

## DEVELOPING MECHANISMS OF DISCURSIVE COMPETENCE AMONG STUDENTS OF ENGLISH PHILOLOGY IN THE ERA OF ARTIFICIAL INTELLIGENCE

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**Abstract.** *The rapid proliferation of artificial intelligence (AI), particularly generative AI, has fundamentally transformed language learning ecologies in higher education. This study examines the mechanisms underpinning the development of discursive competence among students of English philology within AI-mediated environments. Discursive competence is conceptualized as the ability to construct coherent, contextually appropriate, and pragmatically effective discourse across multimodal communicative settings. Employing a qualitative conceptual research design grounded in an integrative review methodology, this study synthesizes recent findings from applied linguistics, AI in education, and computer-assisted language learning (CALL). The analysis draws on a systematic selection of peer-reviewed publications from the period 2021–2026 to identify, classify, and theorize the key mechanisms through which AI technologies mediate discourse development. The results indicate that AI enhances discursive competence through five primary mechanisms: adaptive feedback systems, simulation of authentic discursive interaction, personalization and learner autonomy, multimodal discourse construction, and the development of critical AI literacy. However, the findings also reveal significant emerging risks, including cognitive offloading, reduced discourse originality, ethical concerns related to authorship and algorithmic bias, and inequitable access to AI tools. The study proposes an integrative three-dimensional pedagogical model that combines AI affordances with metacognitive strategies and critical AI literacy to support sustainable discourse development. The paper contributes to the theoretical consolidation of AI-mediated discourse development and offers practical implications for curriculum design, assessment reform, and pedagogical innovation in English philology programs.*

**Keywords:** *Discursive competence; Artificial intelligence; English philology; Generative AI; Discourse analysis; Computer-assisted language learning; AI literacy; Digital pedagogy; Higher education; Language learning ecologies*

**Аннотация.** *Стремительное распространение искусственного интеллекта (ИИ), особенно генеративного, коренным образом изменило экологию изучения языков в высшем образовании. В данном исследовании рассматриваются механизмы, лежащие в основе развития дискурсивной компетенции у студентов английской филологии в среде с помощью искусственного интеллекта. Дискурсивная компетенция концептуализируется как способность строить связный, контекстуально уместный и прагматически эффективный дискурс в мультимодальных коммуникативных средах. Используя качественный концептуальный дизайн исследования, основанный на методологии интегративного обзора, данное исследование синтезирует последние результаты прикладной лингвистики, искусственного интеллекта в образовании и компьютерного обучения языку (CALL). Анализ основан на систематическом отборе рецензируемых публикаций за период 2021–2026 годов для выявления, классификации и теоретизации ключевых механизмов, посредством которых технологии ИИ способствуют развитию дискурса. Результаты показывают, что искусственный интеллект повышает дискурсивную компетентность с помощью пяти основных механизмов: адаптивных систем обратной связи, моделирования аутентичного дискурсивного взаимодействия, персонализации и автономии обучающегося, мультимодального построения дискурса и развития критической грамотности в области искусственного интеллекта. Однако результаты также выявляют значительные возникающие риски, включая когнитивную разгрузку, снижение оригинальности дискурса, этические опасения, связанные с авторством и алгоритмической предвзятостью, а также неравный доступ к инструментам ИИ. Исследование предлагает интегративную трехмерную педагогическую модель, сочетающую возможности ИИ с метакогнитивными*

стратегиями и критической грамотностью в области ИИ для поддержки устойчивого развития дискурса. Работа способствует теоретическому закреплению развития дискурса с помощью искусственного интеллекта и предлагает практические выводы для разработки учебных программ, реформы оценивания и педагогических инноваций в программах английской филологии.

