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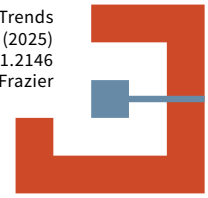

Castledown

Beyond basics: A ten-lesson in-depth unit on generative AI for language students

Euan Bonner
Kanda University of International Studies
bonner-e@kanda.kuis.ac.jp

Ryan Lege
Kanda University of International Studies
lege-r@kanda.kuis.ac.jp

Erin Frazier
Meiji University
efrazier@meiji.ac.jp

How should we handle generative AI in the classroom? Many educators create policies that restrict or limit its use, which may be effective short-term but overlook the long-term impact on language learners as global digital citizens. Limiting AI to specific activities can lead to misconceptions about its capabilities and limitations. It's essential to dedicate class time to exploring AI's true affordances and pitfalls, allowing students to make informed decisions about its use. This paper will outline a ten-lesson unit (15 contact hours) integrated into 1st and 2nd-year courses across several universities in Japan. The unit introduces students to the current AI landscape, covering the history and inner workings of generative AI, while also teaching effective usage. A final project involves designing a local newspaper using AI, with evaluation focused on reflection and prompt effectiveness rather than the product itself. The unit also addresses ethical issues in employing generative AI.

Keywords: large language models, LLM, generative AI, ChatGPT, material creation

Introduction

Artificial intelligence (AI) has been used for decades to automate decision-making through logic-based processes that allow computers to make decisions based on their input. However, the recent proliferation of generative AI that allows for creating art, photographs, videos, and music, has opened up both exciting and alarming new possibilities. These models include Large Language Models (LLMs), which are

trained on enormous corpora of training data to create networks of trillions of connections, allowing them to predict the next word in a string of text and generate human-like output.

The ease of creating text and media is of particular interest and concern for (language) educators who are concerned about the capacity of generative AI to disrupt the teaching and learning process. Many educators' initial reactions to generative AI were to create policies that either restrict, ban, or severely limit its use to only specific AI-focused activities. Such restrictions can be effective in the short term; however, many underestimate the effect this technology will have on language learners' futures. Baidoo-anu and Owusu Ansah (2023) champion an alternative: "... Integrating generative AI tools in the classroom and teaching students how to use it constructively and safely could also prepare them to thrive in an AI-dominated work environment after school" (p. 59). Other researchers have called for a careful collaboration of teachers and students "to ensure that these tools are integrated into language teaching and learning contexts in a meaningful and responsible manner" (Law 2024, p. 11). To accomplish this end, language educators cannot simply ignore generative AI, but they need to involve students and stakeholders in navigating its role in students' academic careers and society as a whole. AI literacy is so necessary that researchers recommend incorporating it into teacher training (Kohnke et al., 2025), however practicing teachers may not know how to approach AI in their courses. Accordingly, the authors designed an in-depth AI unit to educate students about AI, its functions, and the ethical implications of its use.

Method

The researchers employed Derewianka and Jones' (2016) teaching and learning cycle (TLC) as a basis for designing the ten-lesson unit (that was taught over 15 contact hours) on responsible AI-use. Each lesson followed the TLC cycle by first building knowledge of the topic, followed by modeling and deconstruction, engaging in joint construction, and culminating in independent construction tasks. The researchers piloted this unit at multiple Japanese universities with groups of 1st and 2nd year students in social science programs (n=151). After the initial pilot, the unit was revised and expanded, and it is now taught as part of the basic curriculum for all students at one of the universities wherein it was piloted. The unit, which will be detailed below, aims to aid learners in understanding the true affordances and pitfalls of the technology to make informed decisions about how and when to use it.

Unit Structure

The unit focuses on introducing students to the world of generative AI in its most common modalities (e.g. text, images, audio, and video) and teaching them the basics of utilizing it effectively and appropriately in both their studies and future careers. Students practice reading, writing, speaking, and listening through collaboration on multiple group and individual projects that utilize generative AI to achieve a number of practical goals, while also learning about AI's limitations and ethical issues.

The ten-lesson unit begins with an explanation of what sets generative AI apart

from other forms of AI and then dives into its capabilities in generating media such as images, short videos, and music with lyrics. Over the course of three lessons, students develop the skills necessary to get the AI to most closely generate the desired media (see Figure 1), while avoiding many common pitfalls and limitations such as mitigating hallucinations. These lessons conclude with an ethical implications lecture and activity discussing ownership, effects on jobs, and the broader implications of using AI.

