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**ChatGPT in the New Teaching/Learning Era Operating as a Bliss or  
Curse: Case Study of Master One Teachers and Students at the English  
Department, 08 Mai 1945 University, Guelma**

**A Dissertation Submitted to the Department of Letter and English Language  
in Partial Fulfilment of the Requirements for the Master Degree in Language  
and Culture**

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## DEDICATION

In the name of Allah, The Most Merciful, and The Most Compassionate

I dedicate my work with my sincere gratitude to:

My mother, Fatiha, the guiding light of my heart. She embraced me with her heart before her hands, and her prayers helped me overcome difficult times on my path to success.

My father, Abde Alwahabe, my greatest source of strength. His love, support, and sacrifices have made everything possible.

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To my new sister Kawther, whose help and support were essential to completion this work.

**Toureche Kawther**

## DEDICATION 2

I wholeheartedly dedicate this work to the strongest, most loving, and most supportive human:

my mother and to the closest person to my heart: my father.

To my one and only, my right arm, my brother Mouloud. To my beloved sisters, Rihem and Syrine, the guiding stars that illuminate my path.

To my family members, whose presence has been a constant source of support.

To my extraordinary friends, whose souls intertwine with mine in a symphony of laughter, support, and shared adventures.

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## ABSTRACT

The present work explores the use of ChatGPT in the new teaching era. Intelligent chatbots have drawn the interest of language instructors thanks to their ability to communicate with learners in their target language instantaneously and realistically. This Artificial Intelligence (AI) system's ability to produce human like content might either strengthen or weaken language skills, and could pose potential benefits and challenges to language skills. However, the adoption of ChatGPT in educational approaches raises significant ethical concerns regarding its use. This study aims to discover the application of ChatGPT in foreign language teaching and learning, specifically focusing on writing proficiency, and academic research skills. Furthermore, the current study is based on the hypothesis that ChatGPT enhances the teaching and learning experiences. The study adopts an exploratory approach, which is conducted through the quantitative method by using two questionnaires as a data collection tool: one was administered to Master One students (N=60), and the second one to Master One teachers' questionnaire (N=12) at the department of English, 8 May 1945 university-Guelma. The results obtained from this tool confirm the research hypothesis that, students perceive ChatGPT as an effective learning tool and are aware of the associated ethical concerns. However, educators remain uncertain about the long-term effects of this AI model on student creativity and over-reliance. Therefore, it is recommended that educational institutions develop comprehensive policies and guidelines for the responsible integration of ChatGPT and other AI tools in language learning. This should include providing training and support for educators to effectively leverage these technologies while mitigating potential risks and promoting ethical practices among students.

