

From Multimodality to Prompt Engineering: Language, AI, Pedagogy, and Professional Futures in the Digital Age

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<p>Received: 28 May 2026; Received in revised form: 22 Jun 2026; Accepted: 25 Jun 2026; Available online: 30 Jun 2026</p> <p>©2026 The Author(s). Published by International Journal of English Language, Education and Literature Studies (IJEEL). This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).</p> <p>Keywords – Digital Humanities, Multimodality, AI and Language, Prompt Engineering, Sociolinguistics, Hinglish, Digital Pedagogy</p>	<p><i>This paper examines the transformation of English language and literary studies within the framework of Digital Humanities, focusing on the impact of digital communication and Artificial Intelligence (AI) on language practices, authorship, pedagogy, and professional pathways. It argues that contemporary linguistic environments – shaped by social media, multimodal communication, and AI-driven language tools – have fundamentally redefined the nature of language and writing. Drawing on sociolinguistic and multimodal frameworks, the study explores linguistic innovation, hybridity, and code-mixing in multilingual contexts such as India, where practices like Hinglish, emoji use, and platform-specific discourse reshape communicative norms. The paper further analyses AI technologies, including grammar checkers, predictive text systems, and generative tools such as ChatGPT, demonstrating how writing shifts from a cognitive process of composition to one of prompting, generation, and curation. Engaging with the work of David Crystal and Naomi S. Baron, it highlights both the creative adaptability of digital language and the risks of reduced cognitive engagement. The paper proposes prompt engineering as a new form of academic literacy and argues for a pedagogical shift that integrates multimodal analysis, AI-assisted writing, and structured prompt design. It further demonstrates how these transformations open new career pathways in corporate and technology-driven environments, necessitating curriculum redesign and practice-oriented instruction. Ultimately, the paper positions AI as a transformative force that requires new models of language education aligned with both intellectual and professional futures.</i></p>

I. INTRODUCTION

The twenty-first century has witnessed a fundamental transformation in the nature of language, driven by the convergence of digital communication technologies and Artificial Intelligence (AI). Within the field of English language and literary studies, this transformation challenges long-standing assumptions about textuality, authorship, and pedagogy. Traditionally, English studies have been anchored in close reading, interpretive analysis, and human-centred authorship. However, the emergence of digital networks and AI-enabled language tools has reconfigured these foundations, calling for a re-evaluation of disciplinary frameworks.

The emergence of Digital Humanities has already expanded the scope of literary and linguistic inquiry by means of incorporating computational methods, digital archives, and multimodal texts. Yet, the current moment represents a further shift: language is no longer merely analysed through digital tools but is increasingly produced through them. AI systems now actively participate in text generation, blurring the boundaries between human and machine authorship.

Unlike earlier technological tools that merely facilitated communication, AI actively participates in language generation, making it a co-creator in linguistic practices. AI systems rely on Natural Language Processing (NLP) and large-scale datasets to analyse linguistic patterns, predict word sequences, and generate human-like text. This creates a new linguistic environment in which language is no longer exclusively human, and machines are now active participants in communication.

This paper argues that the transformation of language in the digital epoch must be understood across four interconnected domains: (1) digital multimodal communication, (2) speed-driven linguistic change, (3) AI-mediated writing and authorship, and (4) pedagogical and professional transformation through prompt engineering. By synthesizing sociolinguistic theory, multimodal discourse analysis, and contemporary studies on AI and writing, this paper seeks to articulate a coherent structure for understanding—and teaching—language in the digital age.

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The transformation of language in digital environments has been theorized across sociolinguistics, discourse studies, and Digital Humanities. David Crystal's work on Internet linguistics remains foundational, particularly his argument that online communication constitutes an individual linguistic medium rather than a degraded form of language. Crystal's concept of "Netspeak" captures the hybrid nature of digital discourse, which combines features of speech (informality, immediacy) with those of writing (visibility, permanence). This hybridity is key to understanding how language adapts to digital environments without losing complexity (Crystal 17–23).

Multimodal theory, as developed by Gunther Kress and Theo van Leeuwen, provides an essential framework for analysing contemporary communication. Their work shows that meaning is no longer confined to linguistic signs but is distributed across multiple semiotic resources, including visual, auditory, and spatial modes. In digital contexts, this multimodal layering is not supplementary but central to meaning-making (Kress and van Leeuwen 42).

