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ChatGPT as an AI L2 Teaching Support: A Case Study of an EFL Teacher



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Abstract

The present study investigates the potential of ChatGPT as an L2 teaching support and aims to explore the extent to which this Generative AI-powered tool is helpful for English as a Foreign Language (EFL) teachers. Therefore, this exploratory single instrumental case study followed an EFL teacher using ChatGPT for seven months, from January to June 2023, as an aid for her English classes in a private language school in Spain. Data was collected from her ChatGPT history in relation to her prompting tasks, from outputs received from her lesson plans when she implemented ChatGPT in class, and from a semi-structured post-interview. The analysis followed a qualitative approach using thematic analysis of the data to identify the type of support received by ChatGPT and to determine the level of reliability and helpfulness of the outputs. The results indicate that ChatGPT offers significant support to EFL teachers in planning and designing lessons, and implementing ChatGPT in lessons and assessing learner's writing. Our data highlights the potential of ChatGPT as a support for EFL teachers as long as they possess specific AI competencies, such as prompt crafting to obtain useful and meaningful outputs, and critical thinking, together with EFL teaching knowledge, to recognize inaccuracies and identify relevant outcomes.

Keywords: *Generative AI, ChatGPT, prompt crafting, critical AI literacy, EFL*

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Introduction

With the release of ChatGPT in November 2022 Generative Artificial Intelligence (GenAI) has made a significant impact on our society. However, this phenomenon is not entirely novel. As early as 2019, UNESCO published a comprehensive report highlighting the rapid expansion of AI and its widespread implementation across various sectors of our lives. This report highlighted the potential advantages of AI in education, including enhanced learning, assessments, and teaching support, while also expressing concerns about its potential impact on the educational landscape, emphasising the need for the regulation of AI development and implementation within the context of education (UNESCO, 2019).

In a later UNESCO document, Miao et al. (2021) define GenAI tools as artificial intelligence systems designed to create new and original content from trained data. This can include generating text, images, video, music, code and even 3D models. One such GenAI system is ChatGPT, which is large language model (LLM) by OpenAI, a variant of the GPT (Generative Pre-trained Transformer) model, and is trained on a massive amount of text data to generate human-like text. This chatbot has been trained on a large dataset of text from the internet and can be used for a variety of tasks, such as generating questions and answers, summarising text, translating from one language to another, and many others. In fact, Sabzalieva and Valentini (2023, p. 9) summarise the multiple roles that ChatGPT could play to augment teaching and learning, such as a collaboration coach, guide on the side, personal tutor, co-designer, or motivator, among others.

ChatGPT in Education

Some authors have already shown that ChatGPT opens a wide field of possibilities for teaching assistance and learning processes (Cooper, 2023; Gill & Kaur, 2023; Sabzalieva & Valentini, 2023; A. Zhu et al., 2023). Most authors have concurrently warned us to be aware of some challenges in education (Eke, 2023; Meyer et al., 2023). They state that all agents involved—technical developers, policymakers in academic institutions, publishers, teachers, and students—must take responsibility for ChatGPT's good use and initiate a process of change to ensure a good integration in the teaching context. It seems unavoidable that the advent of GenAI offers transformative potential in the field of education. Although still in the early stages of an educational shift, we have to assume that GenAI is already playing a crucial role in education (Cooper, 2023), and we must draw up guidelines for using such GenAI tools and modify our teaching and assessment practices accordingly (Kohnke et al., 2023).

Most of the studies conducted to date have also highlighted the potential drawbacks of the use of ChatGPT, mainly due to ethical issues, information bias and low-quality information (Cooper, 2023; Gill & Kaur, 2023; Meyer et al., 2023; Tenhundfeld & ChatGPT, 2023; Zhu et al., 2023). To date, some outputs generated by ChatGPT suffered from a lack of accurate in-text citations, which serves as both a limitation and a potential safeguard against the unrestricted use of AI to generate academic passages (Tenhundfeld & ChatGPT, 2023). Román-Mendoza (2023) also points out the presence of inaccuracies in some of ChatGPT's answers in the context of Spanish as a foreign language education.

Apart from the aforementioned drawbacks, some studies provide information on the benefits that ChatGPT can bring to education in general (Meyer et al., 2023) and to language education in particular (Muñoz-Basols & Fuertes Gutiérrez, 2024; Peachey, 2023). After a SWOT analysis of ChatGPT, Zhu et al. (2023, p. 149) propose a series of strategies that can harness the potential of ChatGPT in

education: using ChatGPT a) as a virtual tutor for answering student questions; b) as an assistant for creating learning materials; c) as expert support for completing complex tasks; d) as a virtual learning buddy; e) as a reflective learning tool; and f) as a stimulus for critical thinking.

In the context of teaching Spanish as a foreign language, Román-Mendoza (2023) points out that ChatGPT can be a good interlocutor for students to practise their language in interaction, but that the tool still presents problems in some cases of lexical imprecision or even spelling. Román-Mendoza (2023) adds that the strangest thing is that ChatGPT always seems to have to respond, even in some cases where the student's prompts are almost incomprehensible. All these problems may be because the development of the tool in languages other than English is less developed at present (Rudolph et al., 2023).

ChatGPT offers great opportunities for teachers and educational institutions to improve L2 language teaching. As stated by Hong (2023), we need to see ChatGPT as a learning tool and experiment with it to explore its affordances. This tool can save teachers a lot of time. By automating teaching tasks such as assessment and administration.

ChatGPT as an Assistant for Teacher Training

The good use of ChatGPT for teaching is necessarily linked to good teaching skills (Atlas, 2023; Kohnke et al., 2023). Thus, Eke (2023) and Kohnke et al. (2023) point out the need to establish training in the use of ChatGPT for both academic staff and students for optimal and responsible use. Providing staff and students with the necessary support and resources can help mitigate potential risks to academic integrity. Kohnke et al. (2023) identify specific digital competencies that teachers need to develop to ensure an effective use of ChatGPT (Table 1).

Atlas (2023, p. 105) also provides valuable suggestions for educators aiming to leverage ChatGPT for enhancing their professional growth: 1) experiment with the model in new and innovative ways; 2) research the potential applications of ChatGPT in industries that have not yet been explored; 3) share your insights and experiences with others through publications; 4) actively work to refine the model and its capabilities by fine-tuning it; and consider mentoring others or creating educational resources to help others learn about and work with ChatGPT.