**Keywords:** ChatGPT, AI models, Teaching/Learning Processes, New Technologies.

## LIST OF ACRONYMS AND ABBREVIATIONS

**AI:** Artificial Intelligence

**GPT:** Generative Pre-trained Transformer

**LLM:** Large Language Model

**IBM:** International Business Machines

**GPS:** Global Positioning System

**Erica®:** Enhanced Relationship in Customer Assistance

**DBS:** Bank Singapore's Digibot

**ENO:** Electronic Notification Optimizer

**COVID-19:** Corona Virus Disease

**KMB:** Kotak Mahindra Bank

**ITS:** Intelligent Tutoring System

**NLP:** Natural Language Processing

**ARC:** Alignment Research Center

**MOOCs:** Massive Open Online Courses.

**COLT:** Computational Learning Theory

**LAD:** Language Acquisition Device

**UG:** Universal Grammar

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# **GENERAL INTRODUCTION**

## **General Introduction**

In the 21st century, Artificial Intelligence (AI) has revolutionized various aspects of our lives, with significant implications for education, particularly in foreign language teaching and learning. Among these advancements, ChatGPT stands out as a powerful AI tool developed by OpenAI, leveraging the GPT-3.5 architecture to understand and generate human-like text, especially in conversational contexts. This integration of ChatGPT marks a paradigm shift in educational methodologies, promising both opportunities and challenges for educators and learners alike. The integration of AI in education has sparked a new wave of research and debate, examining the potential benefits and challenges of using AI tools like ChatGPT in language learning. AI models like ChatGPT might enhance language proficiency, improve student engagement and motivation, and provide personalized feedback. However, there are also concerns about the potential misuse of AI in education, such as the risk of plagiarism and the need for educators to develop new skills to effectively integrate AI into their teaching practices. Furthermore, the integration of AI in education raises important ethical questions about the role of AI in shaping the future of language learning. This dissertation aims to contribute to this ongoing debate by exploring the potential and challenges of using AI models like ChatGPT in foreign language teaching and learning. Specifically, it examines the effect of AI specifically ChatGPT on language learning outcomes, its role in enhancing student engagement and motivation, and the ethical considerations that arise from its integration in education. By investigating these issues, this dissertation aims to provide insights that can enlighten the responsible integration of AI particularly ChatGPT in foreign language education and contribute to the development of effective AI-enhanced language learning strategies.

## **1. Statement of the Problem**

Using ChatGPT and other AI models and websites became a basic research tool for EFL students from all over the world, which is the same case for students of the English Department at Guelma University. This study investigates the impact of these AI models on students' academic research, particularly their effects on language skills such as writing and vocabulary. Additionally, it examines the implications of using AI models without awareness of ethical considerations.

## **2. Aims of the Study**

The present study aims to scrutinize the impact of using ChatGPT in foreign language teaching and learning. More precisely, learners in their academic journey including writing skills, vocabulary, and their reliability in their academic research and the roles of teachers in raising their awareness about this issue. Hence, the other main objectives are:

1. To inspect the use of ChatGPT by EFL learners
2. To explore EFL learners' perceptions regarding the impact of ChatGPT on their vocabulary acquisition, writing proficiency, and academic research.
3. To raise awareness among teachers and learners about the importance of ethical research while using ChatGPT.
4. To understand how it affects teachers and students while doing research.
5. Does the eloquent dance of ChatGPT with words cast an enchanting spell on the hearts of students, fostering a love affair with learning, or does it weave a tangled web of confusion, leaving minds in disarray?

### **3. Research Questions**

Hence, the present study attempts to answer the following questions:

1. Does ChatGPT presence in the hallowed halls of education whisper sweet sonnets of progress, promising to democratize access to knowledge, or does it thunder with warnings of a storm?
2. Do learners want to enhance their language skills through utilizing ChatGPT?
3. How do ChatGPT's upsides and limitations result in the teaching and the learning process?
4. In academia, does ChatGPT serve as a reliable scribe, transcribing wisdom, or does it mislead students with inaccurate information?
5. What are the AI models and AI-powered applications or devices most used in learning their frequency of use? (GPT, Mathia, Duolingo, Others)
6. For what tasks do teachers/students use ChatGPT for?
7. What are the possible challenges and benefits behind using ChatGPT in teaching and learning?
8. Do teachers/students use ChatGPT for teaching/learning language/skills in general and in academia especially for academic writing?
9. What are teachers' /students' attitudes towards the use of ChatGPT in academic research?
10. What is teachers' stance towards ethics, plagiarism and misinformation when using AI tools in education and how do they react to them?
11. Is there any observed any change in students' engagement/writing skill/collaboration/ when implementing ChatGPT?

### **4. Research Hypothesis**

The technological development is giving learners guidelines and concise information for their academic research through the use of currently developed language models, which may enhance



their critical thinking and writing skills; but it could be harmful if they consider it the principal source of research. Hence, the followings can be hypothesized:

- ChatGPT integration into academia significantly helps the teaching and learning experiences, acting as a reliable and effective tool for spreading knowledge, thereby positively impacting teaching process. (H1).
- The integration of ChatGPT into academia has no significant impact on the effectiveness and reliability of the provided data, neither does it positively enhance the teaching and learning experiences.

## **5. Research Methodology and Design**

This study aims to collect data on the topic by examining the application of AI models, particularly ChatGPT, in educational settings. The objective involves understanding the perceptions, experiences, and potential benefits and challenges faced by both English as a Foreign Language (EFL) teachers and students when integrating ChatGPT into educational settings.

### **5.1. Research design**

The current study is conducted through the qualitative method, based on an exploratory approach, aiming to confirm the research hypothesis and answer the research questions. This method includes a data collection tool, in which two questionnaires were administered for both EFL teachers and students. This method is selected because it offers an efficient approach to explore the use of AI models- particularly ChatGPT- in the teaching and learning processes. It is a reliable tool to gather data from a large number of participants in a short amount of time.