Susan Herring's research on Computer-Mediated Communication (CMC) further contributes to this framework by indicating how technological affordances shape discourse structures. Features such as asynchronicity, reduced nonverbal signs, and rapid interaction lead to the emergence of new language standards, including brevity, informality, and context dependence (Herring 612).

In the domain of AI and writing, Naomi S. Baron provides a critical perspective on the relationship between language and cognition. Baron argues that writing is a form of thinking, and thus the automation of writing processes may affect intellectual engagement (Baron 88). This insight is especially relevant in the context of generative AI, where language generation can occur without direct cognitive effort.

This paper integrates these frameworks to argue that digital language transformation must be understood as a convergence of multimodality, sociolinguistic

variation, and AI-mediated production—with the emphasis on the dynamic interaction between human users, technological systems, and communicative contexts.

III. DIGITAL LANGUAGE TRANSFORMATION AND MULTIMODALITY

The digital age has introduced new forms of communication that extend beyond traditional written language. One of the most significant developments is the rise of multimodality, defined by Gunther Kress and Theo van Leeuwen as the use of multiple semiotic modes—such as text, images, and sound—in meaning-making (Kress and van Leeuwen 20). Digital communication has reshaped the boundaries of language by embedding it within multimodal environments.

On platforms like WhatsApp and Instagram, communication is inherently multimodal. (König, 2024, p. 100818) Messages frequently combine text with emojis, images, and voice notes, creating multiple meanings. For instance, a message such as "Done 🎉 ✨" conveys emotional nuance that cannot be captured through text alone. In classroom contexts, particularly in India, WhatsApp groups function as key sites of academic interaction (Baishya & Maheshwari, 2019, pp. 55-70). A typical message, such as "Kal assignment submit karna hai, don't forget 📌," illustrates the layering of linguistic and visual modes—the text conveys informational content while the emoji adds emphasis and urgency (Kress and van Leeuwen 63).

In multilingual contexts such as India, digital communication also involves extensive code-mixing, particularly in the form of Hinglish (Saha et al., 2019, pp. 76-89)h. Expressions such as "Kal meeting hai, don't be late" illustrate how users fluidly combine languages within a single utterance. This reflects broader sociolinguistic processes of identity construction and linguistic adaptation—what sociolinguists describe as indexicality, where language choices signal identity, social belonging, and contextual meaning (Silverstein 193).

As Crystal argues, digital communication does not degrade language but expands its expressive possibilities. Users demonstrate the ability to shift between registers, using informal, multimodal language in digital contexts while maintaining formal structures in academic settings (Crystal 81). Multimodality thus becomes a central feature of digital discourse, reshaping how meaning is constructed and understood.

IV. SPEED OF COMMUNICATION AND LINGUISTIC CHANGE

Digital communication is characterized by speed, immediacy, and brevity (Strauss et al., 2024)y. These features reshape linguistic structures, leading to phenomena such as syntax simplification, lexical innovation, and informal registers.

At the syntactic level, digital communication often involves simplification and ellipsis. Messages are compressed, omitting grammatical elements while relying on context for meaning. For example, "Coming" replaces "I am coming," demonstrating how meaning can be conveyed efficiently without complete sentences. At the lexical level, digital environments accelerate the creation of new vocabulary (Shahiwala & Rahul, 2026). Terms such as "ghosting," "doomscrolling," and "viral" emerge from digital practices and quickly become part of everyday language. In the Indian context, expressions such as "timepass" or "scene kya hai" illustrate how local linguistic forms are incorporated into digital discourse.

The transformation of language in digital environments has sparked sustained debate within linguistics over whether these changes constitute innovation or decline (Alvero et al., 2025, pp. 50-68). Critics argue that digital communication leads to the erosion of grammatical norms, reduced vocabulary, and a general "laziness" in language use. The frequent use of abbreviations such as "lol," "brb," and "idk," along with phonetic spellings and truncated sentences, is often cited as evidence of linguistic degradation.

