

Utilizing the affordances of an AI bot to facilitate a grammar lesson in an EAP classroom

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Purpose

In this article, I critically analyze the integration of an artificial intelligence (AI) bot known as Pi (Personal Intelligence), introduced by Inflection AI in May 2023. The insights and implications that I share in this essay represent my observations and reflections as an English for Academic Purposes (EAP) professor at a public college in Ontario. These are not meant to present the results of a formal study but to create a dialogic space to problematize and conceptualize the applicability of Pi as a personal assistant bot to both the professor and intermediate-level EAP learners during in-person class activities. Although the bot has also been used for pedagogical and interaction purposes in class and as part of specific home assignments, this article will shed light on one type of grammar-based lesson that draws on the TATE model (Anderson, 2020) as a curriculum design framework, which is informed by the sociocultural perspective of language learning.

Theoretical and contextual background

This reflective and analytical exploratory essay reflects Kushkiev's (2022) position that "personal narratives can be powerful vehicles for introspection, reflection, and transformative action" (p. 155). As an EAP professor in Ontario, I conceptualize my professional role as a language facilitator who continuously reflects on the adaptation of pedagogical practice and adoption of heutagogical approaches to meet the individual learning needs of the students. Each EAP course should therefore not only develop the learners' discursive and discourse competences (Ding, 2019), but it should also weave their social identities, lived experiences, and individual analytical skills into the fabric of the lesson design and planning. Emerging research has indicated that carefully planned and purposefully integrated Generative AI (Gen AI) can support EAP learners' digital literacy skills (Hudson, 2023), oral skills development strategies (Wang et al., 2023), and enhance their learner autonomy and self-efficacy (Kuhail et al., 2023).



Wearing social constructivist theoretical lenses (Lantolf, 2000), I conceptualize language learning as a process of negotiating meaning and making sense of the course material and learning activities in a complex and multi-layered social milieu. This process can be subjectively interpreted by social agents as they re-negotiate their sense of achievement, belonging, and investment in the learning process. EAP courses, as college and university pathways and bridging programs, are designed according to specific learning outcomes that place the EAP learners' developing language and discourse abilities at the centre of curriculum design and lesson planning. In addition to enhancing learners' intercultural and interpersonal critical thinking abilities, research and study skills (BC TEAL, 2013), EAP courses should also help students develop and hone their discursive competencies (Hyatt, 2015) to be able to navigate their higher studies more meaningfully.

Colleges in Ontario provide academic training to a diverse body of learners (Douglas & Landry, 2021). This important induction into the academic community of the institution (Hyatt, 2015) recognizes the pivotal role of social interaction, learner autonomy, and continuous reflection. A growing number of studies on ChatGPT, the most commonly analyzed Gen AI bot, have indicated that the purposeful and ethical integration of such AI tools holds the potential to support and enhance learners' autonomy and language abilities (Liu et al., 2022). Guided by the study results and implications from research in other EAP contexts, I integrated Pi.ai into the stages of a grammar-based lesson based on the TATE model (Anderson, 2020). In the following sections of this article, I will justify my decision to select Pi and the TATE lesson design frame, present my reflections on the potential benefits of leveraging an AI tool for EAP learning, and conclude with specific recommendations for further exploration of this technology in similar settings.

Rationale for selecting Pi and utilizing the TATE model

The affordances of AI have been integrated into learning management systems (LMS) for several decades. However, Generative AI (Gen AI), as a subset of machine learning and deep learning, has only gained prominence in education since the introduction of ChatGPT in November 2022. The number of studies that explore its capabilities as a chatbot and the risks it poses to academic integrity have grown exponentially. Numerous other bots have also been introduced and made available to educators. However, the integration of AI bots in EAP contexts has received much less interest in the literature, with the majority of studies being based in Asian contexts.