### **5.2. Population of the Study**

The first sample consists of Sixty (60) first-year Master students out of a total of 160 from the Department of Letters and English Language at the University of 8 Mai 1945, Guelma. The second sample under study includes twelve (12) teachers working at the same department. They were selected to provide their insights about the topic under investigation on the basis of their experience.

### 5.3. Data Gathering Tools

In order to prove the research hypotheses, the questionnaires served as the primary data gathering tool to effectively explore the perspectives of both teachers and students, regarding the integration of ChatGPT in the EFL teaching and learning process. Two sets of questionnaires were distributed in a paper-pencil format to twelve Master One teachers and sixty first-year Master One students at the Department of Letters and English Language, University of 8 Mai 1945, Guelma. The rationale behind using questionnaires is that they efficiently collect data from many participants within a short timeframe, providing in-depth insights through clear questions, making them effective for gathering qualitative data on the complex phenomenon of AI language models integration in education.

## 6. Structure of the Dissertation

The present dissertation is divided into three main chapters. The first two chapters are highly theoretical; while the third one is an analysis of the practical side of the work. The first chapter is entitled “**ChatGPT and other AI models**”, which includes the definition of AI, its importance, types. The second chapter is entitled “**ChatGPT/AI Models in the Teaching/Learning Processes**”, which explores the definition of the process of teaching and learning, the integration, of ChatGPT in the teaching and the learning process, and its effects on language skills. The third chapter is entitled “**Use of ChatGPT in Teaching and Learning**”, which contains a description of both teachers’ and students’ questionnaires, their aim and administration. Then, it analyses data driven from these tools. Add to that, it interprets the results according to the research questions and hypotheses. The conclusion comprises recommendations, research perspectives and limitations.



## Chapter One: ChatGPT and Other AI Models

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## **Introduction**

The emergence of modern artificial intelligence (AI) dates back to the mid-1950s, when John McCarthy introduced the term, sparking enthusiasm among researchers and propelling efforts to advance the technology as Colin Angle stated. Over the years, AI has evolved significantly, with researchers exploring various avenues such as expert systems, natural language processing, machine learning, and neural networks to emulate human-like intelligence in machines. One notable milestone was the development of Chatbots which are software applications created to mimic human conversation, usually through written or spoken interaction, like ChatGPT, which revolutionized human-computer interaction by enabling natural language interactions.

In this chapter, an overview of AI is provided, covering different definitions, types, and its importance in various sectors, including healthcare, transportation, banking, and education, especially during the COVID-19 pandemic. The chapter also delves into ChatGPT, detailing its architecture, functionality in language generation and understanding, and its integration into language learning and teaching. Additionally, the chapter discusses the merits and demerits of using ChatGPT and other AI technologies such as Talk AI, Language Genie, and Speak Easy in education, along with ethical considerations within educational settings.

### **1.1. Understanding Artificial Intelligence**

AI is a set of innovative technologies which have a great impact on our everyday lives, these technologies are designed to perform specific tasks. AI and its applications have grown to be part of our daily lives, after years of deep and specialized research.

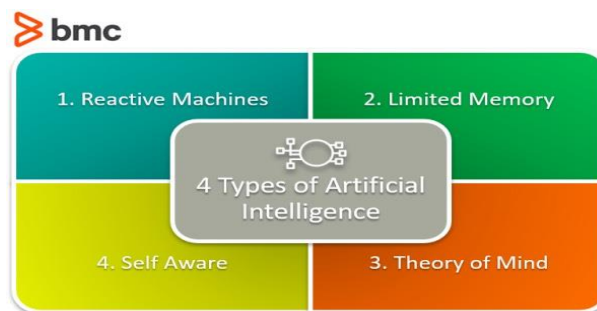
#### **1.1.1. Definition of Artificial Intelligence**

The definition of AI is not limited to one concept; it differs according to the field of study and its use. One of the greatest professors in this domain is McCarthy (2007), who defines AI as “the science and engineering of making Intelligent” (p.2). This shows the use of intelligent behaviour in machines, which is similar to humans, through AI programming. external factors.

