landscape of other fields such as computer science, biology, mechanical engineering, psychology, and sociology, provides a deeper insight into how communicative demands of disciplines shape the endorsement and criticism of AI in academic contexts.

The rapid advancement and uptake of AI-assisted academic writing tools acquired a greater impetus during late 2022 and early 2023, when the use of the Generative Pre-trained Transformer (GPT) to write and edit manuscripts, support non-native speakers of English, and produce summaries and abstracts became the focus of academic attention (Lendvai, 2025). Nevertheless, the decline of critical thinking (Meishar-Tal, 2024), the problem of writing integrity (plagiarism, ghostwriting, etc.), and ethical issues have become pedagogical concerns. These tensions suggest that an interpretive, praxis-based approach to the affordances and restrictions of AI is necessary, an approach that can explain both the opportunities and the disruptive nature of AI in multilingual and educational settings (Deep & Chen, 2025). In the condensed but rhetorically loaded genre of scholarly abstracts, AI-assisted writing has not only made the labor-intensive process of drafting significantly more efficient, but has also produced paradigm-shifting transformations which Punziano (2025) refers to as radical epistemological shifts.

As of 2023, AI has been used in academia to handle more advanced writing activities, such as literature synthesis, rhetorical organization and interactive revision, which can substantially decrease the cognitive load of the researchers and scholars (Wu et al., 2025). Moreover, generative AI-based search technology can help with the complicated process of selecting important and pertinent ideas, enabling users to access these ideas and identify sources that are contextually appropriate (Kung et al., 2023). According to a recent study by Mo and Crosthwaite (2025), GenAI offers several positive aspects for academic prose, such as the

provision of real-time feedback on linguistic features and rhetorical structure, and thus makes the writing process much easier. However, scholarship is sparse regarding the role of academic discourse in conceptualizing the positioning of AI as an enhancer or disrupter, particularly in aspects that can impact educational practice in L2 learning environment, a gap in the literature that warrants discussion.

Although previous research discussed the computational and ethical consequences of GenAI in scholarly abstracts at length, there is a paucity of qualitative or corpus-based research concerning how academic writers discursively make AI a source of empowerment or epistemic disturbance. Specifically, part of the literature, which centered on surface lexicogrammatical characteristics of AI-generated texts or normative paradigms related to AI integration (e.g., Bakiner, 2023; Casal and Kessler, 2023), has not paid much attention to subtle discursive strategies that can be present in human prose. As a result, metaphors, stance markers, and rhetorical structures that position AI as epistemic support or epistemic disturbance remain underexplored, particularly in applied linguistics and other soft-science domains that foreground socio-pedagogical concerns (see Maas, 2023).

Since disciplines vary in priorities and conventions, any discourse on AI in academic abstracts must take these underlying differences into account (see Qu et al., 2024). Applied linguistics, which is regarded as a soft field, is concerned with interpretive analysis, socio-pedagogical processes, and power relations (Becher & Trowler, 2001; Hyland, 2009), and it examines AI in the context of creativity, learner access, and the capacity to influence others socially. In comparison, hard sciences, such as computer science, tend to the use technical discourse in terms of algorithmic and empirical efficiency (McGeoch, 2012). Such discursive norms of elaboration and data-minimal styles are indicative of incommensurate prioritizations, which can suggest how AI discourses circulate. Such variations point to the fact that cross-disciplinary CDA is well-positioned to reveal convergent and divergent AI discourses. The inclusion of other fields is thus not a diminution of the L2 emphasis but a way of placing the discourse of applied linguistics against a variety of rhetorics and therefore in a better position to understand how L2 praxis can respond to and resist prevailing frames. Against this backdrop, the present study is guided by the following research questions:

RQ1: How are AI's enhancing or disruptive potentials discursively constructed in academic abstracts between 2023 and 2025?

RQ2: What are the emergent tensions in these discursive framings, and how might they inform L2 praxis and multilingual equity?

2. Literature Review

AI has emerged as an increasingly prominent component of academic writing, both as a technical tool and as a discursive target based on which the community of scholars in the field shape values, norms, and identities. Though in many ways the idea of AI speeding up research or its possible role in destroying academic integrity has dominated lay media discourse, a more nuanced question of how AI is discussed in scholarly communication has not been well researched. This is not a negligible consideration. The manner in which AI is framed in academic genres contributes to the formation of its validity, limits its acceptable use, and situates it within the broader ideologies of technological change. These framings can never be neutral; they are embedded in disciplinary practices, institutional practices and wider sociocultural arguments (Fairclough, 2013; Wodak & Meyer, 2016). Their interpretation involves an analytical methodology that goes beyond description of the surface as a means of identifying the ideology enacted through discourse.