Table 1 *Specific forms of digital competence needed to use ChatGPT (Kohnke et al., 2023, p. 12)*

Technological proficiency	<ul style="list-style-type: none"> • Be aware of the features of ChatGPT • Understand how ChatGPT works • Construct effective prompts and interact with ChatGPT • Troubleshoot challenges using ChatGPT in the classroom • Stay up-to-date with changes with ChatGPT
Pedagogical compatibility	<ul style="list-style-type: none"> • Think about and plan ways to use ChatGPT to enhance or transform language teaching and learning tasks • Implement tasks that use ChatGPT • Guide learners to use ChatGPT to use for self-directed learning
Social awareness	<ul style="list-style-type: none"> • Have a critical awareness of the drawbacks of ChatGPT and consider them when planning and implementing tasks • Inform learners of the risks, ethical issues, and drawbacks of ChatGPT

The Current Study

The main aim of the present chapter is to investigate the implementation of ChatGPT as a Generative AI teaching support tool by an English as a Foreign Language (EFL) teacher during a period of seven months, from January to June 2023. The study seeks to explore the teacher's utilisation of ChatGPT to enhance her language teaching tasks and her student's language learning experiences in the classroom. To achieve these general objectives, we formulated the following research questions:

- How did the EFL teacher integrate ChatGPT into her language teaching methods?
- How effective was ChatGPT in assisting the teacher in achieving her teaching goals?
- How did the teacher prompt ChatGPT to produce coherent and qualitative responses relevant to her teaching goals?
- What strategies did the teacher employ to validate the reliability of the information provided by ChatGPT?

It is hoped that the findings from this study will shed light on the potential benefits and limitations of incorporating AI-powered tools like ChatGPT in the EFL classroom and provide valuable insights for educators, researchers, and practitioners interested in AI-enhanced L2 language teaching.

Methodology

To address the research questions, this study adopts a qualitative approach (Dörnyei, 2007) of a single instrumental case study (Stake, 2003) to gain insights into the use of ChatGPT by an individual EFL teacher to support her teaching tasks. Thus, the research focus is on the potential of ChatGPT for EFL teaching purposes.

Participants

The selection of the teacher participating in this study responds to the criteria of convenience or opportunity (Dörnyei & Csizér, 2012). Researchers selected the teacher because she was one of the first EFL teachers in Spain to use ChatGPT actively (free version, GPT3) for her teaching in January 2023. Therefore, she agreed to share her chat history of ChatGPT and lesson plans for research purposes for seven months and to be interviewed afterwards.

The teacher in the present study has over ten years of experience in teaching second languages, mainly EFL and SFL, in various educational settings. Currently, she works at a private language school in Spain where Spanish students of all ages and levels attend to prepare for official Cambridge ESOL certifications. These students are the subsidiary participants of the study who are children (aged 4–12), teenagers (aged 12–18) and adults (aged 19 and above). She teaches several small groups of different English levels that range from A1 to C1 according to the Common European Framework of Reference for Languages (Council of Europe, 2001) descriptors with an average of 8 students per group.

Data Collection

Data was collected from three sources: a) the teacher's ChatGPT outputs in relation to her prompting tasks, e.g. designing lesson plans, developing materials, designing activities or exercises, correcting student's writings, etc.; b) the lesson plans in which she implemented ChatGPT in her lessons; and c) a semi-structured interview after the period of collecting data to analyse the teacher's perception of ChatGPT's effectiveness in assisting her day-to-day teaching tasks and the strategies the teacher

employed to validate the reliability of the information provided by ChatGPT. As content was the focus of the interview, a verbatim transcription was made for ease of reading.

Data Analysis

The data gathered from the teacher's ChatGPT interactions and lesson plans underwent a thorough analysis utilising thematic analysis techniques and tasks from the teacher's prompts. The data from the interview was used to yield insights into the teacher's perceptions of her usage of ChatGPT. Additionally, the responses generated by ChatGPT were evaluated to assess their coherence, accuracy, and relevance to the teacher's prompts. The classification of this data into thematic categories followed a bottom-up approach. Each researcher individually classified the typology of activities and prompts, and then a discussion session took place to reach an agreement.

After the first analysis of the prompts the teacher used, the teacher's actions and tasks using ChatGPT were categorised and divided into three main groups: 1) lesson planning – the tasks that helped her to plan her lessons; 2) lesson implementation – the tasks that she used ChatGPT with her students in the actual lessons; and 3) assessment – the tasks related to evaluation processes, e.g. correcting student's written assignments.

Results

Results are presented in three sections: focusing on the teacher's prompt crafting strategies; the tasks she performed using ChatGPT for her teaching purposes divided into the three categories mentioned above (planning, implementation and evaluation), and finally, the strategies she used to check the reliability of the outputs.

Prompt Crafting

Prompt crafting shows the ability of the teacher to ask ChatGPT to suit their teaching needs. Table 2 showcases the verbs used in the initial prompts crafted for lesson planning and assessment.

There is a clear evolution in the selection of verbs by the teacher for planning her classes, transitioning from using the verb '*suggest*' in January, when she was starting to interact with the tool, to employing more specific action verbs such as '*develop and provide*' or '*prepare and encourage students to engage in a lively debate*' in March, only two months later. Regarding the verbs for assessment, she started using specific actions to create rubrics and provide feedback and ended up using ChatGPT only to correct student's compositions.