Merriam Webster dictionary defines AI as “a branch of computer science dealing with the simulation of intelligent behaviour in computers”, which is the capability to create computer systems that can produce human problem-solving behaviour. However, AI refers to the field of creating machines with intelligence, while intelligence is the ability of an entity to operate effectively and with foresight in its environment (Nillson, 2010, p.13).

The statement suggests that the definition of AI has evolved and become more widely recognized in educational settings, impacting both students and teachers in universities.

### 1.1.2. Types of Artificial Intelligence



**Figure 1.1** Different Types of AI

(Adapted from: Johnson, 2020, para 1)

The continuous progress in computing power in different domains has led to significant advancements in artificial intelligence, Brin declares that “The new spring in AI is the most significant development in computing in my lifetime. Every month, there are stunning new

applications and transformative new techniques. But such powerful tools also bring with them new questions and responsibilities” (as cited in Rosso, 2018, para. 3). In recent years, innovations in multi-functional robots have emerged and kept the world in check. It seems that AI is advancing from “young” AI to self-aware machines.

#### **1.1.2.1. Reactive Machines**

Sahota (2022) explained that reactive machines are fundamental AI systems that function solely on immediate responses, and that they have neither past experiences nor the ability to store memories for future decisions (para. 6). Although reactive machines lack the ability to interact, emote, or be conscious entities, they are dependable when it comes to finishing tasks because their response to situations remains reliable (para. 7). Examples of reactive (AI) machines include Deep Blue, IBM chess-playing supercomputer that defeated Grand Master Garry Kasparov. This means that machines success make AI researchers go deeper into this machine to develop the weak areas. However, Deep Blue is designed to react against predictable moves, and its resolutions are based on the present situation and options (para. 8).

Even with a highly developed cognitive system, this kind of intelligence is unable to assess all future moves, and it barely relies on one task. Programs that employ neural networks to improve game development, such as Deep Blue, which is considered more powerful than other programs, highlight the significance of these networks in enhancing AI capabilities. Neural networks enable AI to learn from past experiences, recognize patterns, and make decisions based on complex data inputs. However, researchers in this area are still exploring other methods to improve AI systems' ability to play certain games better and anticipate future moves more accurately. Despite the power of neural networks, AI remains unable to function effectively across various game environments, indicating ongoing limitations in their specific performance (Yannakakis & Togelius, 2018, p. 114).

### **1.1.2.2. Limited Memory**

Sahota (2022) evaluated that this type of AI contains machines that have temporary storage capacity, which allows them to hold acquired experiences for a short period of time, and enables them to make future decisions based on them. These machines can only recall recently acquired memories and cannot access distant past memories (para. 9). For instance, self-driving cars are prepared with advanced features that let them observe and analyse road conditions and helps them to determine the most efficient route and control their speed and directions. These machines do not just look at the current situation; they also identify road conditions and track other objects over time (para. 10). AI with limited memory can adapt and respond to changes by utilising ongoing collected data, which is crucial for systems like autonomous cars. These automobiles are programmed with important elements that enable them to make decisions, such as changing lanes using the information stored in their memory.

### **1.1.2.3. Theory of Mind**

Sahota (2022) recognized that the theory of mind represents a significant advancement of AI in the future. This type of AI based on developmental psychology and with highly sophisticated technological capabilities, involves having a perception of the world that living beings have thoughts and emotions that shape their decision making and conduct. Sahota also added that these machines have the capacity to engage in significant interaction with humans, where they comprehend the intention and emotions and thoughts of individuals. If AI systems are to coexist in society with human beings, they must be taught to adjust their behaviour accordingly, treating humans with respect and care (para. 11).

The theory of mind has yet to be fully developed. However, researchers given the ongoing efforts in this field, can expect significant progress in the near future. For example, it can serve



as a crucial component in empathetic health care, particularly in the context of interaction with individuals that suffer from neurological diseases, like Alzheimer and depression. Such techniques can improve the effectiveness of psychological therapies. Over time, it may become possible to develop robotic companions for people with disabilities that possess the ability to understand and express emotions like human beings (Cuzzolin et al., 2020). Robots need to apply human behaviour, which would likely be the next class of intelligent machines.

#### **1.1.2.4 Self-awareness**

Sahota (2022) showed self-awareness as the recognition of one's unique identity or personality. It is considered the most advanced machines that would be conscious of its internal state and existence, as well as predict feelings of others (para. 13).