In May 2023 Inflection AI, a California based technology company, introduced a new bot- Personal AI: Pi, which was advertised as the 'first emotionally intelligent AI' (Pi.ai/onboarding). Despite the promising contentions that Pi can act a "coach, confidante, creative partner, or sounding board" (Inflection.ai, para.



2), this bot remains ostensibly understudied in the area of EAP. To the best of my knowledge, this is the first reflective attempt to study its capabilities in a Canadian EAP classroom.

I became interested to explore the affordances of this tool because of its ability to generate concise responses “in a natural, flowing style” (Inflection.ai/press, para. 1) with an embedded capability to emulate human-like conversation, show empathy and traits of emotional intelligence (EQ). Such features demonstrate an immense potential to support EAP learners in all four language skills, language systems and pragmatic competences. At the same time, I am wary of the risks to privacy and company’s underexplored commitment to AI companionship because Pi is not immune to hallucinations like any other AI bots. I am also cautious of some promising expectations for being “a game-changer” in EAP (Djelal, 2023), so I subscribe to the more cautious position that it can enhance EAP learners’ engagement with the new target language and support them with their developing receptive and productive skills when purposefully integrated into the learning experiences.

There are very few examples and reflections available in the published works that demonstrate how Pi can be leveraged to complement the teaching and cognitive presence (Garrison et al., 2000) in an EAP classroom. The creators of this bot have adeptly foregrounded the essential role emotions play in teaching and learning another language (Kushkiev, 2019). I believe their conscious attempts to train the bot to be more emotionally intelligent and responsive to the lived experiences and social identities of its users distinguish this tool from its counterparts. I believe that Pi possesses the potential to be integrated into EAP lessons, and this article provides a starting point for EAP teachers to conceptualize this bot’s possible use in their teaching contexts.

Lesson objectives and overview of TATE

The observations presented in this article are based on facilitating an intermediate EAP class in Winter 2024. The lesson aims were to learn and practice the meaning, structure, and use of the verb ‘to hope’ in the context of being a newcomer to Toronto. The class consisted of 20 learners from diverse sociocultural, linguistic, and educational backgrounds. Based on my observations from previous classes, some were more comfortable using technological and Web 2.0 tools when doing the practice tasks, while others preferred to handwrite their answers to the tasks on paper. Before introducing Pi to the learners, I did not have an understanding as to which AI bots, if any, they had previously used.

For this reason, I decided to utilize the TATE model: Text, Analysis, Task and Exploration (Anderson, 2020), as it provided a lesson template for an integrated skills lesson that can also focus on new grammar or vocabulary. Like any other model in English language teaching, it can be better suited for some learning



contexts than others. This model reflects current research on social constructivist approaches to language teaching and integrates meaning-based and form-based tasks in authentic scenarios. I also consider its flexibility and versatility in lesson stages, as well as the opportunity for explicit and implicit grammar presentations, to be its major advantages. Because I was trying a new bot for the first time in my EAP classroom, I needed a current lesson design framework to ensure the learning outcome would be addressed in each stage of my lesson.

Phase	Description	Examples of potential implicit processes	Examples of potential explicit processes
Text^a	Receptive skills practice through meaningful engagement with a written or aural text	Lexical priming Reinforcement	Inferring meaning from context
Analysis^b	Learner- or teacher-led focus on target features (TF) of lexis or grammar related to the text and/or task	Noticing Translanguaging Proceduralisation activities	Raising awareness Focus on lexis Form-function focus Contrastive analysis
Task^c	Meaningful, mainly productive skills practice that may include opportunities to use lexis or grammar from previous phases	Pushed output Negotiation of meaning Translanguaging Automatization of TF	Use of TF (optional) Incidental form focus
Exploration^d	Evaluation, review and form-focus responsive to task success and challenge	Uptake / Noticing the gap Reinforcement	Raising awareness Emergent language focus Reflection Planning for future

From: Anderson, J. (2020). The TATE model: A curriculum design framework for language teaching.