The three-dimensional model of Critical Discourse Analysis by Fairclough provides exactly such a lens (see Fairclough, 2013). Its strength lies in the fact that that it can relate the micro-level of textual aspects to the meso-level of discursive practices and the macro-level of sociocultural systems. On the textual level, the framework suggested by Fairclough makes one focus on the use of vocabulary and grammatical patterns and rhetorical devices, i.e., whether AI is described through metaphors of assistance (supporting, enhancing) or disrupts (threatening, undermining), and on how the modality is utilized to convey the sense of certainty, necessity, or possibility. It investigates text production, text circulation and consumption in specific communities on the discursive practice level and sheds some light on the influence of the text-reviewing norms, the disciplinary gatekeeping and institutional policy setting. At the sociocultural level, it contextualizes these discourses in wider ideological constructions, including neoliberalism in higher education, global competition in scholarship and public anxieties on automation.

This multi-layered view may be considered especially useful in a qualitative study of abstracts written by scholars. The abstract is a condensed but highly strategic genre (Jiang & Hyland, 2017). It should include a summary of the study, an indication of its contribution, adherence to a tight word limit, and compliance with the standards of the discipline. In so doing, it must involve choices regarding what will be foregrounded and what will be omitted, what evaluative standpoints to adopt and how the research will be placed in the existing discourse. These decisions are not only stylistic but also ideological acts that contribute to the construction of the meaning of AI in the academic sphere. A Faircloughian CDA can help us understand how these acts operate at the textual, discursive, and sociocultural levels and how such patterns may otherwise remain concealed.

The applicability of the approach is more evident when taking into consideration the well-documented variations in disciplinary discourse. Empirical accuracy and methodological rigor are indispensable hallmarks of hard sciences which tend to draw on a discursive style that privileges efficiency, and scalability (see Biber and Gray, 2016). Under these conditions, AI can be presented as a neutral tool of optimization, whose usefulness is assessed through its level of accuracy, the speed of processing, and its capacity to handle data. On the contrary, soft sciences have a higher likelihood of expecting interpretive depth, socio-ethical implications, and reflexivity (Jacobson et al., 2016). In this case, AI is more likely to be discussed as a phenomenon embedded in society, which raises questions about equity, inclusion, and the politics of knowledge production. These differences are not merely the manifestation of the lexicogrammatical choices but the reflection of underlying epistemological stances and expectations of readers in academia. Nevertheless, despite their significance, limited research has been done on how these disciplinary differences are realized within the abstract genre, where conciseness reduces an author's stance to a limited number of carefully chosen sentences.

The need to carry out such an examination has become more urgent following the post-ChatGPT shift. The launch of ChatGPT in late 2022 served as a catalyst for a change in public perception regarding the visibility and accessibility of AI tools (Lee et al., 2024). Until this point, AI in academic writing had been treated as a niche or experimental resource, useful primarily to computational disciplines or specialized use cases. It then became a popular subject across fields, as universities issued policy statements, journals debated the rules of authorship, and educators

reconsidered assessment practices. Such proliferation of discourses has been accompanied by a variety of framings. A group of people embrace the innovation as they find it a necessary development in the evolving landscape of academic practice (e.g., Deep & Chen, 2025), others are still skeptical regarding its scholarly legitimacy (e.g., Zhai et al., 2024) and some adopt a contested middle ground (e.g., Yu et al., 2025). Nonetheless, scholarship that delineates the factors that underpin the way such stances are crafted, as well as the lexicogrammatical features that realize them into coherent rhetorical configurations have not been critically examined in a systematic, qualitative manner.

The present study falls within this untapped space. While AI research has progressively continued to spread in the academic sphere, there still exists a substantial gap in cross-disciplinary, qualitative CDA which investigates the abstracts as an ideological negotiating arena. This disparity of representation in discipline also constrains our understanding. Most of the available literature comes from the hard sciences, while the perspectives of the soft sciences, with their focus on socio-ethical consequences and the quality of knowledge, are relatively underrepresented. In addition, some of the tensions to be discussed, both conceptual and ethical, are not commonly addressed in the abstract genre, where brevity requires both rhetorical and ideological decisions. Accordingly, the existing body of research leaves us with academic discourses that are methodologically robust and ethically attuned but that hardly touch upon how AI is discursively conceptualized in academic prose.

To fill these gaps, this paper conducts a qualitative, Faircloughian CDA of 360 scholarly abstracts across six fields, with half drawn from the hard sciences and the other half from the soft sciences. The analysis argues that authors portray AI as an enhancement or a disruption or both by focusing on how they position AI by either framing the abstract as a neutral summary or as a compressed form of an ideological act. At the textual level, it analyzes discipline-specific terminological choices, evaluative language, modality, and metaphor with a close focus on how each contributing factors shape the development of specific positions. At the discursive practice level, it takes into account the constructive influence of disciplinary norms, editorial policies and the communicative demands of the abstract genre. At the sociocultural level, it situates these framings in the post-ChatGPT context, which is characterized by an increased level of public attention, rapid institutional policy responses, and intensified debates about academic integrity.