The final aim of AI development will be achieved by this type of AI. Researchers in this area are fascinated with the idea of conscious robots, but this kind is yet to be fully developed, and the question of whether self-aware machines would co-exist is still an open-ended issue. The curiosity to find an answer has produced a motivation for long term research since these current technological advancements are not even close to being capable of achieving self-awareness. Furthermore, there is not a good understanding and insight of what mechanism enables the brain to become self-conscious.

#### **1.1.3. Importance of Artificial Intelligence**

AI has affected a great deal of today's society as it has established its presence in many fields. Over the past few years, this arising technology has progressed too fast and became a game changing tool from health care to industry to finance as Nadella (2023) believes that "This next generation of AI will reshape every software category and every business, including our own. Although this new era promises great opportunity, it demands even greater responsibility

from companies like ours” (as cited in Taylor, 2024, para. 5). AI, with its ongoing development, has an important role in our lives and aims to enhance the human life and make it easier in the future by proving different applications in every field.

### 1.1.3.1. Healthcare

AI plays an important role in the health sector, and its use in this area has always been marked in a changing wave. Scientists enhance its capabilities by innovating new AI algorithms and techniques.

AI algorithms based on deep learning brought significant results in health care, as well as the availability of high-quality medical services. Applying this innovative technology in diagnosing diseases, like skin cancer and detect other diseases in early stages enables researchers to discover novel drug targets and create more effective medications that specifically target the fundamental causes of different diseases (Haseltine, n.d., para. 10), which is considered a major improvement in applying AI in such a field, which probably makes it the reason of saving people’s lives.



**Figure 1.2** Drobo robot for delivering medical Products

(Adapted from: Badur, n.d., p. 2)

Furthermore, the development of medical robots refers to robots designed to carry out tasks in the area of health care science. There are three types of robots: surgical, wearable, and rehabilitation robots, as well as robots that replicate the human body, which can do essential

work in this field. For instance, the surgical robot can perform a surgery or increase a surgeon's precision to clarify his/her vision and do his/her job to the fullest; or an intelligent scan can provide an accurate diagnosis; or also a virtual assistant can help patients by making a medical diagnosis or answering their questions (Boeru, 2022, para. 3).

AI is awfully needed and has become an efficient tool that can help hospitals in service provision. Nearly all healthcare organisations have already started adopting AI technologies, which greatly facilitate doctors' work and confirm the professionalization in the health care sector.

### **1.1.3.2. Transportation**

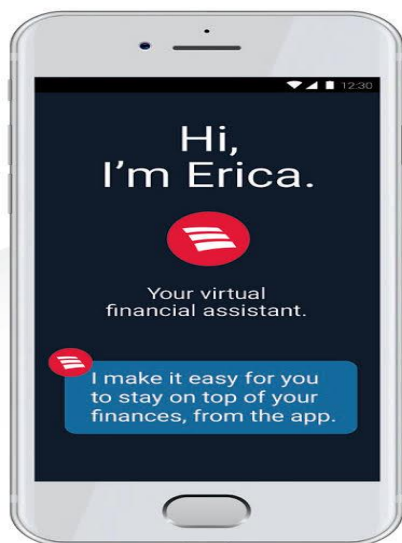
The integration of AI in the transportation industry is a state of flux, with the availability of extensive data and innovative technologies, resulting in such efficiency that human drivers are being surpassed.

According to Kolesnkova (2023), the transportation industry's adaptation of AI vehicles will result in a transformation of urban life, with the invention of smarter cars with sensors cameras and GPS, self-driving vehicles will become better than humans in driving cars, which contain self-parking capabilities, lane recognition technology, and adaptive cruise control that enhances safety on the road by monitoring and predicting traffic accidents (para. 4). A U.S. driver managed to reach the hospital while suffering from a pulmonary embolism by putting his Tesla Model X into autopilot mode. Joshua Neally was driving from Springfield, Missouri, to Branson when he experienced severe pain in his stomach and chest. Instead of calling an ambulance, he used the car's self-driving feature to find a hospital. After traveling about 20 miles, he manually steered the car into the hospital parking lot and checked himself into the emergency room. This incident has highlighted the potential life-saving capabilities of Tesla's autopilot, which has