However, this perspective is challenged by Crystal, who argues that digital language represents not decline but linguistic adaptation. From a sociolinguistic perspective, these changes can be understood as

functional adaptations to the affordances of digital communication. The emphasis on speed, brevity, and immediacy encourages the development of efficient linguistic forms. Abbreviations and code-mixing are not random but systematic, governed by shared conventions within digital communities (Crystal 53–57). Thus, the debate on linguistic decline must be reframed: rather than evaluating digital language against traditional standards, it is more productive to analyse it as a distinct and evolving mode of communication with its own norms and structures.

V. AI LANGUAGE TOOLS

Artificial Intelligence (AI) language tools have become an integral part of everyday communication. These tools use technologies such as Natural Language Processing (NLP) and machine learning to analyse, process, and generate human language. Unlike earlier digital tools, which simply facilitated writing, AI tools actively participate in language production, making them powerful agents in shaping how we communicate.

5.1 Grammar Checkers

One of the most common AI language tools is the grammar checker. Applications such as Grammarly and Microsoft Editor automatically detect spelling mistakes, grammatical errors, and stylistic issues. For example, a sentence like "She don't like coffee" is corrected to "She doesn't like coffee." These tools are especially useful for non-native speakers, as they help improve accuracy and clarity in writing. However, they also reinforce standardized language norms, often prioritizing correctness over creativity. This reflects a prescriptive approach to language, where rules determine what is considered "proper" usage.

5.2 Predictive Text Systems

Another widely used tool is predictive text, which is embedded in smartphones, email platforms, and messaging applications. Predictive text systems suggest words or phrases as users type, allowing for faster and more efficient communication. For instance, typing "I will meet you..." may prompt suggestions such as "tomorrow" or "at 5 PM." While this enhances speed and convenience, it also reduces the need for users to

actively think about word choice. Over time, this may lead to repetitive language patterns and limited vocabulary use.

5.3 AI Writing Assistants

More advanced AI tools include writing assistants such as ChatGPT, Jasper AI, and Copy.ai. These tools can generate complete essays, summaries, emails, and creative texts based on user prompts. For example, a user can request an essay on climate change and receive a structured response within seconds. This demonstrates the capability of generative AI, which produces text based on patterns learned from large datasets.

While these tools offer significant advantages—including efficiency, accessibility, and support for learning—they also raise important concerns. Overdependence on AI tools may weaken users' independent writing skills and reduce critical thinking. Additionally, the increasing reliance on algorithm-generated language may lead to a loss of individual voice and creativity (Baron 102–05).

VI. AI AND THE RESTRUCTURING OF WRITING PRACTICES

AI technologies have introduced a new phase in the evolution of language by enabling machines to generate text as part of everyday communication. Writing is no longer solely a process of composition but increasingly involves prompting, generating, and editing. This transformation can be understood as a shift from composition to curation—the traditional model of "think → write → edit" is replaced by "prompt → generate → edit."

Traditionally, writing was considered a cognitive process involving thinking, drafting, revising, and editing. It required a strong command of language as well as the ability to organize ideas and express them clearly. Today, AI tools allow users to input prompts and receive fully formed text instantly. This changes the writing process fundamentally.

This shift has both positive and negative implications for linguistic competence. On the positive side, AI tools can help users improve their writing skills by providing

suggestions for grammar, vocabulary, and structure. They are particularly beneficial for second-language learners, who may struggle with complex grammatical rules. AI can also reduce anxiety associated with writing by offering guidance and support.

However, there are also concerns about the impact of AI on cognitive engagement. Baron argues that writing is closely linked to thinking. When individuals rely heavily on AI to generate text, they may engage less deeply with their ideas, leading to a decline in critical thinking and analytical skills. Writing becomes less about exploring ideas and more about selecting and editing machine-generated content (Baron 76–80).

In professional contexts, AI is also changing workplace writing. Emails, reports, and presentations are increasingly being drafted using AI tools (Using artificial intelligence in academic writing and research: An essential productivity tool, 2024). While this improves efficiency and ensures clarity, it may result in standardized and impersonal communication. Over time, individual writing styles may become less distinct, as AI-generated language tends to follow predictable patterns.

VII. AI AND THE QUESTION OF AUTHORSHIP

The integration of AI into language production challenges traditional notions of authorship by introducing distributed agency. In literary and linguistic studies, authorship has historically been associated with individual creativity, intentionality, and originality. However, AI-generated texts challenge these assumptions by blurring the boundaries between human and machine agency.