Apart from the specific actions, the teacher used ChatGPT three times to design comprehensive lesson plans. These prompts were crafted as follows:

- *Design a comprehensive lesson structure for an advanced language course to sequence grammar, speaking, and writing exercises effectively. (January)*
- *Develop a lesson plan to work on Valentine's Day in the English as a foreign language classroom with intermediate-level students. Include activities and tasks to practice all four language skills and take into account the 5Es: engagement, exploration, explanation, elaboration, and evaluation. (February)*
- *Act as a language teacher preparing students for the FCE examination. Design a 60-minute lesson plan to help students prepare for the following speaking task: How difficult do you think it is for people to be successful in these areas of life? Friendships Work Parenting Sport Academic studies Talk together for about 2 minutes about the questions and ideas provided in the task. (February)*

Table 2 *Action verbs for the initial prompts*

Month	Specific Actions for Lesson planning (29)	Actions for Assessment (12)
January	<ul style="list-style-type: none"> • Suggest • Design • Propose • Select 	
February	<ul style="list-style-type: none"> • Choose and create • Present and provide • Choose and select • Develop and provide • Create and include 	<ul style="list-style-type: none"> • Create and include • Analyse, evaluate and provide feedback • Evaluate
March	<ul style="list-style-type: none"> • Prepare and encourage students to engage in a lively debate • Develop and craft follow-up questions • Choose • Create (2) • Present • Explain • Write (3) • How can I teach 	<ul style="list-style-type: none"> • Evaluate • Generate • Create • Develop
June	<ul style="list-style-type: none"> • Integrate • Create (2) • Develop • Design (2) • Provide (2) • Generate 	<ul style="list-style-type: none"> • Assess (5)

The specificity of prompts reveals that the teacher was trying to get more and better outputs. In January she asked for only one action to design a lesson plan but later in February prompted more actions and asked for details to home in on her teaching goals and needs, considering the specifications of her teaching context.

Likewise, the teacher's general prompt crafting evolved from simpler outputs generated in the early months of the study (January-February) to more complex ones, produced starting from March, when the teacher began to implement a five-step strategy, based on her experience with ChatGPT and aimed at fine-tuning her prompts, as depicted in figure 1 below.

- *Fill in the blank with the appropriate preposition: "She's interested ____ learning new languages." (January)*
- *Present a scenario where students need to write an email or letter to a friend or family member, asking for advice on a personal problem. Provide a writing task with a word limit and a clear outline of the content and structure. (February)*
- *Act as my private language tutor and come up with the right answers for the following gapped text (...) Provide a short explanation as to why those are the correct answers for an FCE (B2) student of the language. (March)*

The task in the first example is limited to requesting an exercise such as a “fill in the blanks”; while a month later, instructions were given for more complex tasks: creating a context (present scenario) in which students had to activate a productive skill (write an email or letter) to a specific recipient (friend or family) using specific communicative functions (asking for advice on a personal problem) with limitations in terms of word count, content, and structure. This progression continued into the following month of March when she asked ChatGPT to take on a specific role in designing the task for the First Certificate of English type of students of a specific level (B2).

As can be seen in the examples above, experimenting with ChatGPT and observing the results in the classroom allowed the teacher to make progress in the writing of her prompts, which led her to discerning patterns in the student’s responses, identifying areas of challenge or proficiency, and gaining insights into the function of the tool. All this knowledge helped her set up a five-step strategy to craft her prompts (Figure 1).

As for the teacher’s use of ChatGPT in class with her students, a variety of activity types were requested, as shown in Table 3. These prompts were created by the teacher but implemented by the students with the intention of teaching them how to formulate prompts to utilise the AI tool as a personal assistant in the second language learning process. The most frequent prompts used were those related to *Vocabulary* (10), followed by *Grammar* (4), *Writing* (3), *Reading* (3) and *Speaking* (3).

There is a clear progression in the prompts they use in class. For instance, in relation to vocabulary, they started by prompting only the specific meaning in a dictionary-like manner (*the meaning of the idiom ‘spill the beans’*). As time progressed, more complex actions were prompted, such as the creation of vocabulary lists for more specific contexts, coherent with the student’s level, to include communicative functions (*greetings, ordering food, asking for directions, and making reservations*). The same can be said about prompts related to reading, writing, or oral production. By increasing the complexity of her prompts in the classroom with her students, the teacher pursued a clear objective: to provide a variety of different language strategies so that students can see the wealth of language learning affordances ChatGPT offers.

In our data, *Pronunciation* and *Listening Comprehension* prompts were not used as ChatGPT 3.5 was primarily designed for producing written texts, although there are browsers that can be used for oral interaction with the tool that the teacher did not use.

Types of Tasks

The teacher prompted ChatGPT multiple tasks for her teaching purposes. Table 4 displays the variety and frequency of tasks collected from January to June 2023 according to student’s age and level, corresponding to the teacher’s classroom groups.



Figure 1 Enhancing Prompt Crafting: The Five-Step Strategy.

Table 3 *Student's prompts for in-class implementation*

Language Focus		Prompt Samples
Language Systems	Grammar	<ul style="list-style-type: none"> Fill in the blank with the appropriate preposition: "She's interested _____ learning new languages." (January) Correct the mistake in this sentence: "She don't have enough time to finish the assignment." (January) What's the correct form of the verb in this sentence: "If I _____ (have) more time, I would have finished the project earlier." (January) Act as my private language tutor and come up with the right answers for the following gapped text. Provide a short explanation as to why those are the correct answers for an FCE (B2) student of the language. (March) What's the meaning of the idiom "spill the beans" (January) Use the word "ubiquitous" in a sentence to describe modern technology. (January)
		<ul style="list-style-type: none"> Which phrasal verb can be used to complete this sentence: "I need to _____ the meeting due to a family emergency." (January)
		<ul style="list-style-type: none"> Compile vocabulary related to colours and basic shapes. (January) Create a list of words that describe various emotions and feelings. (January) Create a list of vocabulary related to daily routines, including activities that can be done in the morning, afternoon, and evening (February)
	Vocabulary	<ul style="list-style-type: none"> Compile a vocabulary list of words related to travel, such as transportation modes, accommodation types, and common phrases for asking directions. (February) Create a vocabulary list of words and phrases that describe hobbies, interests, and leisure activities. (March) Craft a list of useful phrases and expressions for travellers, such as greetings, ordering food, asking for directions, and making reservations. (March) Create a list of adjectives and nouns that you can use to describe physical appearance, personality traits, and emotions. Include some complex and advanced sample sentences. Put all the information together in a table. (March) Can you explain the main idea of the first paragraph in this reading passage? (January)
		<ul style="list-style-type: none"> What are the three reasons the author provides to support their argument in this text? (January) According to this passage, how does the character feel about the situation they are in? (January) Describe your favourite book and explain why you enjoyed reading it. (February)
		<ul style="list-style-type: none"> Write a formal email to your teacher explaining why you were absent from school yesterday. (February) Create a story beginning with the sentence: "It was a dark and stormy night..." (March) Compose a review of a movie or a book, giving your opinion on the plot, characters, and overall experience. (March) Role-play: Pretend we are at a restaurant, and I am a picky eater. Persuade me to try a new dish from the menu. (February)
	Reading	<ul style="list-style-type: none"> Imagine we are planning a weekend trip. Suggest an itinerary and what activities you would like to do. (March) Act as an X and have a chat with me about (topic). (March)
Language Skills	Writing	
	Speaking	