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Integrating Pi into TATE lesson stages

In this section, I present the integration of Pi into each of the stages of the TATE model.

Text: The learners navigate to the ‘Learn a new language with Pi’, or a similar tab, on Pi.ai and enter the prompt, ‘I’m an EAP student at an intermediate level of my language proficiency at a public college in Toronto. Generate a 400-word text about the hopes of a newcomer to the city.’ The students are then given time to read the text, look up the meaning of the new words by asking Pi in order to understand the story. They are then invited to summarize their text in pairs or small groups and compare how similar the information is. The bot usually creates a slightly different response even if the same prompt is entered numerous times. The learners can add more details about their prior learning experiences to the prompt to receive an even more personalized response. If time allows, the learners can exchange their devices and read their partners’ text for further reading practice.

Figure 2

I’m an EAP student at an intermediate level of my language proficiency at a public college in Toronto. Generate a 400-word text about the hopes of a newcomer to the city.

Arriving in the bustling metropolis of Toronto as a newcomer, one cannot help but feel a mixture of excitement and trepidation. Having enrolled in an EAP program at a reputable public college, I am eager to build upon my language proficiency and fully immerse myself in this culturally diverse city. My hopes for this new chapter in my

From: [Pi.ai/talk](https://pi.ai/talk)

The students then enter the prompt, *'Create five reading comprehension questions based on this text.'* They work alone to find the answers and then discuss them with a partner. The teacher monitors and assists as necessary. At the teacher's signal, the students enter the prompt *'Can you provide the answers to these questions?'* and are given time to review the answers.

Analysis: Now that the students have become more comfortable with the meaning of the words and details in the text, they can focus on the new target language. The teacher can provide a paper copy of a sample text on this topic and display it on the screen. Alternatively, the students can continue to work with the text on their device. They are invited to identify and type or handwrite in their notebooks all sentences that include the word 'hope':

Samples Sentences:

1. You likely have many hopes for your new life here.
2. Newcomers often hope to connect with others who share a similar cultural heritage.

One useful approach to facilitating the learners' ability to notice the meaning and form of the verb 'to hope' is to ask concept-checking questions (CCQs):

- Is the word 'hope' used as a noun or verb?
- Does it refer to a situation in the past, present, or future?
- When it is used as a verb, is it followed by the base form of the other verb?
- Can the verb 'hope' be used in past or future verb tenses?

If some explicit explanation or clarification is needed, the teacher can now explain the meaning and use of the target language in this context. After that, the learners enter the prompt, *'Explain how the verb 'to hope' is used'*. They read the bot's responses and ask the teacher any further clarifying questions. The teacher uses the same prompt on the screen and asks the learners how they understand the bot's definition and examples. For instance, the bot may use this verb in the continuous tense, but the learners know that 'to hope' is a state verb. The teacher should monitor the process and support each learner as needed.



Figure 3

The verb "to hope" is used to express a desire or wish for something to happen or be true, often with an expectation that it is possible or likely to happen. It refers to a feeling of optimism or expectation about a particular event or outcome in the future.

Here are some key ways to use the verb "to hope":

1. **Present tense:** In the present tense, "hope" is used to express a current desire or wish. For example:
 - I hope it doesn't rain tomorrow.
 - We hope you have a great time at the party.
 - She hopes to graduate with honors.
2. **Past tense:** In the past tense, "hope" is used to talk about desires or wishes that were held in the past. For example:
 - I hoped you would come to my birthday party.

From: [Pi.ai/talk](https://pi.ai/talk)

Task: This stage should provide “a meaningful opportunity for extensive productive skills practice” (Anderson, 2020, p. 7). It can also be extended as a project-based task in which the student will potentially rely on their grasp of the new grammar from the analysis stage. The learners can first do some restricted practice tasks, such as filling in the blanks with the correct form of the verbs. They enter the prompt ‘*Create 10 sentences with fill-in the blanks to practice the meaning, use, and form of the verb ‘to hope’.*’ If the students type their responses, they can ask the bot to check if their answers are correct.