3. Method

3.1. Corpus Design and Selection

This research draws on a qualitative and corpus-based approach that integrates Critical Discourse Analysis (CDA) with thematic analysis to analyze discursive constructions of Artificial Intelligence (AI) in the abstracts of research articles. By analyzing only the abstract sections instead of the whole text, this study is aimed at exploring the strategic framing of scholarly work at the level of the first interaction with the reader, where the role of rhetorical economy and disciplinary positioning is of particular importance. The corpus is stratified to capture this diverse disciplinary perspective, and the construction of AI's potential as both an enhancing and disruptive field is examined across hard and soft science domains.

The decision to focus on research article abstracts rather than the full texts was informed by the fact that they align with Fairclough's tenets of CDA and represent both a theoretically and methodologically sound choice. Abstracts are considered an independent academic genre that functions as a brief summary of the study and its findings, outlines the underlying theoretical orientation, and indicates the scholarly disciplinary alignment (Agbaglo & Fiadzomor, 2021; Hyland, 2004). They are selected as strategically formulated genre units that project the relevance of the research and the ideological stance of the researcher to the target audience. Accordingly, abstracts could be considered a suitable venue for identifying lexicogrammatical choices that discursively construct AI as either an enhancer or a disruptor.

Also, the form and rhetorical function of abstracts are very similar and uniform across disciplines. It is fundamental to cross-disciplinary CDA because such consistency filters confounding variables that might be caused by section specific variation in full articles. This aligns with the three-dimensional model put forward by Fairclough (2013), where the text, discursive practices, and social practices are considered the primary dimensions of analysis, and the abstract occupies a specific form between these dimensions as it represents such decisions and production norms, as well as institutional discourses.

Methodologically, the texts in the abstracts are brief, and this aspect makes them more convenient for manual, in-depth coding to ensure that the target scale of analysis (360 texts) is met. This brevity also contributes to inter-coder reliability in the elaborate lexicogrammatical, metaphorical, and thematic coding required for analyzing multi-level CDA.

Previous discourse-analytic studies (e.g., Lores, 2004; Ansarifar et al., 2018) have demonstrated that abstracts serve as ideologically compact spaces, where authors place themselves in the context of ongoing debates concerning issues related to disciplines and society. Given that the focus of this research is the discursivity of AI, abstracts are not merely summaries of complete texts but constitute the most analytically beneficial site for identifying such discursivity.

3.1.1. Inclusion Criteria

The corpus includes 360 abstracts of empirical research articles published from 2023 onward. The choice was inspired by the rapid proliferation of AI-related research articles following the advent of ChatGPT, making it possible to capture and represent the existing and fast-changing AI discourse. Articles were required to go through a peer-review process and provide an original empirical study. Abstracts were the only analyzed sections of the articles, where the elements of genre and methods are clearly expressed. In addition, abstracts are brief but rich in rhetoric, making it possible to have a high level of fine-grained CDA coding across a large dataset with a high degree of interdisciplinary comparability (2020). Theoretical and literature review articles, as well as meta-analyses, were excluded, and articles without English-language abstracts were not included.

The selection of journals was informed by a set of guidelines of methodological and disciplinary quality standards to ensure relevance and credibility. The journals were restricted to the ones that are accredited and included in major scholarly databases (preferably the best journals in the target areas): Computer Science, Biology, Mechanical Engineering, Applied Linguistics, Psychology, and Sociology. Papers needed to emphasize original, peer-reviewed empirical studies and were required to be published in the last three years (2023-2025), that is, the immediate post-ChatGPT period when AI-related discourse got transformed significantly. This shift has been empirically documented through bibliometric analyses that highlight a marked increase in interdisciplinary scholarship and thematic diversification following the release of ChatGPT (Afjal, 2025). The abstracts were required to be in free-format to maintain the narrative structure, enable discourse analysis, and be limited to English-language journals. Another selection criterion was reasonable disciplinary coverage, where at least three appropriate journals per discipline were identified to ensure diversity and eliminate single-source bias, and

the prevalence of articles addressing topics at the intersection of academic writing and Artificial Intelligence, so as to ensure the corpus was thematically aligned with the study's focus. Table 1 presents three of the most highly accredited journals in each target field that satisfied the selection criteria and were employed in the study.

Table 1.