Table 4 *Frequency of tasks using ChatGPT*

Tasks	Children (4–11)			Teenagers (12–18)			Adults (19+)		
	A1	A2	B1	B1	B2	C1	B1	B2	C1
Lesson planning									
Curriculum and Content Suggestions	–	2	–	–	–	1	–	–	–
Activity Generation	–	4	3	2	3	2	2	3	1
Lesson Structure and Sequencing	–	–	–	1	–	–	1	–	–
Cultural Insights	–	–	–	1	1	–	–	–	–
Vocabulary Expansion	2	1	–	–	–	–	–	–	2
In-Class Lesson Implementation									
Real-time Q&A	–	–	–	3	1	–	–	–	–
Interactive Language Practice	–	–	1	2	4	2	–	–	–
Sentence and Text Editing	–	–	1	2	1	–	–	–	–
Vocabulary lists & tables	1	2	1	1	–	1	–	1	–
Assessment									
Automated grading, evaluation and feedback	–	1	1	1	1	1	1	1	1
Language proficiency tests	–	2	–	–	–	–	–	–	–
Reading comprehension tasks	–	1	–	–	–	–	–	–	–
Creative assessment	–	1	–	–	–	–	–	–	–

There were a total of 68 productions generated by ChatGPT, divided as follows:

- 24 prompts aimed at teaching children, 12 of which were devised for planning, 6 for in-class lesson implementation, and 6 for evaluation.
- 31 prompts aimed at teaching teenagers, with 11 for planning, 17 for in-class lesson implementation, and 3 for evaluation.
- 13 prompts aimed at teaching adults, including 9 for planning, 1 for in-class lesson implementation, and 3 for assessment.

The differences in the frequency of ChatGPT usage based on age and level are primarily due to the teacher's conclusion that the AI tool could be valuable for generating lesson plans, texts, materials, and other resources of low complexity, adapted to the age and proficiency level of learners at the elementary or intermediate level. In her experience, the texts and materials produced for advanced levels lacked relevance, deviated from the intended objectives, or were too superficial.

Furthermore, as the teacher stated in the interview, the materials contained in textbooks for children are often very limited. The use of ChatGPT represented an opportunity to expand and enhance didactic resources for classroom use. According to her experience, ChatGPT provides creative and easy solutions for children in the classroom, something that is not commonly found in textbooks.

Regarding the differences in frequency in the typology of actions, the number of prompts proposed for assessment is considerably lower, as minor modifications to the same prompt can be used to correct compositions at any level. Additionally, continuous assessment is a highly specific procedure that requires taking numerous variables into account. On the other hand, the increase in the number of prompts for classroom implementation is due to two main reasons. Firstly, the teacher observed a high willingness on the part of adolescent students to use AI in the classroom. Secondly, the teacher aimed to demonstrate to her students how to independently work with the L2 in context, using prompts that were written and verified by her.

Lesson Planning

The *Lesson Planning* section showcases how ChatGPT has become an indispensable ally for L2 teachers, as it considerably alleviates their workload. In the case of the current study, the EFL teacher asked the AI tool to perform the following tasks and actions to help her with her planning and designing activities:

1. Curriculum and Content Suggestions – ChatGPT provided ideas for:
 - lesson topics,
 - relevant materials, and
 - suggested activities to align with the curriculum.
2. Activity Generation – ChatGPT generated:
 - grammar and vocabulary exercises
 - quizzes and games
 - worksheets to reinforce language concepts or grammar rules.
3. Lesson Structure and Sequencing – It helped in:
 - organising the flow of the lesson and
 - suggested how to sequence different activities for better learning outcomes.
4. Cultural Insights:
 - It provided information about the culture and customs related to the language being taught.
 - It enabled the teacher to create culturally enriched lessons.
5. Vocabulary Extension:
 - It suggested new vocabulary words and phrases suitable for various proficiency levels.
 - It aided in broadening student's lexical repertoire, tailoring new word suggestions to suit various proficiency levels in the blink of an eye.

Below are two illustrative instances of tasks created by ChatGPT for lesson planning. These selected examples effectively highlight the tool's capacity to bridge the gap between intricate definitions and the student's cognitive and linguistic capabilities, as evidenced by the first case (Excerpt 1). In addition, as can be seen in the prompt provided to the ChatGPT in Excerpt 1, in March, four key steps of the 5-step strategy were already incorporated to achieve more effective outputs.

Excerpt 1.

Example of Lesson Planning (lesson structure). Initial prompt: *Can you explain the following concepts to my seven-year-old students? Matter, States of Matter and Properties of Matter.*



ChatGPT

Of course! I'll explain these concepts in a way that's easy to understand for your seven-year-old students.

Matter:

"Hey there, young scientists! Matter is everything around us that takes up space. Think about your toys, your chair, the air you breathe, and even you! All of these things are made of matter. Matter can be tiny, like a grain of sand, or big, like a mountain. It comes in different shapes, sizes, and even colors!"

States of Matter:

"Alright, let's imagine matter like a superhero that can change its form! Matter can be in three main forms: solid, liquid, and gas. Imagine an ice cube. It's solid and you can hold it. When the ice melts and turns into water, it becomes a liquid. And when you heat up water, it becomes steam, which is a gas. So, matter can be solid like ice, liquid like water, or gas like steam."

Properties of Matter:

"Now, let's talk about the special things that matter can do! These are called properties. Think about how a bouncy ball feels when you touch it. That's its texture. When you squeeze it, it's soft or hard. That's its hardness. When you let it go, it bounces back. That's its ability to bounce. These are all properties of the bouncy ball. Matter has lots of properties like color, shape, size, and even how it feels."