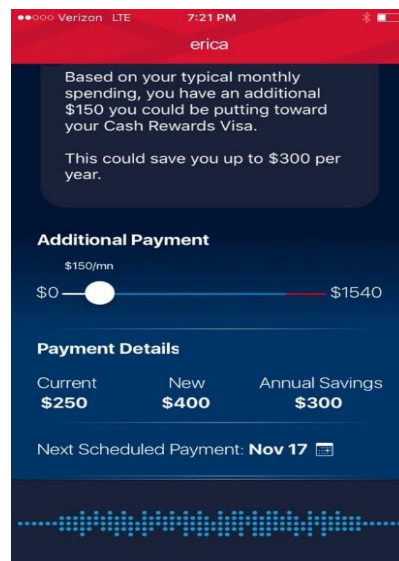
come under scrutiny following other accidents. Neally expressed his gratitude for the technology, believing it could prevent accidents if a driver becomes incapacitated (“Tesla car drives owner to hospital after he suffers pulmonary embolism,” 2016).

### 1.1.3.3. Banking

According to Noreen et al. (2023) the adaptation of AI in banking operations is a certain and essential part of the future, and its use based on digital financial services in this field results in faster and more efficient achievement of various computational tasks than traditional methods, significantly improving fraud prevention in banks, leading to reliability, accuracy, high speed and hassle-services banking (P. 1). AI is transforming the banking sector by delivering significant cost savings, enhancing customer experiences, and introducing innovative technologies like chatbots, which have become integral tools in the banking and financial industries, revolutionizing customer interactions and streamlining processes. For instance, **Erica®** by Bank of America stands out with over 1.7 billion interactions since its launch in 2018, providing invaluable assistance to clients in managing their finances.



**Figure 1.3** Erica Mobile App



**Figure 1.4** Erica AI Chatbots

Adapted from: (Evans, n.d., p.1)

Adapted from: (Evans, n.d. p.2)

Meanwhile, **DBS Bank Singapore's Digibot** efficiently addresses customer queries and handles transactional requests, making banking easier and more accessible. J.P. Morgan Chase's **Coin** takes automation to new heights by analysing commercial loan agreements, saving significant time, and minimizing errors. Similarly, **Eno** by Capital One offers users convenient access to account information and assists in monitoring credit card activity, providing valuable insights to customers. Lastly, **Index GPT** by J.P. Morgan Chase aims to simplify financial investment decisions, guiding clients based on their current financial status. Together, these chatbots represent a significant advancement in the industry, enhancing customer experiences and driving efficiency. AI technology is expected to save huge money, mainly through reduced paper work and printing costs, some chatbots offer a unique and effective communication with customers and which enables problem resolution and data collection for future use. Furthermore, AI based digital financial services improve customer satisfaction and experience by learning from customer behaviour and preferences to develop customized plans. Thus, after the AI integration in this area, the banking industry in Pakistan and Saudi Arabia has observed a great progress in its financial services as in Pakistan, the **Kotak Mahindra Bank** launched a voice bot called **Keya** aimed at helping users navigate swiftly and smoothly through the IVR (Interactive Voice Response) system (Rizvi & Ali, 2023). In Saudi Arabia, **Haptik** has implemented AI-powered conversational solutions for banks to aid in everything from taking care of common questions to providing valuable insights that ensure more personalised customer experiences.

These chatbots use feedback bots to collect feedback from customers in a conversational survey format, making it a far more compelling alternative to the use of long, static feedback forms. They can also handle complex transactions, such as fund transfers between accounts, investment transactions, and even loan applications. Additionally, these chatbots are designed

with robust security measures, using secure encryption methods to protect customer data and ensure that financial details and personal information are safe. They contribute to the peace of mind of customers by offering a secure channel for banking inquiries and transactions (P. 3).

This shows that AI has started to become a very powerful tool to make a significant change in financial industries and can be advanced to perform better stock analysis and prediction.

#### **1.1.4. Importance of AI in Education**

The use of technology has a significant influence on the educational system, which has become even more prominent during the COVID-19 pandemic. The integration of AI technologies in classrooms enhances the quality of education and makes teaching and learning more effective. Kaliouby asserts that “Artificial intelligence has the potential to democratize access to education, healthcare and economic opportunities. Let's strive to make AI technology accessible and beneficial for all” (as cited in Taylor, 2024, para. 13).