Three Most Accredited Journals per Discipline

Discipline	**Selected Journals**
Biology	*Journal of Cell Science; Molecular Biology Reports; Journal of Experimental Biology*
Computer Science	*Journal of Computer Science and Technology; Theoretical Computer Science; Journal of Parallel and Distributed Computing*
Mechanical Engineering	*Journal of Mechanical Science and Technology; International Journal of Mechanical Sciences; Journal of Thermal Science and Engineering Applications*
Applied Linguistics	*Applied Linguistics; System; Journal of English for Academic Purposes*
Psychology	*Frontiers in Psychology; Journal of Applied Psychology; British Journal of Psychology*
Sociology	*Sociology; Current Sociology; Social Science Research*

3.1.2. Stratification and Sampling

To ensure a robust cross-disciplinary analysis that uses data-driven methodologies to identify disciplinary rhetoric, it was decided to compile two corpora of texts comprising an evenly balanced selection of hard and soft sciences. This approach of stratification is based on the arguments put forward by Biglan (1973), Durrant (2017), and Hyland (2004) regarding distinctions between the features of discipline and the anticipated rhetorical strategies. The hard sciences stratum comprises 60 abstracts per discipline to ensure balance and enable cross-disciplinary comparisons, and includes Computer Science, Biology, and Mechanical Engineering, fields generally characterized by precise empirical results, technical innovation, and standardized procedures. In contrast, the soft sciences stratum encompasses Applied Linguistics, Psychology and Sociology. These fields delve further into interpretive analysis, socio-cognitive

processes and human-centered inquiry, and provide profound insights into the intersection between AI and language, cognition, and society. This structure allows a thorough investigation of the way AI is addressed across different academic contexts, allowing the study to examine the possible variations in discursive formations, rhetorical approaches, and the possible tensions. Sampling within these strata is based on representative articles to ensure that the corpus is both broad and deep in its coverage of AI discourse in academic abstracts.

3.2. Data Collection

To ensure methodological rigor and representativeness in this corpus-based study of AI discourse across the domains of hard and soft sciences, a systematic multi-database search procedure was implemented. Scopus, Web of science, and Google Scholar-databases have a reputation of comprehensive, peer-reviewed, multidisciplinary coverage, thus preventing disciplinary bias and increasing the breadth of corpus (Harzing & Alakangas, 2016; Martin et al., 2018). The search strategy entailed both a layered set of focused keywords (e.g., key AI-related terms, such as "Artificial Intelligence", "AI" and "generative AI") and academic discourse keywords (e.g., "academic writing", "scholarly communication", "discipline-specific terminology"). Manual screening was conducted in order to identify the repeated entries and irrelevant records, followed by a second review with the purpose of ensuring genre fidelity and disciplinary balance.

3.3. Data Analysis

The research design is a multi-layered analytical method that combines Critical Discourse Analysis (CDA), which is based on the three-dimensional model of Fairclough (2013), and reflexive thematic analysis (RTA), as outlined by Braun and Clarke (2006). Using this framework with abstracts allows for a systematic investigation of both micro-level linguistic choices and macro-level topical patterns in the framing of AI within the contexts of hard and soft sciences.

In implementing this dual-method approach, the present study does not consider CDA and RTA parallel analytic perspectives but views them as complementary lenses. The focus of CDA in the interplay of textual form, discursive practice and social or cultural context offers the critical richness to reveal and explore the ideology behind AI discourse. RTA, in turn, allows greater flexibility in its analytical approach while still providing a systematic means of defining

patterns of recurring cross-disciplinary semantics. This study, by offering theoretical and thematic insights that are embedded within a broader critical frame of discourse, does not only capture what is said about AI in particular academic abstracts, but also the preferred framings that construct legitimate and, in contrast, illegitimate forms within larger academic and societal contexts.

To ensure the methodological rigor and sensitivity to discursive context, the present research adopted a six-phase reflexive thematic analysis outlined by Braun and Clarke (2006) and Fairclough (2013) Critical Discourse Analysis (CDA). The analysis was initiated by the familiarization step in which the annotators involved in identification of the language features (i.e., evaluative lexis, metaphors, and framing devices) across 360 abstracts, which were read several times. Salient features were then coded and used across the three dimensions of CDA: textual analysis (modality, metaphor, cohesion), discursive practice (rhetorical structures, disciplinary language, intertextuality) and sociocultural analysis (linking patterns to the wider story such as the necessity to use technology or the possibility of equality in education).

New codes were put together into tentative themes, such as AI as an enhancer or disruptor, which displayed the most frequent representations and the conflicts represented by those representations. All of these themes were refined following multiple rounds of feedback to introduce clarity and richness of explanation, and eventually specified and labeled in a way that defined their scope and emphasis. The final "writing up" used the results of the process of CDA and thematic analysis to produce a multi-layered interpretation that unveiled how the micro-level linguistics choices were connected to disciplinary discourse and overall sociocultural dynamics, showing cross-disciplinary trends, divergences, and the nuanced ideological positioning of AI within academic abstracts.

To enhance the trustworthiness and depth of the analysis, the author and a colleague with expertise in applied linguistics and corpus linguistics engaged in a collaborative coding process. An initial subset of the corpus (15%) was coded independently using the preliminary codebook. The aim of this step was not to quantify the matching responses, but to explore and compare the interpretive readings, delineate the category boundaries and refine the coding scheme. The differences in interpretation were considered analytically useful, which stimulated the discussion that enriched the shared understanding of the categories of enhancement, disruption, and tension.