Remember, learning about matter, its states, and properties is like exploring a magical world of science! You can find matter all around you, and by understanding its different forms and properties, you'll become amazing little scientists! ✨🔬



The output offered by ChatGPT is in line with the teacher's request and the age and level of the students. This is why the teacher stated in the interview that:

ChatGPT played a crucial role in helping me brainstorm ideas and approaches for my lesson plans, especially for kids. Its ability to generate diverse content and examples allowed me to create lessons that were not only relevant to my student's interests but also catered to their individual learning needs. Additionally, ChatGPT's suggestions helped me add variety and creativity to my teaching materials, making the learning experience more enjoyable and productive for my students.

Excerpt 2 below shows the prompt elaborated by the teacher in June, being specific and fulfilling four steps, which indicates that she reached a level of mastery in the use of ChatGPT, and thus, the expected quality of the output. Equally noteworthy in this excerpt is the tool's skill in presenting information through visual synthesis and employing contextually fitting examples, such as songs or raps, to facilitate vocabulary acquisition in a manner that resonates with the core tenets of language instruction for young learners as exemplified.

Excerpt 2.

Example of Lesson Planning (Vocabulary extension). *Initial prompt: Generate a thematic vocabulary list for young learners, focusing on daily routines and activities. Include meaningful examples and a rap song.*

**ChatGPT****Thematic Vocabulary List: Daily Routines and Activities for Young Learners**

Verb Phrases	Nouns	Examples
Wake up	Bed	I wake up in my cozy bed every morning.
Brush teeth	Toothbrush, toothpaste	I brush my teeth with my blue toothbrush.
Take a bath	Bathtub	I take a bubbly bath in the big bathtub.
Eat breakfast	Cereal, milk	I eat yummy cereal with milk for breakfast.
Go to school	School, backpack	I go to school with my colorful backpack.
Play with friends	Playground	I love to play with my friends at the playground.
Have lunch	Sandwich, fruit	I have a tasty sandwich and juicy fruit for lunch.
Do homework	Pencil, paper	I do my homework with my sharp pencil and paper.
Watch TV	Television	I watch cartoons on the television after school.
Go to bed	Pillow, blanket	I go to bed with my soft pillow and warm blanket.

Meaningful Examples:

1. **Wake up:** In the morning, I wake up and stretch my arms.
2. **Brush teeth:** After breakfast, I brush my teeth to keep them clean.
3. **Take a bath:** I use soap and water to take a bath and feel fresh.
4. **Eat breakfast:** I eat cereal and drink milk for breakfast to start the day.
5. **Go to school:** I put on my shoes and backpack and go to school to learn.
6. **Play with friends:** At recess, I play games with my friends and have fun.
7. **Have lunch:** For lunch, I eat a sandwich and enjoy some fruit.
8. **Do homework:** After school, I do my homework with my pencil and paper.
9. **Watch TV:** Sometimes, I watch my favorite shows on the television.
10. **Go to bed:** At night, I snuggle under my blanket and go to bed.



Rap Song:

(Verse 1)

Wake up, stretch high, it's a brand-new day,
Brush my teeth, shiny white, in every way.
Take a bath, splashy fun, I'm squeaky clean,
Ready for the day, you know what I mean?

(Chorus)

Daily routines, activities so neat,
From morning till night, they can't be beat.
Eating, playing, learning too,
Young learners, we know what to do!

(Verse 2)

School time comes, with my backpack on my back,
Playing with friends, on the playground track.
Lunchtime is here, a sandwich, some fruit,
Fueling up my energy, isn't that cute?

(Chorus)

Daily routines, activities so neat,
From morning till night, they can't be beat.
Eating, playing, learning too,
Young learners, we know what to do!

(Verse 3)

Homework time, pencils out, paper in sight,
Watching TV for a while, everything's all right.
Bedtime arrives, with my blanket so snug,
Dreaming sweet dreams, like a cozy bug.

(Chorus)

Daily routines, activities so neat,
From morning till night, they can't be beat.
Eating, playing, learning too,
Young learners, we know what to do!

Creating a fun rap song can make learning about daily routines and activities engaging and memorable for young learners.

In addition, in the case of Excerpt 2, we can also see the capacity for creation, originality and coherence that the output provides. The examples of use offered are coherent throughout the actions requested by the prompt: the thematic vocabulary list offered is the one included in the examples, and the same one is integrated in the song.

Both creations were introduced into the classroom and yielded impressive results, as shared by the teacher during the interview:

ChatGPT's assistance in developing instructional materials was invaluable. It provided me with a vast range of resources and authentic language examples that I could use to address different language proficiency levels among my students. With ChatGPT's support, I could tailor materials to suit both struggling learners and those who needed additional challenges. This personalization improved student's engagement and facilitated their language acquisition process.

The resources proved to be immensely helpful in enhancing the student's comprehension and retention of new vocabulary and concepts.

In-Class Lesson Implementation

ChatGPT in-class lesson implementation empowered the EFL teacher by enabling real-time Q&A and interactive language practice. With its sentence and text editing capability and its vocabulary lists and tables feature, ChatGPT supported her students in widening their vocabulary as well as honing their writing skills, enhancing sentence structure, and refining compositions.

1. Real-time Q&A – ChatGPT assisted in:
 - answering student questions during the lesson,
 - providing immediate clarifications and explanations.
2. Interactive Language Practice – It engaged in:
 - simulated conversations,
 - role-playing, and
 - language practice with students to improve their speaking/writing (productive) skills.
3. Sentence and Text Editing – ChatGPT helped students by suggesting improvements to their sentences and compositions.
4. Vocabulary lists & tables – It generated:
 - comprehensive and tailored vocabulary lists, categorising words based on themes, topics, or difficulty levels,
 - organised tables that display words, their meanings, example sentences, and relevant contextual information.
5. Reading comprehension – ChatGPT:
 - generated a text requiring students to comprehend and condense the main ideas,
 - asked students to identify the primary concepts or themes in a passage, helping them grasp the central message,
 - had students infer the meaning of specific words or phrases from the context of the passage,
 - challenged students to predict what might happen next in the story based on the current events in the passage,
 - generated sentences with missing words and asked students to fill in the blanks with appropriate words based on the context,
 - had students relate the themes or concepts from the passage to real-world situations or their own experiences.

Below are two examples of outputs generated by ChatGPT based on two prompts crafted by the teacher during the study (Excerpt 3 and Excerpt 4). The examples also demonstrate an evolution in terms of prompt formulation, as can be observed in both excerpts:

Excerpt 3.