Burton (2023) states that AI in education provides benefits and opportunities by facilitating the personalization of learning and improving student outcomes, which are tailored to individual student needs and learning styles, strengths, and weaknesses, as well as analysing their previous academic performance to create personalized lesson plans and adjustments based on their past achievements (para. 6). AI technologies provide each student with customised resources and recommendations, creating individualized study plans and reaching large groups of them simultaneously (para. 7), especially the use of chatbots that keep student engaged in educational materials anytime and anywhere (para. 14). This makes learning easier and enhances student’s understanding of the material, which could involve modifying the speed of their learning and the materials they use and adjusting the order of lessons.

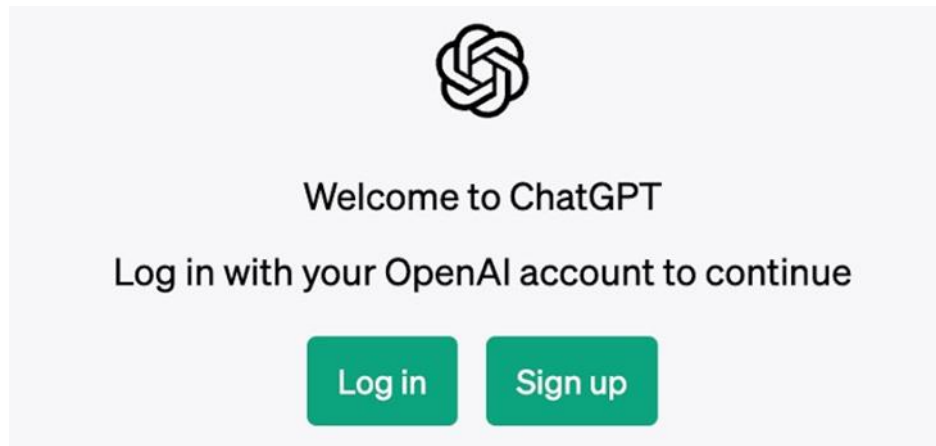
AI has the ability to serve as Intelligent Tutoring System (ITS) in education to offer personalized teaching and feedback for students based on their individual knowledge level and priorities, as well as tailored support and guidance in areas where they are struggling and need the most assistance. Like teachers, ITS teaches by providing theory and examples and testing student's knowledge through questions as they work on solving problems in specific knowledge domains. Moreover, researchers are taking an interest in developing effective ITSs to teach various subjects, such as: math, physics, and grammar (Ahmed et al., 2021, para. 7). This unique learning experience shows that, each student can have personalized and adaptive instructions without the need for human interference. Furthermore, AI technology can assist teachers in the grading and assessment process by automating tasks, such as assessing essays and assignments, and providing students with specific feedback about their mistakes in areas like grammar, content, and vocabulary and how they can enhance them. This allows teachers to have a quick and detailed response on student's performance. Thus, it makes them concentrate on planning lessons and engaging with students and focus on other important critical aspects of teaching (Burton, 2023, Para. 12). In the same context, rob-grades, which is a chatbot that is designed to assist students, teachers, and administrators in various educational tasks, such as answering questions, providing information, and offering personalized learning experiences, is becoming more prevalent in grading student's essays, particularly in Utah-Ohio and soon in Massachusetts (Smith, 2018).

## **1.2. Generative Pre-trained Transformer (GPT) models**

Waters assumes that "ChatGPT is a chatbot with advanced language skills, capable of generating human-like text, answering questions, writing code, and more" (as cited in The Best ChatGPT Quotes, n.d., para. 6). Generative Pre-trained Transformer (GPT) models represent a significant advancement in AI, developed by OpenAI. These models leverage deep learning

techniques to understand and generate human-like text, proving valuable in a wide range of applications, from natural language processing to creative writing (OpenAI, 2023).

### 1.2.1. What is ChatGPT?



**Figure 1.5** Welcome Page of ChatGPT

(Adapted from: Richards, 2023, para. 4)

ChatGPT is a sophisticated conversational tool that utilizes natural language processing to engage in human-like dialogue. It functions as a versatile language model capable of generating various forms of written content, including articles, social media posts, essays, code, and emails. In essence, it operates as a form of generative AI, enabling users to input prompts and receive responses that closely resemble human-generated text, images, or videos (Open AI, 2023).