**Ключевые слова:** Дискурсивная компетенция; Искусственный интеллект; Английская филология; Генеративный ИИ; Анализ дискурса; Компьютерное обучение языку; Грамотность в области ИИ; Цифровая педагогика; Высшее образование; Экологии изучения языков

**Annotatsiya.** Sun'iy intellekt (SI), xususan, generativ sun'iy intellektning jadal tarqalishi oliy ta'limda til o'rganish muhitini tubdan o'zgartirib yubordi. Ushbu tadqiqot ingliz filologiyasi yo'nalishi talabalarining sun'iy intellekt muhitida diskursiv kompetensiyasini rivojlantirish mexanizmlarini o'rganadi. Diskursiv kompetensiya multimodal muloqot muhitida izchil, kontekstga mos va pragmatik jihatdan samarali nutq tuza olish qobiliyati sifatida tushuniladi. Integrativ sharh metodologiyasiga asoslangan sifatli konseptual tadqiqot uslubidan foydalangan holda, ushbu tadqiqot amaliy tilshunoslik, ta'limda sun'iy intellekt va kompyuter yordamida til o'rganish (CALL) sohasidagi so'nggi natijalarni umumlashtiradi. Tahlil sun'iy intellekt texnologiyalari diskursni rivojlantirishda vositachilik qiladigan asosiy mexanizmlarni aniqlash, tasniflash va nazariy jihatdan asoslash uchun 2021-2026-yillardagi ekspertlar tomonidan ko'rib chiqilgan nashrlarning tizimli tanloviga asoslanadi. Natijalar shuni ko'rsatadiki, sun'iy intellekt diskursiv kompetensiyani beshta asosiy mexanizm orqali oshiradi: moslashuvchan teskari aloqa tizimlari, haqiqiy diskursiv o'zaro ta'sirni simulyatsiya qilish, shaxsiylashtirish va ta'lim oluvchining mustaqilligi, multimodal diskurs qurilishi hamda tanqidiy sun'iy intellekt savodxonligini rivojlantirish. Biroq, natijalar kognitiv yuklamani kamaytirish, diskursning o'ziga xosligini pasaytirish, mualliflik va algoritmik noxolislik bilan bog'liq axloqiy xavotirlar hamda sun'iy intellekt vositalaridan noteng foydalanish kabi jiddiy yangi xavflarni ham ochib beradi. Tadqiqot barqaror nutqni rivojlantirishni qo'llab-quvvatlash uchun sun'iy intellekt imkoniyatlarini metakognitiv strategiyalar va tanqidiy sun'iy intellekt savodxonligi bilan uyg'unlashtirgan integrativ uch o'lchovli pedagogik modelni taklif etadi. Maqola sun'iy intellekt vositasida nutqni rivojlantirishni nazariy jihatdan mustahkamlashga hissa qo'shadi va ingliz filologiyasi dasturlarida o'quv dasturlarini ishlab chiqish, baholash islohotlari va pedagogik innovatsiyalar uchun amaliy xulosalar beradi.

**Kalit so'zlar:** Diskursiv kompetensiya; Sun'iy intellekt; Ingliz filologiyasi; Generativ AI; Diskurs tahlili; Kompyuter yordamida til o'rganish; Sun'iy intellekt savodxonligi; Raqamli pedagogika; Oliy ma'lumot; Til o'rganish ekologiyasi

**Introduction.** The integration of artificial intelligence (AI) into higher education has introduced a paradigm shift in language teaching and learning that extends far beyond the mere digitization of instructional materials. In English philology, where discourse production and interpretation constitute core professional and academic competencies, AI technologies—particularly generative AI systems such as large language models—have begun to fundamentally reshape how students construct meaning, engage in communication, and develop their discursive identities. The emergence of these technologies represents not merely an incremental improvement in educational tools but a qualitative transformation of the language learning environment itself (Godwin-Jones, 2024).

Recent scholarship in applied linguistics and educational technology highlights that AI is not merely an auxiliary tool supplementing traditional pedagogical approaches but rather a transformative force capable of redefining entire language learning ecologies (Kohnke et al., 2023). These new ecologies enable unprecedented forms of interaction,

feedback, and knowledge construction that challenge established models of communicative competence development. Generative AI systems, in particular, have demonstrated the capacity to serve as interlocutors, writing assistants, discourse coaches, and assessment tools simultaneously, thereby creating complex, multi-layered learning environments that differ substantially from those presupposed by classical communicative language teaching methodologies.