Following this calibration stage, the first coder coded the remainder of the corpus, with regular peer debriefing sessions to reflect on coding decisions and ensure consistency with the agreed interpretive approach. In line with the principles of reflexive thematic analysis, no statistical intercoder reliability measures were calculated because coding is regarded as an active and interpretative process influenced by the disciplinary viewpoints of the researchers and their reflexive engagement with the data (see Braun & Clarke, 2006).

4. Findings

4.1. Overview of Framing Distribution

Consistent with the structure of the CDA–RTA framework outlined in Section 3.3, the findings are grouped within thematic frames identified through iterative coding processes and analyzed at the textual, discursive practice, and sociocultural practice levels of Fairclough's three-dimensional framework. This organization maintains the micro-to-macro analytic relationship that is established in the methodology. First, comes the description of lexical and syntactic patterns then their interpretation in the context of disciplinary genre conventions and finally their explanation in relation to a broader system of ideological and institutional contexts in which AI-related discourses operate.

A prevailing enhancer orientation is evident in the 360 research article abstracts sampled from six disciplines (Biology, Computer Science, Mechanical Engineering, Applied Linguistics, Psychology, and Sociology).

The proportion of enhancer framings is just over 80 percent of all occurrences in the disciplines, ranging from more than 80 percent in Biology to more than 90 percent in Mechanical Engineering. Disrupter framings are much less common, comprising approximately 7-14 percent of all cases, while mixed framings, which incorporate both enhancing and disruptive components, accounted for the rest (around 1-8 per cent). Although the frequency of the enhancer discourse is consistent, lexical resources, as well as co-occurrence patterns through which efficiency stances are conceptualized in different disciplinary settings, are vastly differentiated. This observation can be explained in light of the view that while a given discourse is dominant in a given social field, its realization is shaped by conventions of specific genres and institutional contexts (Fairclough, 2003). In our case, although enhancer framings are dominant in all six disciplines, they are enacted through using the lexical and co-occurrence patterns that

vary in ways that mirror the communicative norms and epistemic priorities of each disciplinary community.

4.2. Enhancing Potentials in Disciplinary Context

The *Efficiency Maximizer* frame is prominent, especially in Mechanical Engineering and Biology, where it co-occurs with task-specific technical lexis to present AI as an optimization engine for resource use, prediction accuracy, and workflow efficiency. In Biology, for example, "*Harnessing cutting-edge technologies to enhance crop productivity*" (BIO_11) juxtaposes the verb *enhance* with the goal of *crop productivity*, bringing agricultural outcomes into focus as the main beneficiaries of technology integration. The same orientation can be noticed in Mechanical Engineering regarding pronounced focus on quantifiable advancement "*a collective contribution of 62.3% was achieved, which is 17.3% better than conventional methods*" (MEC_364). This magnitude of accuracy represents "technology of legitimation" (Martin et al., 2020), which naturalizes efficiency gains as something not just measurable but desirable. In the concordance examples, the three-letter code (e.g., BIO) is used to show what discipline the excerpt is taken from and the number is used to indicate where the excerpt is placed in the list of the concordances (e.g., BIO_11 points to the eleventh line of concordance in Biology).

The *Innovation Driver* frame, perhaps most observable in Computer Science and Biology, is driven by high-impact verbs such as *revolutionize* and buttressed by boosters such as *unprecedented*. A representative example can be found in a biology text, "*AI's potential to revolutionize microbiological diagnostics and infection contro*l" (BIO_O41), which combines speculative modality (*potential to*) with transformative agency (*revolutionize*), a lexical configuration that Fairclough (1992, pp. 123-125) characterizes as "rewording", constructing technological progress as a catalyst for transformative social change. This rhetorical approach situates AI's role not as a tool for existing paradigms but as a trigger for redefining paradigms.

The *Accessibility Enabler* frame has a huge impact on Applied Linguistics and Psychology, which associate it with inclusiveness and the reduction of barriers. Linguistic injustice is the concept that is predominantly employed in Applied Linguistics where for example one abstract speaks of addressing "*the issue of linguistic injustice faced by non-native English speakers in academic publishing*" (APL_350), taking an ethical and justice-oriented

perspective toward AI as a tool for promoting equity. In Psychology, discipline-specific application is often highlighted as illustrated in the phrase "*augment traditional psychological counseling methods*" (PSY_265) where the positioning of the words is in a way that the final section carries the key conceptual load. These framings are reminiscent of the idea of "synthetic personalization" that Fairclough (2001, p.52) describes in the context of academic service discourse where technology is presented as offering personalized solutions, yet is delivered on a large scale.