When a student or writer uses AI to generate content, authorship becomes distributed across multiple entities: the human user, the AI system, and the datasets on which the system was trained. This raises critical ethical and epistemological questions regarding originality, ownership, and intellectual labour. As Crystal emphasizes, language is inherently social and human, grounded in lived experience and intentional meaning-making. AI, by contrast, operates through pattern

recognition and statistical prediction, lacking consciousness or experiential depth (Crystal 212–14).

A crucial distinction must be made between human creativity and AI generation. Human writing is based on lived experience, emotional depth, and intentional meaning-making. Writers draw on their personal knowledge, cultural background, and imagination to create original content. In contrast, AI systems generate text based on patterns and probabilities—they do not possess consciousness, emotions, or true understanding.

The use of AI also raises ethical concerns. One major issue is plagiarism: since AI generates text based on existing data, it may produce content that resembles previously published material. Another concern is the potential misuse of AI in academic settings, where students may submit AI-generated work as their own, thereby challenging traditional assessment methods.

At the same time, AI can be seen as a collaborative tool rather than a replacement for human authorship. Writers can use AI to generate ideas, structure their work, or refine their language, while still maintaining control over the final output. This suggests a shift toward a new model of authorship, in which humans and machines work together, with the emphasis moving from individual production to collaborative human–AI knowledge-making.

VIII. PROMPT ENGINEERING AS A NEW FORM OF LITERACY

In response to these transformations, a new form of literacy emerges—prompt engineering. Prompt engineering involves designing structured, precise, and contextually rich instructions that guide AI systems to produce meaningful, academically relevant outputs. This shift represents a movement from linguistic competence—the ability to produce grammatically correct language—to meta-linguistic competence—the ability to control and direct language generation through structured prompts.

Students are no longer merely writers but become designers of discourse, shaping how knowledge is generated. Effective prompts typically include: a

defined role (e.g., "act as a sociolinguistics researcher"), a specific task (e.g., "analyse multimodality"), contextual parameters (e.g., "Indian multilingual classrooms"), explicit theoretical frameworks, and controlled output format and depth.

8.1 The Anatomy of an Effective Prompt

A well-designed prompt follows a five-part structure: Role, Task, Context, Format, and Depth. This can be illustrated through three stages of iterative refinement using the topic of multimodality in WhatsApp messages:

Stage 1 – Basic Prompt: "Explain multimodality in WhatsApp messages in Indian classrooms." This identifies a topic and context but lacks role, depth, theoretical grounding, or format specification. Output is likely general and minimally academic.

Stage 2 – Structured Prompt: "Act as a sociolinguistics researcher. Analyse multimodality in WhatsApp messages in Indian multilingual classrooms. Include examples of code-mixing, emojis, and voice notes. Use sociolinguistic concepts such as indexicality and communities of practice. Write in 400–500 words in academic paragraph form." This adds role, analytical task, specific examples, theoretical framing, and format control. Output is structured, theoretical, and academically relevant.

Stage 3 – Exhaustive Prompt: "Act as a sociolinguistics researcher. Write a 400–500-word academic essay suitable for TYBA Semester VI students analysing multimodality in WhatsApp messages in Indian multilingual classrooms. Include examples of Hinglish, emojis, and voice notes. Apply theoretical frameworks such as Kress and van Leeuwen's theory of multimodality and Silverstein's theory of indexicality. Ensure clear paragraph structure and academic tone." This further specifies audience, output type, localized examples, named scholars, and language register.

This iterative process demonstrates that prompt quality directly shapes output quality. More importantly, it requires students to think critically about task formulation, theoretical framing, and contextual specificity – making prompt engineering a higher-order cognitive skill.

8.2 Types of Prompts for Academic Research

Students must learn to deploy different prompt types depending on the research purpose: Explanatory Prompts (for theory); Analytical Prompts (for deeper thinking); Comparative Prompts (for critical writing); Application Prompts (for case studies); and Critical Prompts (for evaluation). One-prompt approaches are never sufficient; iterative refinement is the key skill.

8.3 Advanced Prompting Techniques

Beyond basic prompt construction, students should be introduced to chain prompting (breaking a task into sequential steps: define concept → add theory → apply example), constraint prompting (forcing specificity, e.g., "use only Indian examples, limit to 500 words"), and perspective prompting (e.g., "answer as a feminist critic" or "answer as a sociolinguist"). These techniques reinforce structured, critical thinking and prepare students for research-level engagement with AI.