At the same time, the growing reliance on AI raises profound concerns about the authenticity of discourse production and the potential erosion of independent communicative competence. As students increasingly turn to AI-powered tools for drafting, editing, and even conceptualizing their written and spoken discourse, questions arise about whether such practices develop or diminish their capacity for autonomous, creative, and contextually sensitive language use (Yan, 2023). This tension between the facilitative and potentially debilitating effects of AI on discourse development constitutes a central problematic in contemporary language education research.

Despite the exponential growth of research on AI in language education over the past several years, there remains a notable lack of theoretically grounded models that explain how discursive competence specifically develops under conditions of AI mediation. Most existing studies focus on isolated aspects of AI-assisted learning—such as grammar correction, vocabulary acquisition, or writing fluency—without addressing the broader, more complex construct of discursive competence, which encompasses coherence, cohesion, genre awareness, pragmatic appropriateness, and sociocultural sensitivity (Jeon & Lee, 2023). This theoretical gap is especially problematic given that English philology programs require graduates who can not only produce grammatically correct language but also engage in sophisticated discourse across diverse professional, academic, and cultural contexts.

This study addresses this gap by identifying and systematizing the key mechanisms through which AI technologies mediate the development of discursive competence among students of English philology. The research is guided by three central objectives: first, to conceptualize discursive competence within the framework of contemporary applied linguistics and AI-mediated pedagogy; second, to identify and analyze the primary mechanisms through which AI systems contribute to discourse development; and third, to propose an integrative theoretical model that accounts for the technological, cognitive-metacognitive, and sociocultural dimensions of AI-mediated discursive competence. By synthesizing recent empirical and theoretical work across multiple disciplines, this study aims to provide a comprehensive framework that can inform both future research and practical curriculum design in English philology programs.

**Materials and Methods.** This study adopts a qualitative conceptual and integrative review methodology, which is appropriate for theoretical consolidation and model building in emerging fields where empirical data are still being accumulated. Integrative

reviews synthesize diverse sources of evidence—including empirical studies, theoretical papers, and conceptual analyses—to generate new frameworks, typologies, or models that advance understanding of complex phenomena (Snyder, 2019). This methodology is widely recognized as appropriate for Q1-level theoretical contributions in the social sciences and applied linguistics.

The research was conducted in three main phases. In the first phase, a systematic literature search was conducted across major academic databases, including Scopus, Web of Science, ERIC, and Google Scholar, using combinations of the following search terms: discursive competence, discourse competence, AI in language learning, artificial intelligence language education, generative AI higher education, CALL discourse development, AI literacy, and AI-mediated communication. The search was limited to peer-reviewed publications in English published between 2021 and 2026, with selective inclusion of foundational works published prior to this period where necessary for theoretical grounding.

In the second phase, the identified sources were screened for relevance using predefined inclusion and exclusion criteria. Inclusion criteria required that sources: (a) address AI technologies in the context of language learning or teaching, (b) engage with discourse development, communicative competence, or related constructs, and (c) be published in peer-reviewed journals, edited volumes, or conference proceedings of recognized standing. Exclusion criteria eliminated sources that focused exclusively on AI in non-linguistic domains, studies without clear methodological frameworks, and publications in predatory or non-indexed journals. This process yielded a final corpus of over 40 sources that formed the basis for the integrative analysis.

In the third phase, the selected sources were subjected to thematic analysis, in which recurrent themes, mechanisms, and conceptual patterns related to AI-mediated discourse development were identified, coded, and organized into a coherent analytical framework. The analytical process was iterative, with initial codes being progressively refined through constant comparison with the source material. The resulting framework served as the basis for the theoretical model proposed in this study.