Example of In-Class Implementation (Vocabulary Extension). Initial prompt: Compile vocabulary related to colours and basic shapes.



ChatGPT

Sure, here's a compilation of vocabulary related to colors and basic shapes:

Colors:

1. Red
2. Blue
3. Green
4. Yellow
5. Orange
6. Purple
7. Pink
8. Brown
9. Black
10. White
11. Gray
12. Gold
13. Silver

Basic Shapes:

1. Circle
2. Square
3. Triangle
4. Rectangle
5. Oval
6. Diamond
7. Pentagon
8. Hexagon
9. Octagon
10. Sphere
11. Cube
12. Cone
13. Cylinder
14. Pyramid

Remember, when teaching colors and shapes, it's useful to provide visual aids, like colored objects and shape cutouts, to reinforce the concepts.

ChatGPT not only provided the requested information but also gave the teacher advice on how to bring the vocabulary to the classroom and facilitate both understanding and learning (similar suggestions that also appeared in Excerpts 1 and 2), which the teacher also outlined in the interview:

By incorporating ChatGPTs' suggestions and advice, I noticed an increase in student participation and enthusiasm for language learning.

In Excerpt 4, we observe that as the teacher became more familiar with the tool, she increased the complexity of what she asked for in terms of formal aspects of the language.

In this case, she asked ChatGPT to give her the information in a spreadsheet so that she could take it back to the classroom as it was.

Excerpt 4.

Example of Lesson Planning (Vocabulary Extension). *Initial prompt: Create a list of adjectives and nouns that you can use to describe physical appearance, personality traits, and emotions. Include some complex and advanced sample sentences. Put all the information together in a table.*



ChatGPT

Sure, here's the information organized in a table format:

Category	Adjectives	Nouns
Physical Appearance	Beautiful, Handsome, Attractive	Appearance, Features, Physique, Complexion, Figure
Personality Traits	Kind, Generous, Humble, Compassionate	Personality, Character, Nature, Temperament, Disposition
Emotions	Happy, Sad, Excited, Anxious, Content	Emotion, Feeling, Mood, Sentiment, State of Mind

Sample Sentences
Her elegant appearance was enhanced by her striking blue eyes and flowing, golden hair.
Despite his confident demeanor, he harbored a deep-seated anxiety about public speaking.
Maria's compassionate nature led her to volunteer at the local shelter, where she helped the less fortunate.
The artist's creative personality was evident in the intricate and imaginative paintings he produced.
James' ambitious drive to succeed propelled him to achieve remarkable feats in his career.

Presenting the information in a table format makes it easy to compare and reference different elements.

The progression in prompt crafting is notably discernible. As exemplified in Excerpt 3, when guided by the provided instructions, the tool generates a mere list of terms, which offers limited value in terms of acquiring new vocabulary in a second language. Conversely, Excerpt 4 unveils a meticulously organised table categorised by usage examples.

This method proved instrumental in facilitating substantial and enduring comprehension among students, a conclusion reaffirmed through subsequent objective assessment tests administered by the teacher.

Assessment

The assessment section highlights ChatGPT's pivotal role in objective grading through automated grading, providing valuable writing evaluation feedback, and assessing student's written production and reading comprehension skills. Moreover, its ability to generate language proficiency tests, tailored to specific language levels, enhanced the comprehensive evaluation of student's language abilities. By utilising these ChatGPT features, the teacher could streamline assessment processes and offer more tailored feedback to students. The teacher used ChatGPT for the following tasks on assessment in two ways:

Category 1:

Automated Grading, Evaluation, and Feedback (Tasks 1, 2 and 3)

These tasks involved the automated assessment and evaluation of student's work, along with providing feedback. Both tasks centred around leveraging ChatGPT's capabilities to streamline the grading process and enhance the efficiency of evaluating student's language skills.

1. Automated grading, evaluation, and feedback – ChatGPT was used to:
 - automatically grade assignments, essays, or other written tasks submitted by students; create prompts;
 - design assessment rubrics;
 - assess the material, grammar, word choice, and flow by devising imaginative and captivating evaluation exercises. For instance, educators could prompt students to craft a dialogue between two figures from history, fashion a poem, or create a brief narrative employing targeted vocabulary and grammatical constructs; and
 - provide instant feedback, highlighting areas that need improvement.
2. Language proficiency tests – ChatGPT:
 - generated language proficiency tests for students at different levels. These tests can cover various language skills, such as listening, speaking, reading, and writing; and
 - created questions that assess grammar, vocabulary, comprehension, and more;
 - gauged student's progress, identified areas of improvement, and tracked their language development over time.
3. Creative assessment – ChatGPT assisted in:
 - providing prompts that encourage students to showcase their language skills in imaginative ways, making the assessment process more enjoyable and fostering creativity in language learning.

To ascertain the credibility of ChatGPT in the assessment and scoring of writings created by students for the Cambridge assessment, a strategic approach was adopted. This involved employing the correction models outlined in the official Cambridge Handbook for Teachers (2023).

By doing so, the outcomes generated were systematically juxtaposed with the revisions carried out by adept examiners who possess proper training and accreditation. These examiner corrections are outlined by Cambridge University Press & Assessment (2023, p. 39). It should be noted that the prompt is much more specific than the ones so far and that it is in compliance with the 5-step strategy.

Excerpt 5.

Example of Assessment. Initial prompt: *This is an essay written by an adult FCE (B2) candidate based on the following task: In your English class you have been talking about the environment (...) Assess the essay based on the Cambridge FCE writing scales and give a mark out of 5 for each of the evaluated items (Communicative achievement, Language, Content, Organisation & Overall), plus a general mark out of 20 (...)*

**ChatGPT**

Certainly, I'll assess the essay based on the provided criteria. Here's the breakdown of the evaluation:

Communicative Achievement (out of 5): 3

- The essay addresses the topic of the environment, discussing pollution, transport, and rivers/seas.
- The candidate's point of view is somewhat clear, emphasizing the importance of changing attitudes and taking action.
- The essay includes an introduction and mentions three points (transport, rivers/seas, personal contribution) as requested.

Language (out of 5): 2

- The language usage is adequate, but there are several errors and inconsistencies throughout the essay.
- Vocabulary and expressions are sometimes imprecise.
- There are issues with word choice, agreement, and tense consistency.