The students can now work in small groups and use the bot to generate ideas for speaking and practice using the new grammar focus. They enter the prompt ‘*Create a task for some speaking practice using the verb ‘to hope’ in the context of being a newcomer to Toronto.*’ It is important that the teacher monitor the discussions and assist as needed. In case a learner is not comfortable interacting with the bot, the teacher can provide them with a different task and adapted instructions. The teacher can also observe how effective

the learner's engagement with the bot is and how they use the new target language during the productive task.

Figure 4

'Create a task for some speaking practice using the verb 'to hope' in the context of being a newcomer to Toronto.

Task: Newcomer's Hopes in Toronto - Speaking Practice

Imagine you have just moved to Toronto and are excited to share your hopes and aspirations with a new friend you've met in the city. You'll be using the verb "to hope" to discuss various aspects of your new life, such as adapting to a new culture, improving language skills, building connections, exploring the city, and engaging in personal growth.

Instructions:

1. Work in pairs and take turns introducing yourselves as

From: [Pi.ai/talk](https://pi.ai/talk)

Exploration: For this stage, the teacher will not utilize the bot so that the learners can feel a sense of confidence as they normally would in a classroom setting without the integration of AI bots. The teacher can again ask concept-checking questions to ensure the learners understand the meaning, use, and structure of the new grammar focus. The learners can share their experience using the bot to assist the teacher with the creation of tasks and facilitation of in-class discussions. Another possible alternative for the students is to ask the bot for extension activities to practice the new words or even create a daily training plan with Pi that can tutor the learners on any aspect of the meaning, pronunciation, or use of the new words and grammar language. To illustrate, the learners can download the Pi application on their phones, read aloud sentences or words from the text, and ask Pi if their pronunciation is correct. Pi can also correct their grammar and recommend practice sentences when suitable prompts are used. Before introducing Pi to

the class, I demonstrated its different capabilities on my phone and provided them with a list of sample prompts they could adapt for their specific needs.

These kinds of meta-tasks (Anderson, 2020) can take the form of self-reflection, peer feedback and discussion, or peer review activities to be completed as a home assignment or during the following class. The model allows the flexibility to briefly switch back to any of the previous stages to ensure every learner has a proper grasp of the new grammar. The interface of the bot is regularly updated, but once the learner has signed up with their email account, the bot will ‘remember’ their previous conversations and use that record when generating its responses to the prompts.

This lesson plan should initially be utilized with learners in a classroom setting to be able to provide more critical and constructive feedback and conceptualize new avenues to explore the integration of the bot into regular classroom learning activities. The teacher can initiate a class discussion, informed by their observation of the students’ work during the previous stages. These interactions can serve as a dialogic and learning space to plan their future lessons, in which the bot can be fully or partially integrated.

Concluding thoughts and implications for EAP teaching practice

Although I have integrated Pi into several of my EAP lessons, I have become aware of its immense pedagogical significance when carefully integrated into the lesson stages. My position is that not all learners feel equally comfortable or willing to use the bot because this places more responsibility on them, so they need to rely on their own skills as the teacher only supports the process. It is also important to provide options and alternative ways to complete the tasks to meet the needs of all EAP students.

The introduction of this bot has created an opportunity for both professors and learners to experiment with Gen AI through Pi, which can generate responses that are shorter, more personalized, and less robotic. Although I have not explored any specific aspect of digital companionship, nor have I suggested replacing classroom instruction and facilitation with the bot, I believe this tool can be trained to support EAP learners with pronunciation challenges, explanations of vocabulary and grammar, and the generation of sample texts and practice tasks. More importantly, Pi can be the preferred AI tool to enhance learners’ autonomy, independent learning, and discursive capabilities that are essential as they navigate their academic journey in the Canadian higher education system.



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