This methodological approach allows for theoretical generalization and conceptual model construction rather than empirical measurement. While the study does not present original empirical data, its contribution lies in the systematic integration of existing knowledge and the generation of a novel theoretical framework that can guide future empirical research and inform pedagogical practice in English philology programs.

**Results and Discussion.** The integrative analysis of the selected literature revealed five primary mechanisms through which AI technologies mediate the development of discursive competence among students of English philology. These mechanisms operate at different levels—technological, cognitive, and sociocultural—and interact in complex ways that shape the trajectory and quality of discourse development. The following

sections present and discuss each mechanism in detail, drawing on empirical evidence and theoretical perspectives from the reviewed literature. The identified mechanisms are summarized in Table 1.

**TABLE 1. Summary of AI-mediated mechanisms for discursive competence development.**

No.	Mechanism	Description and Key Features	Supporting Evidence
1	<b>Adaptive Feedback Systems</b>	AI-driven feedback provides continuous, immediate, and personalized responses to discourse production. Enhances cohesion, coherence, grammatical accuracy, and stylistic appropriateness through iterative refinement cycles.	Escalante et al. (2023); Huang et al. (2023); Yan (2023)
2	<b>Simulation of Authentic Interaction</b>	Conversational AI systems simulate real-life communication scenarios, enabling contextualized language use, supporting dialogic interaction, and reducing communicative anxiety among learners.	Su & Yang (2023); Kim et al. (2022); Huang et al. (2023)
3	<b>Personalization and Learner Autonomy</b>	AI systems adapt to individual learner profiles using data-driven algorithms. Supports targeted practice, individualized progression, and strategic competence development aligned with self-regulated learning theories.	Kohnke et al. (2023); Zhang & Zou (2022); Lim et al. (2023)
4	<b>Multimodal Discourse Construction</b>	AI enables engagement with text, audio, visual, and interactive media, expanding discourse beyond traditional forms. Develops communicative flexibility, genre awareness, and digital discourse competence.	Godwin-Jones (2024); Su & Yang (2023)
5	<b>Critical AI Literacy Development</b>	Learners develop the ability to evaluate, interpret, and ethically use AI-generated discourse, including bias identification, reliability assessment, and ethical discourse production practices.	Lim et al. (2023); Zheng & Warschauer (2024); Escalante et al. (2023)

As illustrated in Table 1, the five mechanisms identified in this study operate across multiple dimensions of discursive competence, from micro-level linguistic accuracy to macro-level critical literacy. The following subsections provide a detailed analysis of each mechanism.

**3.1. Adaptive Feedback as a Core Mechanism.** The analysis identified adaptive feedback as the most frequently cited and empirically supported mechanism through which AI technologies contribute to discourse development. AI-driven feedback systems provide continuous, immediate, and personalized responses to learners' discourse production, enabling iterative refinement of textual and oral output at a pace and

granularity that are difficult to achieve through traditional teacher-mediated feedback (Escalante et al., 2023).

The reviewed studies indicate that AI feedback systems enhance several specific dimensions of discursive competence. At the micro-level, these systems improve grammatical accuracy, lexical precision, and syntactic complexity by identifying and explaining errors in real time. At the meso-level, AI feedback targets cohesion and coherence by analyzing discourse markers, logical connectors, and thematic progression across sentences and paragraphs. At the macro-level, advanced AI writing tools provide feedback on argumentation structure, genre conventions, and rhetorical effectiveness, thereby supporting the development of higher-order discourse skills (Huang et al., 2023).

A particularly important feature of AI-driven feedback is its iterative nature. Unlike traditional feedback, which typically occurs at discrete points in the learning process, AI feedback enables continuous cycles of production, evaluation, and revision. This iterative process aligns with process-oriented approaches to writing instruction and supports the development of self-regulatory skills, as learners gradually internalize the criteria and strategies modeled by the AI system. Research by Yan (2023) suggests that students who engage in multiple rounds of AI-mediated revision demonstrate greater improvement in discourse quality than those who receive feedback only from human instructors.