IX. PEDAGOGICAL IMPLICATIONS: RETHINKING THE CURRICULUM

The integration of AI into language practices necessitates a fundamental rethinking of pedagogy in English studies. Traditional curricula, which emphasize textual production and analysis, must now incorporate training in critical AI literacy and prompt engineering.

9.1 Adapting Pedagogy

Teaching students how to construct effective prompts becomes essential. This involves guiding them through stages of prompt refinement—from basic queries to structured, research-level instructions. Such practices encourage clarity of thought, precision, and analytical depth.

9.2 Critical Engagement with AI

Rather than banning AI tools, pedagogy must focus on critical engagement. Students should be trained to evaluate AI-generated content, identify biases and limitations, and refine and contextualize outputs. Ethical use must be emphasized: AI output should not be copied directly; students must always edit, interpret, and take ownership of the final work.

9.3 Hybrid Writing Models

Writing assignments must evolve to reflect collaborative human-AI processes. For instance, students can be asked to generate responses using AI, critically edit and expand them, and reflect on the effectiveness of their prompts. This approach shifts the emphasis from mere production to process-oriented learning.

9.4 Reframing Assessment

Assessment methods must also adapt. Instead of evaluating only final outputs, educators should assess prompt design, iterative refinement, and critical reflection. A sample assessment task might ask students to: (1) create three different prompts on a language topic such as Hinglish or memes, (2) generate AI responses, (3) analyse which prompt worked best and why, and (4) submit prompts, outputs, and a reflective commentary. Evaluation criteria should cover prompt quality, depth of output, critical thinking, and originality.

X. LANGUAGE, AI, AND EMERGING CAREER PATHWAYS

The transformation of language in the digital age is not confined to academic debate; it has significant implications for employment and professional practice. As digital technologies and AI systems become central to corporate operations, new career pathways are emerging that require advanced linguistic competencies combined with technological literacy.

Traditionally, careers in language and literature were associated with teaching, publishing, journalism, and content writing. However, the integration of AI and digital communication into corporate workflows has significantly expanded this scope. Today, roles such as content strategist, UX writer, AI language trainer, prompt engineer, and digital communication specialist are increasingly in demand (Vu & Oppenlaender, 2025). These roles require not only proficiency in language but also the ability to work within technologically mediated systems.

One of the most significant shifts is the emergence of AI language-related roles, where individuals are tasked with training, evaluating, and refining language models (O'Keefe et al., 2026, pp. 657-674). Within such contexts, linguistic expertise is crucial for ensuring that AI-

generated content is accurate, contextually appropriate, and culturally sensitive. AI language trainers must understand nuances such as tone, register, and sociolinguistic variation in order to guide machine-generated outputs effectively.

UX writing and interface communication are other key domains in which language is used to guide user interaction with digital platforms. UX writers must craft concise, clear, and user-friendly text that aligns with both technological functionality and user expectations—a task that requires an understanding of multimodal communication, as text is often integrated with visual and interactive elements.

These developments highlight a critical gap between traditional language education and contemporary professional requirements. Current curricula often emphasize canonical texts, formal writing, and theoretical analysis, with limited engagement with digital communication practices or AI tools. To address this gap, curriculum design must incorporate AI-assisted writing workflows, prompt engineering as a core competency, multimodal discourse analysis, and applied language practices such as UX writing and content strategy.

XI. CONCLUSION

The digital age has transformed language into a dynamic, multimodal, and technologically mediated system. AI further extends this transformation by reshaping writing practices and challenging traditional notions of authorship. Rather than viewing these changes as threats, they should be understood as opportunities for innovation.

Prompt engineering, in particular, represents a new form of literacy that integrates linguistic competence with technological awareness. It enables students to engage with AI in informed, critical, and creative ways. Rather than replacing humanistic inquiry with technological efficiency, the aim must be to cultivate a pedagogy that equips students to navigate and shape the evolving linguistic landscape.

Ultimately, the future of language studies lies in redefining the relationship between language,

technology, and human cognition. AI is not replacing language—it is reshaping it. The task for contemporary English studies is to ensure that language education remains both intellectually rigorous and professionally relevant in a rapidly evolving digital world.

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