Figure 1. Slide describing the way AI-image generators focus on key vocabulary

The unit then proceeds to text-based LLMs, first focusing on the history of large language models, the rise of the popular ChatGPT, and the subsequent release of its competitors such as Google Gemini and Anthropic's Claude. These lessons also contain a practical overview of the basics of interacting with text-based LLMs. This instruction is centered around a basic four-step structure that maximizes the quality of the desired output (see Figure 2).

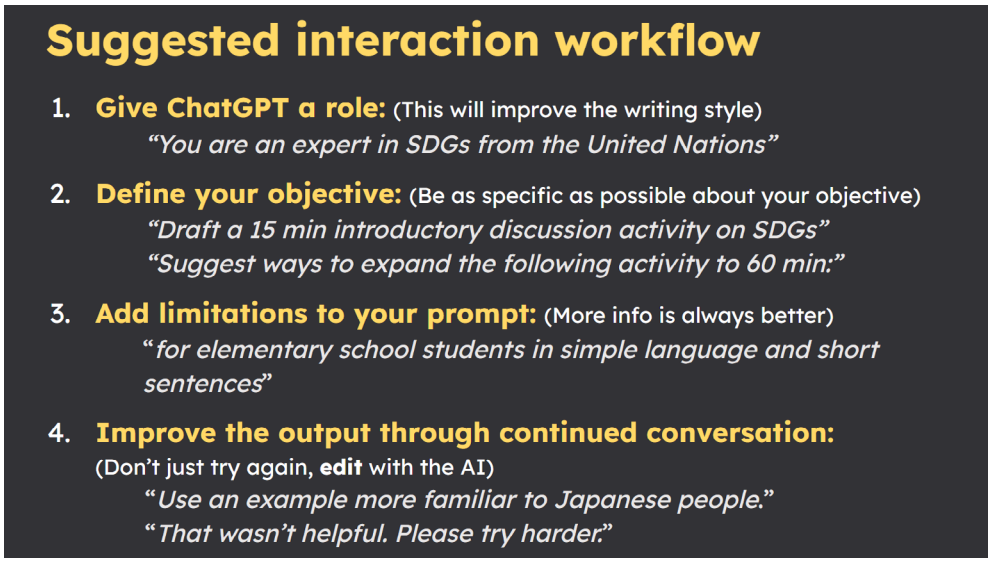

Figure 2. Slide describing a four-step method for interacting with LLMs

Students practice not only engaging with AI as a conversation partner but also utilizing it as a tool for idea generation, summarization, writing templates, image analysis, and translation. One lesson is also dedicated to its usage in different industries, with students developing and programming simple web pages, games and applications without any prior programming experience necessary. Throughout these lessons, time is spent discussing the inherent biases that these AI possess, how they came to be, and how to navigate them. Similarly to the AI media lessons, the ethical implications of its usage are also addressed, drawing particular focus on its wider misuse and abuse online. The final activity focuses on examples of AI-generated social media posts and fake news (see Figure 3).

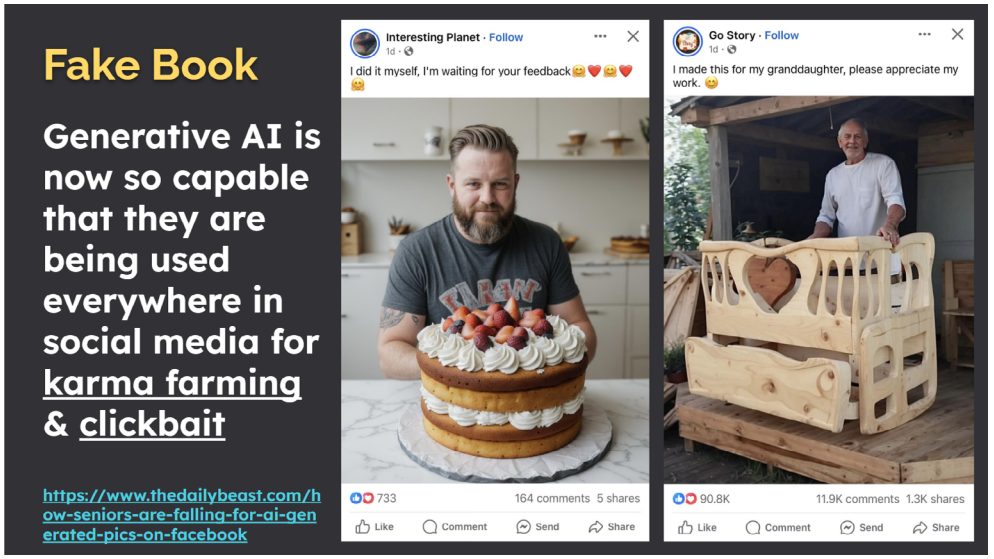

Figure 3. Slide showing examples of AI-generated fake social media posts

The unit culminates in a holistic project that necessitates the prompting skills,