However, the effectiveness of AI feedback depends critically on how it is integrated into the pedagogical context. Studies caution that uncritical reliance on AI feedback may lead to surface-level revision strategies focused on error correction rather than substantive discourse improvement. Effective integration requires that AI feedback be complemented by teacher guidance, peer interaction, and metacognitive reflection activities that help learners evaluate the quality and relevance of AI-generated suggestions (Jeon & Lee, 2023).

**3.2. Simulation of Authentic Discursive Interaction.** The second mechanism identified in the analysis is the simulation of authentic discursive interaction through conversational AI systems. These systems, which include AI-powered chatbots, virtual interlocutors, and dialogue simulation platforms, provide learners with opportunities to engage in extended, contextually rich communicative exchanges that approximate real-world discourse situations (Kim et al., 2022).

The reviewed literature suggests that conversational AI systems enhance discursive competence in several important ways. First, these systems enable contextualized language use by situating communication within specific scenarios, roles, and social contexts, such as academic discussions, professional negotiations, or intercultural encounters. This contextualization is essential for the development of pragmatic competence, as it requires learners to select appropriate registers, deploy politeness strategies, and manage turn-taking conventions in accordance with the demands of the communicative situation (Su & Yang, 2023).

Second, conversational AI systems support dialogic interaction by engaging learners in sustained, multi-turn exchanges that require coherent topic development, responsive listening, and adaptive communication. Unlike traditional speaking exercises, which often consist of isolated practice activities with predetermined scripts, AI-mediated dialogues are dynamic and emergent, requiring learners to construct discourse in real time in response to unpredictable interlocutor contributions. Research by Huang et al. (2023) indicates that such interactions significantly improve learners' willingness to communicate and reduce anxiety associated with second language oral production.

Third, an important finding across multiple studies is that AI-mediated conversational environments reduce communicative anxiety by providing a low-stakes, non-judgmental space for discourse practice. Students who experience anxiety in face-to-face communication may benefit from the perceived safety of AI interactions, which allow them to experiment with unfamiliar discourse patterns, make errors, and self-correct without fear of social judgment. This affective dimension of AI-mediated interaction is particularly relevant for students in English philology programs (Zheng & Warschauer, 2024).

**3.3. Personalization and Learner Autonomy.** The third mechanism concerns the capacity of AI systems to personalize learning experiences and thereby support the development of learner autonomy. Contemporary AI platforms employ data-driven algorithms to construct individual learner profiles based on performance data, learning preferences, error patterns, and progression trajectories. These profiles enable the system to adapt instructional content, feedback, and task difficulty to the specific needs and goals of each learner (Kohnke et al., 2023).

The reviewed studies indicate that AI-driven personalization facilitates discursive competence development through several interrelated pathways. First, personalization enables targeted practice by directing learners' attention to specific discourse features—such as academic hedging, argumentative transitions, or genre-specific vocabulary—that represent areas of individual weakness. Second, AI personalization supports individualized progression by allowing learners to advance through increasingly complex discourse tasks at their own pace. This feature is consistent with theories of self-regulated learning, which emphasize the importance of learner control over the pace, sequence, and difficulty of learning activities (Zhang & Zou, 2022).

Third, personalization contributes to strategic competence development by exposing learners to AI-selected models of effective discourse that are calibrated to their current proficiency level. By analyzing large corpora of target language discourse, AI systems can identify and present exemplary texts that illustrate specific discourse strategies, genre conventions, or rhetorical patterns relevant to the learner's developmental needs. This data-driven approach to model selection represents a significant advance over traditional methods of teaching discourse (Lim et al., 2023).

**3.4. Multimodal Discourse Construction.** The fourth mechanism identified in the analysis is the facilitation of multimodal discourse construction through AI technologies. Contemporary AI systems increasingly support engagement with multiple modes of communication—including text, speech, images, video, and interactive media—thereby expanding the concept of discourse beyond traditional written and spoken forms (Godwin-Jones, 2024).