Content (out of 5): 3

- The content covers the provided points (transport, rivers/seas) and introduces the candidate's own idea about personal contribution.
- The essay provides some explanation about the impact of transport and pollution on the environment.
- The point about factories and plants polluting rivers and seas is mentioned, but it lacks detailed explanation.

Organisation (out of 5): 2

- The essay has a basic structure with an introduction, three main points, and a conclusion.
- There is a lack of smooth transitions between paragraphs, making the essay somewhat disjointed.
- The candidate's own idea (personal contribution) could have been elaborated upon more to enhance the essay's structure and flow.

Overall (out of 20): 10

- The essay demonstrates an attempt to address the topic with some coherence.
- While the candidate makes an effort to present points and reasons, there are significant language and organization issues that hinder the clarity and effectiveness of the essay.

Please note that this assessment is based on a general overview and without considering the official Cambridge FCE writing scale's specific criteria. It's recommended to consult the official assessment guidelines for a comprehensive evaluation.

The output of Excerpt 5 shows a discrepancy of three points between the official correction and the assessment offered by ChatGPT in the final score. Specifically, in the '*Content*' category, the tool attributed a score of 3, diverging from the official score of 4. Similarly, within the '*Language*' segment, the tool conferred a score of 2 in contrast to the officially designated 3, as indicated in the official handbook. Furthermore, within the '*Organization*' aspect, ChatGPT assigned a score of 2 instead of the established official score of 3 to the candidate.

Category 2:*Student Self-Assessment (Task 4)*

These kinds of tasks were for students to evaluate their own learning in more creative aspects of language, like understanding what they read, thinking critically, and expressing themselves creatively. These tasks focused on helping students understand and use language more deeply.

4. Self-assessment on reading comprehension and writing – ChatGPT:

- designed a portfolio to help students self-assess on reading comprehension and writing;
- created multiple-choice questions that assess comprehension of details, characters, or events in the reading;
- generated statements based on the passage and asked students to determine if they were true or false;
- crafted questions that required students to use new vocabulary words correctly in sentences related to the passage;
- had students arrange sentences or events from the passage in chronological order;
- created questions that prompt students to analyse the personalities, motivations, and actions of characters in the reading;
- created questions that required students to interpret metaphors, symbolism, or figurative language in the passage; and crafted questions that prompted students to evaluate the author's arguments, perspectives, or intentions.

Excerpt 6 below is an illustrative instance of a creative assessment output ingeniously generated by ChatGPT. As depicted, when the goal is to forge creative assessment tools tailored to a specific subject matter, the tool emerges as an invaluable ally. Both the complexity and substance of the portfolio tasks harmoniously resonated with the student's language proficiency level and the predetermined objectives. These objectives, which had been originally crafted by ChatGPT at the beginning of the instructional unit, underscored the tool's foresight in meeting educational objectives.

Excerpt 6.

Example of Assessment. Initial prompt: *Can you create a portfolio to help my students (aged 6–7 with a beginner level of the L2) self-assess their knowledge and understanding of the subject of states and properties of matter?*



ChatGPT

Certainly! Here's a simplified self-assessment portfolio tailored for your young students aged 6-7 with a beginner level of the L2 (second language) to self-assess their understanding of states and properties of matter:

Title: My Science Portfolio - Exploring States and Properties of Matter

Introduction:

Hello, curious scientists! In this special portfolio, you'll show what you've learned about matter, its different forms, and how things can be different. Let's have fun while we learn!

Section 1: What I Know:

Draw a picture or write a sentence about what you've learned about matter, like solids, liquids, and gases. Use colors and pictures to show your understanding.

Section 2: Rating My Knowledge:

Look at the smiley faces below. Draw a happy face on the smiley that shows how well you understand each thing:

- 😊 = I understand a lot
- 😐 = I understand a little
- 😞 = I need more help

- Solids, Liquids, Gases
 - 😊 😐 😞
- Changes in Matter
 - 😊 😐 😞
- What Things are Made of
 - 😊 😐 😞

Section 3: My Favorite Experiment:

Draw or write about one experiment you did that showed something about matter. What did you do? What happened? What did you learn?

Section 4: My Special Moment:

Draw or write about a time when you learned something new about matter. Maybe it was in class, from a friend, or by exploring. What was the new thing you learned?

Section 5: My Goal:

Write or draw one thing you want to learn more about when it comes to matter. Maybe you want to know more about liquids, or how things change. What do you want to know more about?

Section 6: Creative Art:

Create a colorful drawing that shows solids, liquids, and gases. Use your imagination to make it fun and interesting!

Conclusion:

Congratulations, young scientists! You've shown your understanding of matter and its forms in this special portfolio. Keep exploring, asking questions, and discovering new things. You're on your way to becoming amazing science explorers!

This simplified portfolio is designed to engage young learners and encourage self-assessment in a way that's understandable and enjoyable for their age and language level.

The use of ChatGPT in assessment tasks for students satisfied the teacher due to the creative alternatives it offered, as seen in the portfolio proposal presented in Excerpt 6. The sections presented, the incorporation of emoticons, and the use of clear and appropriate language for the age and level of the students should be highlighted. The teacher pointed out the following in the interview:

I used ChatGPT outputs as a reference to provide targeted feedback to my students. While I always ensured to review and validate the suggestions, ChatGPT's assistance saved me time and allowed me to focus more on providing personalised feedback to each student.

Reliability of Outputs

The quality of the information offered by ChatGPT, its veracity, and the possible biases in terms of gender, origin or any other type should also be considered. Developing critical thinking about the outputs provided is a strategy that the teacher considered from the start. In the interview, she stated the strategies she employed to validate the reliability of the information provided by ChatGPT.

Firstly, we encouraged students to cross-reference the information provided by ChatGPT with reputable and credible sources. By comparing the information from multiple reliable sources, we could identify any discrepancies or inaccuracies.

It is noteworthy that she incorporated her students in the tasks of reviewing the information.

Secondly, we fact-checked the information generated by ChatGPT using reputable fact-checking websites or databases. This helped us verify the accuracy of the data and claims made by ChatGPT.

She also involved other colleagues from her school in the task of reviewing the information.

In addition, teachers, as well as students involved in the experiment, were encouraged to review each other's work and provide feedback. This collaborative approach allowed for critical evaluation of the information generated by ChatGPT from different perspectives.

