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AL Forum

The Newsletter of the Applied Linguists Interest Section

ARTICLES

ARTIFICIAL INTELLIGENCE MEETS APPLIED LINGUISTICS: ANNOTATED BIBLIOGRAPHY AND EARLY ADOPTER INSIGHTS

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Generative Artificial Intelligence (AI)—like OpenAI's ChatGPT, Google's Bard, and Hugging Face's Transformers—has come like a bolt out of the blue, screaming into, if not relevance, then at least a place of attention in our daily lives. Pre-November 2022, you'd be forgiven if you'd never heard of Generative Pre-trained Transformers (the GPT in ChatGPT) or Large Language Models (LLMs), the technologies that drive, in different forms, all these AI agents. But, with the widespread release of ChatGPT into the wild in the winter of 2022-2023,



the cork has come off the bottle, as it were. As we have seen—and perhaps imagined—its implications for language education are potentially significant.

In the spirit of transparency, and to model ethical Al-integration, I want to acknowledge my use of Al agents in the process of writing this article. During drafting and revision, I employed ChatGPT-4, Bard, and Perplexity.ai to brainstorm ideas, seek content feedback, and even generate a suitable title. I also utilized constructive Al tools like Grammarly Pro and Microsoft Office Copilot to assist with revision and editing. However, I emphasize that the core content and ideas presented are my own. Second, I am intimately aware of the considerable and legitimate ethical questions around Al—from learning loss to data privacy and ownership to the ecological costs of planetary computing. For now, however, I would encourage us to focus on what we can control by considering how we, as language specialists, will navigate this new Al-rich landscape. To aid in this, I will outline a few resources that have shaped my own thinking and practice. I will conclude by offering some advice on integrating Al into your professional practice, which I offer as an early adopter who has grappled with a variety of Al tools.

Selected Resources

Of the numerous articles, books, and chapters available, the following three sources have shaped my thinking and professional practice the most:

Pasquale, F. (2020). The new laws of robotics: Defending human expertise in the age of AI (pp. 60-88). The Belknap Press of Harvard University Press.

In This Issue

- LEADERSHIP UPDATES
- ARTICLES
- ABOUT THIS COMMUNITY

Tools

- SEARCH BACK ISSUES
- FORWARD TO A FRIEND
- PRINT ISSUE
- RSS FEED

1 of 5

It's easy to get dazzled by Al's seemingly rapid progress and proliferation. However, Al has been part of our lives for years, if not decades, at this point. This chapter from Pasquale's must-read book offers a sober and thorough investigation of Al in educational settings, how it influences educational policy and classroom pedagogy, and how it has affected our conceptualization of good versus bad learners. This chapter is vital for educators seeking to position their practice critically and responsively because it illustrates just how pervasive Al has already become. From the marriage of facial recognition and sentiment analysis for classroom management Al to multilingual chatbots that scale in difficulty and content to deliver personalized instruction, Pasquale asserts that Al is already in our classes in ways large and small. Once we recognize this, we can make more meaningful decisions about how Al will impact our teaching philosophy and practice.

Office of Educational Technology. (2023). Artificial intelligence and the future of teaching and learning: Insights and recommendations [government white paper]. U.S. Department of Education. https://www2.ed.gov/documents/ai-report/ai-report.pdf

This U.S. Department of Education (DoE) report comprehensively examines Al's possible influence on education. Admittedly, this report largely ignores classroom management Al and the problematic invasion of students' private lives and classroom underlife. Take for example, the so-called "intelligent classroom behavior management systems," which work by tracking eye gaze and facial expression to gauge student engagement and rate how earnestly students have participated in classroom learning. These have been deployed in classrooms in China and have raised some concern among privacy and student advocates who worry about these systems' potential abuse in assessing students based on a reductive definition of "engagement" (Hao, 2019).

In this case, however, the DoE report offers a very human-centric take on building classroom policies that are both Al-aware and that prepare students to inhabit an increasingly Al-rich world, with a strong focus on equity, access, and transparency. For example, they encourage educators to craft academic integrity policies that make space for students to engage with Al tools while teaching them how to be transparent about the degree, manner, and impact of their use. Equally practical are the report's recommendations for how Al can be used as a pedagogical tool to drive (personalized) learning while also making space for employing educator expertise. One could, for example, use an Al tool like Twee to automatically generate a vocabulary list or low-stakes comprehension assessment for students based on a YouTube video the class has watched. Alternatively, one could use a tool like ChatGPT or Bard to generate example text and then lead a class activity designed to help raise critical thinking about the accuracy of Al-generated information.

Oniveros, C. (2023, April 17). How to use ChatGPT to learn: A new paper on LLMs in the classroom and a heuristic for their practical use.

AutomatED: Teaching Better with Tech. https://automated.beehiiv.com/p/teach-chatgpt

This piece has several useful nuggets, including some essential guidelines on engaging in prompt engineering—writing a prompt that produces useful and meaningful output—for education contexts. It also provides examples of possible classroom uses, for example, asking the generative AI to rewrite a text for a specific audience. This can be helpful, for instance, when redesigning a task created for an advanced proficiency class into a similar one for lower proficiency students. Below, you will see figures with screenshots that demonstrate one way that you could achieve this goal with AI (ChatGPT-4 was used here).

2 of 5

Figure 1

Step 1: Provide Context

I'm teaching an EAP writing and grammar class to low-intermediate ESL college students from diverse national and linguistic backgrounds. I've planned for us to talk about the rhetorical situation and how it can be used to improve writing. When I teach this to my advanced students, I like to use an activity where we engage with a piece of scholarly writing and fill out a worksheet describing how we see the rhetorical situation playing out in that text. Here are the instructions that I give to my advanced students.

Figure 2

Step 2: Review initial Output from the AI

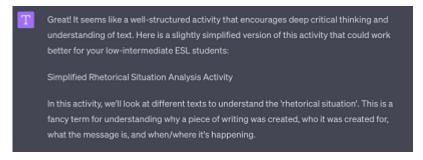


Figure 3

Step 3: Make Your Ask

Thanks for the positive feedback, but I need your help translating these instructions into language that is more accessible to students with a low-intermediate proficiency in English. I would like you to also advise me on how to make sure the instructions are more easily understood. For example, in the past, my students have focused too much on the author's credentials and have failed to consider how the authors' other written works can be used to gauge expertise.

Lastly, Step 4 will include repeating Steps 2 and 3, approaching the cycle of prompt-response as if it were a conversation complete with follow-up and clarifying questions.

As the teacher, you likely have the expertise to reimagine activities for different proficiencies already. But the AI acts as a second set of eyes, like when you ask a co-worker to give you feedback. But now you don't have to wait for a colleague to have a free minute—a challenge in itself — and can turn to the AI for the same task.

Advice

In this section, I provide advice as an AI power-user who has already deeply integrated AI agents into their workflows, à la Dolgova and Weger (2020).

Get Away from ChatGPT

OpenAl's ChatGPT-4 is, perhaps, the most capable Al agent with the most intuitive user interface, taking the form of a chatbot. However, you need to cast a broader net to understand Al's potential impact on your practice and how your students might choose to (dis-)engage with your classes. For example, if you teach research writing, learning to use and integrate perplexity ai can be beneficial, as it has the ChatGPT-style interface, can be restricted to only using academic/scholarly sources to formulate its answers, and links directly to source articles in the Semantic Scholar database. Likewise, if you teach presenting, an agent like Gamma APP can be integrated to allow students to shift focus from slide-deck design to content and delivery. And, given the contingent status of many language specialists,

3 of 5