

GENERATIVE AI AS A DISRUPTOR OF LANGUAGE EDUCATION

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Abstract

Since the launch of ChatGPT, generative artificial intelligence (genAI) has widely affected society, but the full potential impacts on language education are yet to be felt. Most discourse on genAI in language education views it as a facilitator of existing practice, yet genAI has potential for disruptiveness. Based on the theory of disruptive innovation, this paper looks at three case studies of genAI use in education representing different levels of disruptiveness: the sustaining enhancing innovation of combining genAI and flipped classrooms, the sustaining challenging innovation of genAI-aided active learning, and the disruptive innovation of the teacherless classroom. Applying these models to TESOL, a program to increase the likelihood of genAI use in TESOL being beneficial is proposed.

Keywords

Generative AI, ChatGPT, innovation, disruption

INTRODUCTION

Since the launch of ChatGPT in November 2022, artificial intelligence text generators, also known as generative AI (genAI), have had massive impacts on society, such as threatening the careers of paralegals. Some teachers may be concerned that their own jobs will also be under threat in the future, since, in language education, the impacts of genAI are yet to be fully felt. Most educational institutions are continuing as usual, perhaps with the occasional warning about using genAI unethically or integrating genAI in a few lessons. Yet, genAI has the potential to disrupt language education and substantially change or even perhaps threaten our jobs as teachers. What the long-term impacts of genAI on language education will be is unclear, but the TESOL community would benefit from considering various possible future scenarios. From a utopian perspective, such future planning would enable the field to ensure that the greatest benefits accrue to innovations combining genAI and education. From a dystopian viewpoint, being prepared allows the field to resist changes that could ultimately be detrimental.

GenAI as a Disruptive Technology

Many of our everyday behaviors have changed massively in the last few years. Paying with cash is a rarity, we shop online, and we order taxis rather than wait for them. These changes are due to disruptive technologies. To examine genAI's potential disruptive impacts on TESOL, I will use the theory of disruptive innovation ([Christensen, 1997](#)) as a framework. This theory argues that new technologies lead to improvements in performance, but that there are different ways in which these improvements occur. Where the innovation fits with current practice, improvements are incremental and follow an established trajectory. These innovations are termed sustaining innovations. Such sustaining innovations work within the existing educational system, and aim to enhance existing practice in a structured intentional way.

Where the innovation leads to major changes in practice, often combined with shifts in beliefs and values, the innovations are disruptive. Initially there may be no clear improvements in performance, but the innovation may be adopted because of convenience or price. Traditional methods, institutions and assumptions may come under threat, challenging existing beliefs and values. It is in this possible replacement of values that disruption has the greatest long-term impacts. Taking the shift from film photography to digital photography as an example, as well as bankrupting Kodak and enabling social media platforms like Instagram, digital photography changed individuals' and society's perceptions. Individuals take a massively greater number of photos, share them widely even with strangers, and, in some cases, view the world as if through a lens. From a social perspective, daily life has become visually documented, a culture of sharing personal experiences has emerged, and the credibility of photos is not taken as given. Currently in education, genAI is acting as a sustaining technology facilitating normal educational practices, yet genAI has substantial potential for disruptiveness shifting social values. If genAI does disrupt the educational status quo, the impacts are likely to be technosocial, changing the nature of education, prioritizing previously marginalized judgment criteria and values, and forcing teachers to take on different roles.

It should be noted that the possibility of genAI disrupting education is not necessarily based on the effectiveness of genAI. From the history of previous technological disruptions, some disruptive technologies have taken over from traditional alternatives because the innovations were cheaper or more convenient, even if they did not perform as well ([Utterback & Acee, 2005](#)). Studying English at home through a smartphone is cheaper and more convenient than travelling to a school to sit in a room with a paid teacher, and a key argument for using genAI in education is its cost effectiveness ([Samala et al., 2024](#)). Other disruptive technologies have come to the fore through marketing and public relations which allowed them to gain a critical mass in the market

even though they were less effective than competitors. For example, in the 1970s and 1980s two competing formats of videotapes were being promoted. Betamax entered the marketplace first and had higher picture quality, but lost out to VHS which placed a greater emphasis on affordability and licensed more companies to produce recorders and movies. Even now, some language test providers boast of the quality of their AI evaluators with some implying that these are better than human markers. Whether such promotion of genAI changes markets remains to be seen. Finally, some innovations clearly underperform the existing alternatives on traditional measures, but have distinguishing features which create new markets, which themselves eventually disrupt the existing providers ([Hopster, 2021](#)).

GenAI-aided active learning

Similar to the flipped classroom approach, the second set of cases also distinguishes between specific external goals addressed through genAI personalized learning and intangible internal goals focused on in the classroom. In genAI-aided active learning, however, genAI tools such as ChatGPT are used to support and promote discussion, collaboration and interaction in the classroom, in addition to being the main tool for outside-class learning of external goals as in the flipped classroom approach. For example, students can use genAI to research real-world issues when engaged in problem-solving tasks; genAI can guide discussions to be more critical; and data collection and analysis in case study discussions can be facilitated by genAI ([Adiyono et al., 2025](#); [Jayasinghe, 2024](#)). Using genAI-aided active learning shifts teacher roles “from imparter of knowledge to stimulator of students’ learning motivation”, “from knowledge transmitters to technology users” and “from skills demonstrators to value guides” ([Zhang & Lin, 2024](#)).

The teacherless classroom

A common fear in education since the advent of effective genAI has been the replacement of teachers ([Chan & Tsi, 2024](#); [Selwyn, 2019](#)). While genAI has had very little impact on the education job market to date, there are estimates that 18% of jobs globally are under threat because of AI ([Cerrulo, 2023](#)), and the first indicators that teachers might not be exempt are becoming apparent.

At the forefront of using genAI as a tutor are the large nongovernmental education providers, such as Khan Academy (through Khanmigo) and Coursera, which are working on producing genAI tutors ([Kshetri, 2023](#)). Claims abound for tireless tutors who can engage in Socratic questioning, identify individual student’s unique problems, and provide personalized solutions. For example, the Khanmigo website (<https://www.khanmigo.ai/learners>) states that it provides “engaging and on-topic tutoring ... personalized tutoring ... with limitless patience, it guides learners to find the

answer themselves”. Currently, however, they appear to be more appropriate as a support for rather than a replacement of teachers.

A potentially more serious challenge became a news story in August 2024. A private secondary school in London is offering a programme that “entirely replaces traditional teaching for the core curriculum in the classroom with AI-driven adaptive learning platforms” ([Education Today, 2024](#)). While the school claims that their goal is “to enhance learning, not replace teachers”, the only courses with human teachers are art and sex education. To mitigate the potential harmful repercussions of a lack of social interaction, the school will hire learning coaches to monitor students and provide support if needed ([Martins, 2024](#)). The teacherless classroom clearly has potential for disruptiveness with massive potential impacts on the teaching profession, on the nature of education and how students learn, and on the institutional ecology of education.

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