The Impact of Artificial Intelligence on Writing and Speaking Practices among EMI and ESL Students

Sociolinguistic and Pragmatic Perspectives

Elina Stepanyan

University of Padova · Italy

1 Background & Objectives

The rapid integration of artificial intelligence (AI) into higher education carries significant cognitive, pedagogical, and sociolinguistic implications, especially for non-native English-speaking university students.

This study examines how AI-assisted writing and speaking tools shape second language (L2) development in academic contexts, asking whether AI functions as a **scaffold** that promotes language development **(Vygotsky, 1978)** or as a **compensatory mechanism** that may inhibit deeper cognitive and linguistic processing **(Swain, 1985)**.

2 AI & Communicative Practices

AI has become an active participant in contemporary communication, influencing lexical choice, syntactic structure, and emotional tone **(Hohenstein et al., 2023; Hancock et al., 2020)**. Through **asymmetrical accommodation**—an extension of Giles' (1973) theory—users adapt their language to the perceived limits of AI, while the system accommodates only within its design parameters.

- AI reply suggestions raise positivity and reduce lexical variation **(Hohenstein et al., 2023)**
- Culturally specific markers are lost with template reliance **(Algouzi & Alzubi, 2023)**
- The cumulative result: gradual homogenisation of written English

3 Sentence Length & Lexical Conciseness

AI-supported systems such as ChatGPT and Grammarly consistently produce outputs marked by **shorter sentences, reduced repetition, and increased conciseness (Rudnicka, 2025)**.

These effects are not limited to L2 learners—native-speaker texts show the same pattern. Such tools improve readability but prioritise structural simplification over stylistic diversity and rhetorical complexity, encouraging increasingly **standardised expression** in academic and digital communication.

4 Cognitive Offloading & Critical Thinking

Sarkar (2025) argues that users increasingly become **editors rather than authors**, delegating linguistic decision-making to AI.

- Knowledge workers report reduced critical reasoning with AI-generated content **(Lee et al., 2025)**
- Heavy LLM reliance lowers comprehension and retention **(Kreijkes et al., 2025)**
- Productive cognitive effort declines when AI takes over output

From an SLA perspective, this matters: Swain (1985) identifies the search for words, the construction of grammar, and the formulation of argument as **essential mechanisms of language development**. When delegated to AI, the productive struggle through which learning happens is bypassed.

5 Cognitive, Pragmatic & Sociolinguistic Dimensions

For L2 learners, academic production in English demands considerable cognitive effort, since lexical search and syntactic planning operate within a partially acquired system **(Sweller, 1988; Kormos, 2012)**. AI tools can ease this load, freeing learners for higher-order concerns.

Yet **pragmatic competence**—adapting language to context, audience, and purpose **(Bardovi-Harlig, 2013)**—cannot be acquired through AI mediation alone. AI texts tend toward fluent, pragmatically safe formulations: surface-appropriate but lacking the reasoning of expert discourse.

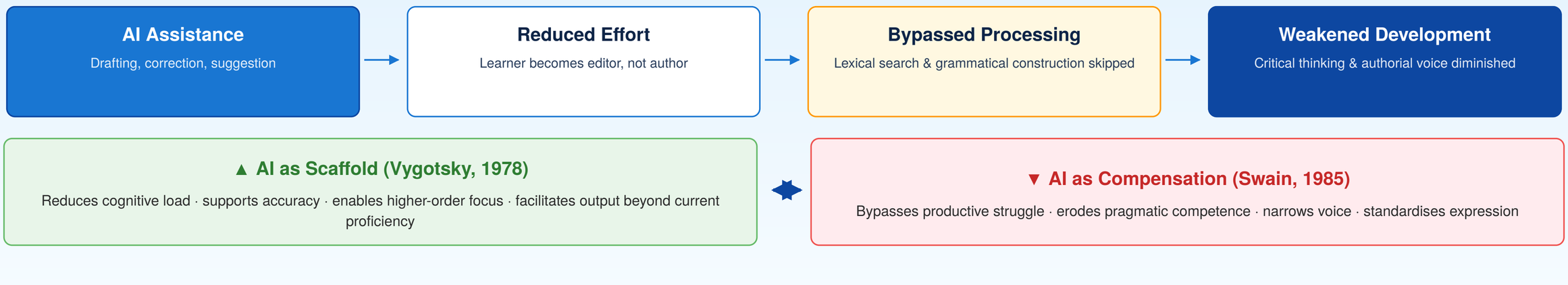
Sociolinguistically, academic writing builds an authorial identity within a scholarly community **(Ivanič, 1998)**. Wide AI reliance may produce what Sarkar (2023) calls **"mechanised convergence"**—a narrowing toward homogeneous styles, with consequences for voice, identity, and academic plurality.

6 Conclusion & Pedagogical Implications

AI is no longer merely an external aid to L2 production but an **active participant**. The challenge is not to exclude AI from language learning but to integrate it thoughtfully.

- Design tasks that ask learners to **evaluate, question, and revise** AI outputs
- Cultivate **critical AI literacy**: bias, limitations, fluency cues that mask error
- Preserve productive struggle as the engine of acquisition
- Use AI for drafting; reserve final production for independent reasoning

THE COGNITIVE OFFLOADING PATHWAY



KEY REFERENCES

Algouzi, S., & Alzubi, A. (2023). AI templates and the loss of cultural markers in L2 writing.

Bardovi-Harlig, K. (2013). Developing L2 pragmatics. *Language Learning, 63*(s1), 68–86.

Giles, H. (1973). Accent mobility: A model and some data. *Anthropological Linguistics, 15*(2), 87–105.

Hancock, J. T., Naaman, M., & Levy, K. (2020). AI-mediated communication. *JCMC, 25*(1), 89–100.

Hohenstein, J., et al. (2023). Artificial intelligence in communication impacts language and social relationships. *Scientific Reports, 13*(1).

Ivanič, R. (1998). *Writing and identity: The discoursal construction of identity in academic writing*. John Benjamins.

Kormos, J. (2012). The role of individual differences in L2 writing. *JSLW, 21*(4), 390–403.

Kreijkes, P., et al. (2025). LLM-assisted reading and comprehension outcomes.

Lee, H.-P., et al. (2025). The impact of generative AI on critical thinking. *CHI '25*.

Rudnicka, K. (2025). Sentence length and conciseness in AI-assisted writing.

Sarkar, A. (2023). Mechanised convergence in AI-mediated writing.

Sarkar, A. (2025). Editors, not authors: AI and the displacement of writerly agency.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Newbury House.

Sweller, J. (1988). Cognitive load during problem solving. *Cognitive Science, 12*(2), 257–285.

Vygotsky, L. S. (1978). *Mind in society*. Harvard University Press.