critical analysis of output, and ethical considerations covered in the unit. The project takes the form of the front page of a local newspaper that students populate with three articles of different genres, photos, and advertisements, all generated with the assistance of AI (see Figure 4). The article genres include a local restaurant review, an opinion piece, and a local news story based on student notes to ensure that student input is a critical part of the process. Students need to create each topic and provide the AI with a list of notes to generate the articles. However, the project is designed to focus on the process rather than the end product and is accompanied by a log that requires students to record all prompts and interactions with AI. Students are also required to write a 250-word critical analysis of AI upon completion of the project that includes questions to ensure they understand "the broader implications of their [generative AI tools'] use, including issues of bias, privacy and the potential for misuse" (Wood & Moss, 2024, p. 163). The newspaper, log of AI interaction, and analysis are all weighted equally in the final grade.

Figure 4. Newspaper template (left) and sample page of the log (right)

Results and discussion

As a part of the written reflections, students were asked to critically analyze their use of AI in an open-ended response. These reflections were analyzed using thematic analysis, and the following themes were found: The strengths of AI, student foreseeable usage, weaknesses, and ethical issues.

Strengths and foreseeable usage

Most of the learners identified that as they followed the prompt workflow structure taught in the unit, they were able to generate "a certain level of quality guaranteed just by giving instructions". Another strength learners called attention to was that "AI generate[s] many ideas in a short period of time and is good at analysis". There was also a positive response to the usage of AI and the majority of learners stated that it will be a useful tool for their future. Students noted that although they could not rely solely on AI, "AI and people can coexist by creating what AI cannot create". Students realized that AI could be a valuable tool if used responsibly.

Weaknesses and ethical issues

Learners highlighted that though they received instruction on how to successfully produce prompts for the AI for their projects, occasionally, the AI "[did] not always follow the instructions". This was primarily due to how the prompt was written itself, due to its tendency to include all keywords regardless of whether they were negated (see Figure 1).

Additionally, several learners pointed out "that a certain level of English proficiency was required since the prompts had to be sent in writing". As our tasks were designed and executed in English, learners had to possess sufficient language to allow them to manipulate the language of their prompts. Without that language proficiency, some learners may find the AI difficult to use. Finally, learners commented that they felt that AI, as of the time the unit was completed, was often found to hallucinate or "present incorrect information". This may have been a frequent comment due to awareness raised in the lessons on the limitations and ethics of AI.

Many learners ran into the issue of copyrighted materials in both media and text creation, which occurred due to the training process of the AI. For instance, learners created advertisements as part of the newspaper project. Advertisements featuring shoes often included the trademarked Nike Swoosh by default. This was indicative of the use of copyrighted material in the training data that led students to question the legality of using generative AI. One student remarked, "I felt that we cannot leave the task to AI alone without thinking about it with a certain degree of human intelligence".

Conclusion

As AI continues to establish a presence in our everyday lives, students will need to become familiar with its capabilities to ensure their future success. Therefore, teachers should provide students with opportunities to learn how to use it proficiently and ethically. By offering an in-depth AI unit, rather than a one-off lesson, learners can make informed decisions about how they use the technology. Providing learners the opportunity to interact with generative AI extensively ensures that they will better comprehend how to navigate the complex nature of our increasingly AI-permeated world.

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Author biodata

Euan Bonner is an emerging technology researcher. He teaches media literacy and programming courses. He is an application developer, and his research interests include the creation of custom VR, AR and AI experiences for language education.

Ryan Lege teaches academic reading, media, and design courses. His research interests include using design to support learning, Maker Education, and leveraging technologies such as artificial intelligence (AI) and virtual reality (VR) to support educational outcomes.

Erin Frazier is currently lecturing at Meiji University in Tokyo, Japan. Her research interests include innovative materials design, the use of newer technologies to enhance education (AI, AR, VR), and the effects these technologies can have on sociolinguistics.