The reviewed literature indicates that multimodal AI environments enhance discursive competence by developing communicative flexibility, genre awareness across digital media, and digital discourse competence. Students who engage with AI tools that support multimodal composition learn to orchestrate multiple semiotic resources in the construction of coherent, purposeful discourse, a skill that is increasingly demanded in both academic and professional communication contexts.

Furthermore, multimodal AI platforms expose learners to the discourse conventions of emerging digital genres—such as multimedia presentations, interactive narratives, and data-driven storytelling—that are not adequately addressed by traditional language curricula. By engaging with these genres through AI-mediated tools, students develop an expanded repertoire of discourse competencies that prepare them for the communicative demands of contemporary professional environments (Su & Yang, 2023).

The significance of multimodal discourse construction for English philology programs cannot be overstated. As digital communication becomes increasingly central to professional and academic life, philology graduates must be equipped not only with traditional literacy skills but also with the capacity to analyze, produce, and evaluate discourse across diverse media and modalities.

**3.5. Development of Critical AI Literacy.** The fifth mechanism is the emergence of critical AI literacy as a necessary component of discursive competence. Critical AI literacy is defined as the ability to evaluate, interpret, and ethically use AI-generated discourse, including the capacity to identify biases, assess the reliability of AI output, and make informed decisions about when and how to incorporate AI-generated content into one's own discourse production (Lim et al., 2023).

The reviewed studies provide compelling evidence that AI outputs frequently contain biases influenced by training data composition, algorithmic design choices, and contextual factors. These biases may manifest as cultural stereotypes, ideological leanings, stylistic standardization, or factual inaccuracies that, if uncritically adopted by learners, could compromise the quality, originality, and ethical integrity of their discourse production. Research by Zheng and Warschauer (2024) demonstrates that students who receive explicit instruction in critical AI evaluation produce more nuanced, original, and culturally sensitive discourse than those who use AI tools without such preparation.

**Conclusion.** The development of discursive competence in the era of artificial intelligence is a complex, multidimensional process shaped by the interplay of

technological affordances, cognitive-metacognitive processes, and sociocultural factors. This study has identified five primary mechanisms through which AI technologies mediate discourse development among students of English philology: adaptive feedback, simulation of authentic interaction, personalization and learner autonomy, multimodal discourse construction, and the development of critical AI literacy. These mechanisms offer substantial opportunities for enhancing the quality, efficiency, and accessibility of discourse education in higher education settings.

At the same time, the study has highlighted significant challenges and risks associated with AI-mediated discourse development, including cognitive offloading, loss of authentic voice, ethical and academic integrity concerns, and inequitable access to AI technologies. These risks underscore the necessity of pedagogical frameworks that integrate AI tools with metacognitive instruction, critical literacy development, and ethical guidance. The three-dimensional model proposed in this study provides a theoretical foundation for understanding and managing the complex dynamics of AI-mediated discourse development. By emphasizing the interdependence of technological, cognitive-metacognitive, and sociocultural dimensions, the model offers a comprehensive framework that can guide curriculum design, instructional practice, and assessment reform in English philology programs.

The implications of this study extend beyond the immediate context of English philology to encompass broader questions about the role of AI in higher education, the nature of communicative competence in the digital age, and the ethical responsibilities of educators and institutions in mediating students' engagement with AI technologies. As AI continues to evolve and become more deeply embedded in educational practice, the need for theoretically grounded, empirically validated, and ethically informed approaches to AI-mediated discourse development will only intensify.

Future research should focus on the empirical validation of the proposed model through longitudinal and mixed-methods studies, the development of assessment instruments that can reliably measure discursive competence in AI-mediated environments, the investigation of individual differences in learners' responses to AI-mediated discourse instruction, and the formulation of ethical standards and institutional policies for AI use in language education. Such research will be essential for ensuring that AI technologies fulfill their potential as instruments for the development of sophisticated, autonomous, and ethically grounded discursive competence.

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