4.3. Disruptive Potentials Across Disciplines

The *Ethical Risk Agent* frame is among the most common discursive representations in Sociology and Applied Linguistics, and is often linked with fairness and integrity. Sociology abstracts indicate AI's role in "significant societal inequality" (SOC_18), and Applied Linguistics raises concerns about "*ethical questions about the use of AI-generated text in academic work*" (APL_349). An interesting result is that the Integrity Eroder frame is used in Applied Linguistics as concerned with plagiarism and authorship, where it suggests "*posing serious implications . . . given the potential for student plagiarism*" (APL_41), and in Psychology, as a threat to authenticity, as in "*challenges in achieving the depth of personalization . . . characteristic of human therapists*" (PSY_270). The *Equity Gap Widener* frame is pronounced in Sociology and Biology, where AI is constructed in a way that it serves as a tool that worsens inequalities in access to economic resources which could possibly lead to social divide. This is evident in the following concordance line "*enhancing both between-country and within-country social inequality*" (SOC_18), an ironic inversion of the more usual enhancement of a positive social outcome.

4.4. Mixed Framings

Mixed framings are uncommon, but still, they have analytical significance. The exhibiting abstracts function as sites where promotional and cautionary messages are presented in the same piece of text through concessive or opposing structures. For example, "*While both sources of correction significantly enhance writing development, ChatGPT demonstrated overall superiority… Thus, it could be integrated… as a complementary tool, yet its role should remain supportive rather than replacing teacher feedback*" (APL_7) balances capability with vigilance.

These constructions indicate the scholarly standard of projecting innovation in the discourses that they simultaneously address constraints, and they employ lexicogrammatical devices to actively balance the tensions between opposing or contrasting discourses.

4.5. Lexical Strategies and Methodological Linkages

In all fields, enhancer framings are more likely to be co-located with strong positive evaluatives (enhance, improve, optimize, unprecedented) and field specific words (protein structure prediction, fluid Mechanics, doctoral writing strategies). On the other hand, disrupter framings are based on negative evaluatives (risk, threat, erosion, inequality) and cautionary modality (must ensure, should avoid). These were the patterns that were created as a result of the iterative coding cycles of the RTA in which the initial open coding of lexis was refined into thematic frames and was confirmed by concordance evidence. The selective lexical items and collocational patterns are exemplified by representative concordance lines which depict how they work together on the level of textual practice (lexis, modality, grammar), discursive practice (disciplinary genre framing) and social practice (engaging with ideologies of progress, equity, and risk).

4.6. Emergent Tensions

There are two common dialectical tensions that run through the corpus, and these are in line with the concept of competing discourses as proposed by Fairclough. Innovation vs. Integrity: Across disciplines, capability terms (*enhance early-stage drafting*, *unprecedented scalability*, *refine diagnostic precision*, *automating reviewer synthesis*) are paired with vigilance markers (*risk compromising judgement, demands rigorous validation, raising questions about fairness*). In Applied Linguistics, "*AI's potential to enhance early-stage drafting…still, students expressed skepticism about AI's role in language learning and voiced ethical concerns…risks related to plagiarism*" (APL_7) stages this interplay explicitly. In Psychology, "*Using an LLM to classify text may require only basic accuracy checks, whereas claiming it can simulate anxiety demands a far more rigorous validation process*" (PSY_72) tempers optimism with procedural safeguards. In Computer Science, "*Automating reviewer synthesis… risks encoding the evaluative biases of the training corpus*" (CSC_512) links technical benefit to epistemic caution.

Equity vs. Inequality: AI is simultaneously characterized as both an opportunity and a threat. In Applied Linguistics, "…*valued GenAI for reducing language barriers and enhancing writing mechanics, they remained wary of issues related to originality, transparency, and ethical accountability*" (APL_95) is countered by recognition of risks that could undermine equitable outcomes. In Sociology, "*The integration of Artificial Intelligence (AI) holds the potential to profoundly transform society in various ways… these advancements may exacerbate pre-existing social inequalities* …" (SOC_16)", foregrounds distributional inequities. In Biology, "…*enable small labs to do protein structure predictions*…" (BIO_47) is offset by "…*licensing restrictions… limit replication in low-income research settings*" (BIO_47). These comparisons illustrate how, in most cases, the discourse of empowerment is undermined by recognition of structural constraint.

4.7. Disciplinary Contrasts

Compact, data focused enhancer framings are more likely to be used in hard sciences like Biology, Computer Science and Mechanical Engineering, but disrupter framings are linked to performance or data limitations. This particular instance in Mechanical Engineering, "…*gains were offset by instability… indicating a mismatch between simulation and operational reliability*" (MEC_358) is an indication of a functional weakness. In Computer Science, "…*may exclude edge case phenomena not represented in the training data, affecting generalizability*" (CSC_611) uses probabilistic modality to caution about model scope. Sociology warns of "…*are at a disadvantage in the application of technology*" (SOC_21), while Psychology cautions that "*The traits that LLMs acquire in such a way... may have real-world consequences for individuals and social groups*" (PSY_26). This divergence reflects Fairclough's (2003) distinction between "problem solving" discourses in the hard sciences and "problem posing" discourses in the soft sciences (pp. 24-25).