This review considered possible biases as well as the veracity and quality of the information.

We were aware that AI language models like ChatGPT may have inherent biases in their training data. To address this, we actively looked for any biases in the generated content and corrected or supplemented it with a more balanced perspective when needed.

I supervised the output of ChatGPT closely to ensure that the language used was appropriate, coherent, and grammatically correct. Moreover, the questions or prompts given to ChatGPT were carefully crafted to elicit accurate and relevant responses. Ensuring that the prompts were based on accurate information contributed to the overall reliability of the responses.

This process of reviewing the information, either alone, with her students or with other colleagues is useful as a guideline for teachers who want to introduce the use of ChatGPT but fear possible disinformation risks.

Discussion

The data analysis carried out shows us the potential ChatGPT has for teaching assistance and learning processes, as stated by several authors (Cooper, 2023; Gill & Kaur, 2023; Sabzalieva & Valentini, 2023; Zhu et al., 2023). However, as the teacher admitted during the interview, her journey in learning to better use ChatGPT prompts was a process of exploration and experimentation. Initially, she familiarised herself with the capabilities and limitations of ChatGPT, understanding its underlying technology and purpose in the L2 generation. She spent some time exploring ChatGPT through various platforms and interfaces, engaging in practice sessions to observe how it responded to different prompts, both generic and specific to language learning topics. Carefully reviewing sample responses generated by ChatGPT allowed her to analyse the accuracy, clarity, and relevance of the answers, enabling her to gauge its performance and identify areas where she needed to guide her students more effectively.

The teacher's approach aligns with Hong's (2023) ideas about exploring ChatGPT's potential as a learning tool and teacher's assistant. Through persistent experimentation, the teacher identified effective initial prompt steps. This experimentation highlighted ChatGPT's potential for various teacher tasks like lesson planning, in-class teaching, and assessment. Utilising ChatGPT for tasks such as automated grading and generating language tests can save time and ensure consistent evaluation, aiming to objectively assess student language proficiency and assist in self-assessment.

The teacher was also careful in verifying the quality and reliability of the information generated by ChatGPT, and she was in need to check that there was no bias of any kind, as proposed by UNESCO

(2019), Tenhundfeld & ChatGPT (2023), or Zhu et al., (2023), among others. Moreover, these checks were formative in nature (Atlas, 2023) for both the students and the other colleagues in the Language Centre. The teacher specifically tried to engage students with the aim of getting them used to reading the outcomes critically.

In addition to using ChatGPT to prepare lesson plans and materials, the teacher also implemented the AI tool during sessions to empower the students and grant them greater autonomy. This demonstrated to the students the possibilities GenAI offers for self-study and the development of communicative competence autonomously.

It seems necessary for a good use of ChatGPT for L2 teaching that teachers develop their own strategies for its use to meet their teaching objectives (Atlas, 2023; Kohnke et al., 2023). Following the specific forms of digital competence underlined by Kohnke et al. (2023) – *technological proficiency*, *pedagogical adaptability*, *social awareness*, *critical awareness* – the teacher adeptly assimilated the features of ChatGPT. She demonstrated a comprehensive understanding of its mechanisms and exhibited a strong proficiency in prompt crafting (*technological proficiency*). In terms of *pedagogical adaptability*, she displayed the ability to strategize varied didactic uses of ChatGPT, particularly in lesson structuring, classroom integration, and assessment methodologies. Moreover, she proposed methods for her students to independently utilise ChatGPT. Consistently throughout the process, she demonstrated a strong sense of *social awareness* concerning the content generated by ChatGPT. This was exemplified by her *critical awareness* and engagement with the tool. Her mindful approach not only acknowledged the technology but also considered the broader societal impact and ethical dimensions associated with the use of ChatGPT in an educational context.

Conclusion

Following one EFL teacher for seven months allowed researchers to observe the evolution of her strategies using ChatGPT as they improved over time and, thus, the effectiveness of ChatGPT for her teaching purposes. She demonstrated a skillful ability to use the tool and develop most of the forms of digital competence needed to use ChatGPT according to Kohnke et al. (2023) (Table 1). Moreover, two fundamental strategies were clearly identified that every teacher and student should develop when using ChatGPT: prompt crafting and critical thinking.

After analysing the results and regarding our first question, we can affirm that the teacher managed to integrate ChatGPT in the teaching processes carried out in her classes. This was achieved by experimenting with the writing of prompts. These prompts started out simple (no more than one action per prompt), especially in the request for lesson planning or tasks in the month of January until reaching an optimal initial prompt structure throughout the months. This structure was based on the incorporation of 5 steps for useful information: action, format, context, target, and extra information. It is the wording of these prompts that enabled ChatGPT to generate coherent and qualitative responses relevant to the teacher's goals, as seen in the six excerpts. Moreover, thanks to the information provided by the teacher throughout the interview, we know that ChatGPT was effective in helping the teacher design most teaching tasks for her classes of different ages and levels. In some excerpts, we were able to appreciate how ChatGPT offered original ideas to facilitate the management or implementation of those tasks in the classroom. Regarding precautions to be considered before the information generated by ChatGPT, we have to say that the teacher deployed a range of useful strategies that helped to ensure the reliability of the information provided by ChatGPT. These strategies focused on the contrast and verification of the information provided by ChatGPT by all the agents involved in the teaching-learning process: the students, the teacher herself and the rest of the teachers of the Language Center where she works.

The inferring limitations of a single case study cannot offer anything beyond this particular case. However, the relevant information achieved in this exploratory empirically-rich study of a selected active teacher using ChatGPT opens the door to conducting new larger-scale studies that take the results of the present study into account.

ChatGPT emerges as an invaluable resource, revolutionising L2 classrooms by elevating three fundamental dimensions: lesson planning, in-class lesson implementation, and assessment. The GenAI language model's multifaceted capabilities can empower language educators, providing them with dynamic tools to create engaging lessons, deliver interactive teaching experiences, and conduct comprehensive evaluations. In exploring the transformative role of ChatGPT, we unveil its potential to shape more efficient and enriching L2 learning journeys for students and teachers alike. Teachers need to experience its potential for teaching, to share the results with other colleagues, and to contrast them with recently published research, as our teacher conscientiously did.

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