Overall, the findings of this study reveal that enhancer framings were prevalent across all disciplines and predominated over other framing types, albeit manifested through markedly different lexical, rhetorical, and ideological configurations. As opposed to hard disciplines, which tend to focus on technical improvement, precision, and measurable progress, social disciplines primarily conceptualize AI through the lens of socio-ethical discourse, focusing on such themes as fairness, intellectual property (authorship) and human agency protection. Some

abstracts employ mixed framings whereby advocacy-oriented and prudential discourses co-occur in the same piece of text to underscore the balance between the innovative features of the AI and the communicative demands of the disciplines.

Two cross cutting tensions, which are Innovation vs. Integrity and Equity vs. Inequality, emerge as key in this negotiation. These discussions do not belong solely to particular disciplinary realms; instead, they cross-cut across disciplinary lines, determining the placement of AI as both a resource for transformation and a source of disruption or exclusion. These linguistic manifestations of the tensions are realized in terms of concessive structures, evaluative lexis, and modality, and they are subject to the specifics of the genre, in which the academic abstract must simultaneously appeal and at the same time create credibility and admit the challenges the author cannot overcome.

5. Discussions

5.1. Ideological Dominance in AI Discourses

The overpowering nature of enhancer framings in all fields is an indication of the ossified ideology of technological determinism, with AI positioned as an unavoidable trajectory of technological advancement. This suggests the broader rhetoric of educational technology, whereby the element of innovation is framed as a necessity and not an option (Hallstrom, 2022; Selwyn; 2016). Disruptive framings are peripheral and responsive and only occur in relation to enhancement narratives. This discursive inertia, as proposed by Wodak (2021), is best described as sedimented ideology, in which repetition becomes integral to techno-optimism.

This finding is supported by comparative studies. The multi field analysis of Mo and Crosthwaite (2025) identified enhancement clustering in tech centric disciplines; the current corpus demonstrates larger diffusion, which indicates cross disciplinary normalization. Historical parallels in genomics discourse, in which promises of medical breakthroughs sidelined bioethical concerns, underscore the ideological stakes (Selin et al., 2023). From a CDA perspective, this dominance narrows the discursive space for critique, defining what counts as legitimate academic concern.

5.2. Disciplinary Discourse Variation

Despite overarching ideological convergence, disciplinary discourses exhibit considerable variation in their realization of enhancer framings. The hard sciences tend to use technical language, such as efficiency, accuracy and scalability embedded in methodologically complex syntax, as manifestations of STEM ideals of procedural legitimacy (Hyland, 2009). Enhancers are empirically grounded, as AI is characterized as an enhancement of performance since there are metrics to support claims. In contrast, the soft sciences tend to employ socially inflected lexis, such as addressing inequality and empowering learners, that aligns with and appeals to the moral projects of their readership.

These types of framings are connected with increased references to human actors, as well as intertextual relationships with policy or pedagogy (Biber & Gray, 2016). The dichotomy is epistemological: the hard sciences are justified by quantification, and the soft sciences by sociocultural relevance. The abstracts of engineering are more likely to focus on feasibility, while social sciences anticipate that the community will adopt it and that these will uphold commitments to equity. This is in line with the conclusions of Bearman et al. (2023).

5.3. Micro–Macro Dynamics in Discursive Practice

The CDA-RTA model makes it possible to examine how micro level linguistic decisions determine macro level ideological positions. The positive modal auxiliaries (*will change, can revolutionize*), the reinforced adjectives (*significant, dramatic*), as well as the prospective aspect constructions depict the projected changes as certain and inevitable. These choices, according to Fairclough (2003) and van Dijk (2008), are performative; they construct authority and put the readers in a situation that they find themselves aligned with a future that is already moving in the direction.

Agency attribution varies in different disciplines. Psychology employs first person plural (*we propose*) which involves foregrounding academic cooperation. Computer Science projects computer offloading agency onto AI systems (*the algorithm learns*), which suggest genre conventions in favor of artefactual agency. Such micro-level decisions reflect broader macro-narratives, what Ulnicane and Erkkilä (2023), in their discussion of AI policy scripts and competitiveness framings, characterize as an "AI-driven knowledge society," wherein technological adoption is positioned as a prerequisite for global competitiveness. These

configurations echo historical parallels in e learning discourse, where high modality combined with low human agency has been shown to obscure structural inequities (Bayne, 2015; Selwyn, 2011).

5.4. Power Dynamics and the Politics of Representation

The tension of Innovation and Integrity vs. Equity and Inequality suggests that the power may be linguistically evident. Across soft disciplines, AI is constructed as a leveller, and it creates opportunities for disadvantaged groups, though these are mitigated by the fear of anonymity and access inequities. Equity in hard sciences is not often addressed, and when it is, it comes as a universalist abstraction ("usable for all users"), functioning as a "floating signifier" (see Romele, 2025). As CDA shows, the exclusion or universalization of equity justifies the status quo of asymmetries of research resources and epistemic authority. This aligns with the argument of a covert bias in the allegedly unbiased systems advanced by Shin (2025). Power is also indexed by role assignment as evidenced by the way abstracts of hard science present AI as an autonomous innovator, whereas abstracts of soft sciences present it as a tool or collaborator. This bifurcation mirrors discourse around CRISPR (clustered regularly interspaced short palindromic repeats), a gene-editing technology adapted from a natural bacterial immune system that allows scientists to make precise changes to DNA. When used in biomedical literature, CRISPR is presented in terms of expertise and novelty, and in bioethics literature, it is discussed in relation to governance and societal oversight (Jasanoff and Hurlbut, 2018).

6. Conclusion and Implications

This study investigated the discursive construction of artificial intelligence in the abstracts of six research articles from six different fields in the post-ChatGPT era. The study results indicated the dominance of the enhancer framings that transcend the hard/soft sciences dichotomy. Although the lexical and rhetorical realizations of enhancement are diverse, from the technical precision characteristic of the hard sciences to the socio-ethical inflections of the soft sciences, the prevailing techno-optimistic stance reflects a sedimented ideology of technological determinism. Even when they occur, disruptive framings are always quantitatively peripheral, frequently

expressed in reactive relation to the enhancement framings, an indication of the discursive boundaries within which critique is authorized.

The combination of Fairclough's theoretical three-dimensional CDA and reflexive thematic analysis made it possible to trace how micro level linguistic choices such as modality, evaluative lexis and agency attribution are consolidated into macro level ideological positions. Such patterns are not just stylistic, but they are actually involved in the formation of the epistemic and ethical frames of AI discourse in the academic field. The tensions uncovered, particularly between the notions of innovation and integrity, equity and inequality, are an indication of the ideological work of abstracts as a genre. They in tandem facilitate the use of technology and imply the dangers of technology, which in most cases are negotiated in a manner that portrays disciplinary epistemologies and institutional interests.

For applied linguistics and L2 education, these tensions carry immediate implications. The concept of AI literacy should be presented not just as a useful tool but also as a critical activity with the language that legitimizes particular concepts of improvement at the expense of others. Contrastive readings across disciplines can be used by L2 educators to encourage learners to identify and react to the underlying ideologies in AI discourses, as well as, develop genre awareness activities to prepare them to study in multilingual settings. Such work can bolster resistance to monolingual norms frequently reproduced by AI-mediated tools, instead foregrounding linguistic plurality, local relevance, and culturally responsive understandings of equity. This strategy places applied linguistics as an interpreter of an engaged contributor in framing discourses that will influence the positioning of AI in L2 praxis.

The results of the current study have significant implications for the development of policy and tool design. To policymakers, this prevalence of enhancer frames constitutes a significant mechanism for ensuring that technology deterministic assumptions are replicated uncritically within the governance framework. In other words, the policies surrounding AI, whether through research funding, academic integrity, or the digital infrastructure should be informed by a subtle grasp of how language formulates expectations, and should proactively provide consideration to issues of ethical discourse, equity, and interdisciplinary diversity.

Future studies may build on this investigation to examine full-text articles to gain insight into how the abstract-level framings are upheld, modified, or undermined throughout the body of articles, and how things develop over time as AI technologies and policies change. Cross-

linguistic and cross-cultural comparisons would also assist in illuminating worldwide academic discourse that negotiates between the opportunities and threats of AI. Finally, it is not merely a question of linguistic description to uncover the discursive life of AI in academic communication, but also a way of constructing circumstances within which academic knowledge is created, justified, and distributed.

Bio-data

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Declarations

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Acknowledgements: The author would like to thank Dr. Ghasem Vadipour for valuable feedback during the coding process.

Compliance with Ethical Standards: This article does not contain any studies with human participants or animals performed by the author. Ethical approval was therefore not required.

Competing Interests: The author declares that there are no competing interests.

Availability of Data and Materials: The study analyzed article abstracts, which are publicly accessible through journal websites and scholarly databases. All abstracts used in this research are openly available. The complete list of sources and the coding scheme employed for analysis are available from the author upon request.

Authors' Contributions: The author solely conceived, designed, and conducted the study, performed the analysis, and wrote the manuscript.

Declaration of Generative AI-powered Tools in the Process of Writing:

The authors declares that he has not used AI-powered tools in writing and formulating various stages of this study, including the data generation, the analysis of the data , or the process

required for writing the body of the manuscript as well as the procedures for editing and revising the paper based on the received feedback.

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