Similar to the chat services commonly found on customer support websites, ChatGPT allows users to ask questions and seek clarification on its responses. The acronym "GPT" stands for "Generative Pre-trained Transformer," indicating the model's approach to processing requests and formulating replies. Through a process of reinforcement learning, ChatGPT continuously refines its responses based on human feedback and reward models, thus enhancing its effectiveness over time (Open AI, 2023).



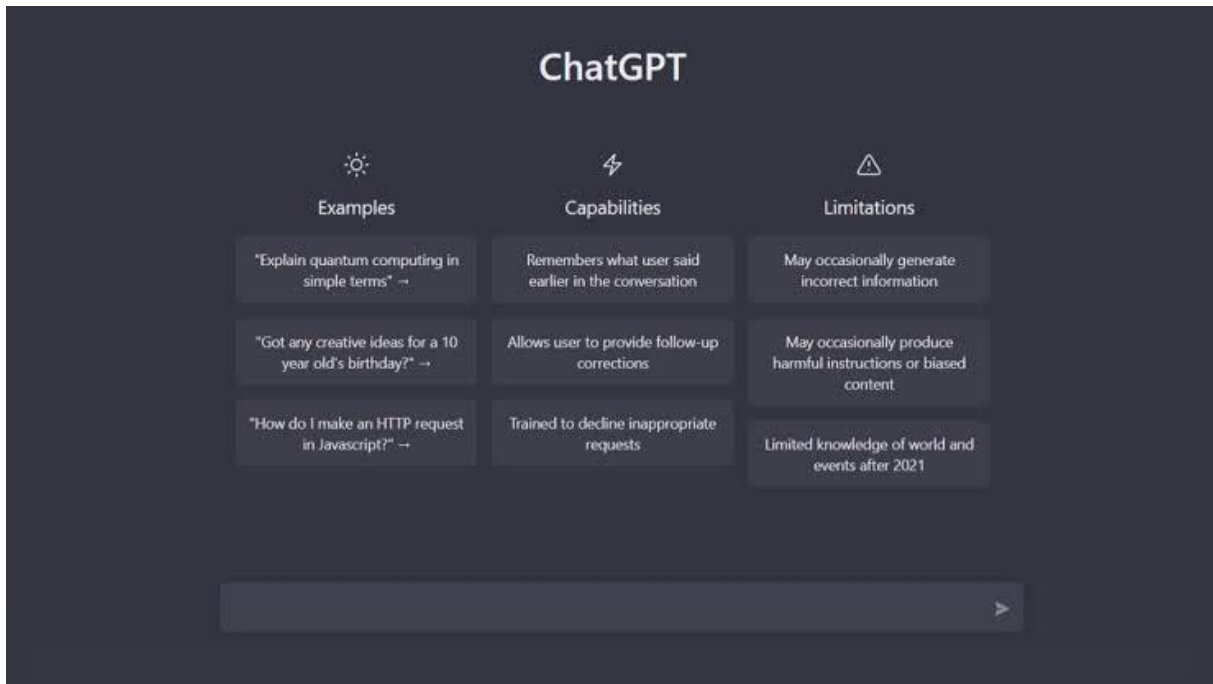
Created by OpenAI, an AI research company, ChatGPT was launched in November 2022. Founded in 2015 by a group of entrepreneurs and researchers, including notable figures like: Elon Musk and Sam Altman, OpenAI has garnered significant attention for its pioneering work in the field of AI. Supported by various investors, with Microsoft being a prominent contributor, OpenAI has also developed other innovative AI projects, such as Dall-E, a text-to-art generator. In a notable event, GPT-3 wrote an entire article for The Guardian, showcasing its capabilities. OpenAI has since released GPT-4 in March 2023, accessible via ChatGPT Plus and integrated into Bing's search engine. Despite this advancement, our focus will remain on GPT-3 and GPT-3.5, which the free version of ChatGPT uses to generate more interactive and engaging responses (Chen, 2021).

### **1.2.2. An Overview of ChatGPT Architecture**

ChatGPT is built on the GPT architecture, an advanced neural network model designed to generate human-like text. This architecture uses a transformer model with multiple layers of attention mechanisms, enabling it to process and generate coherent text based on the input it receives (OpenAI, 2023).

### **1.2.3. How ChatGPT Works**

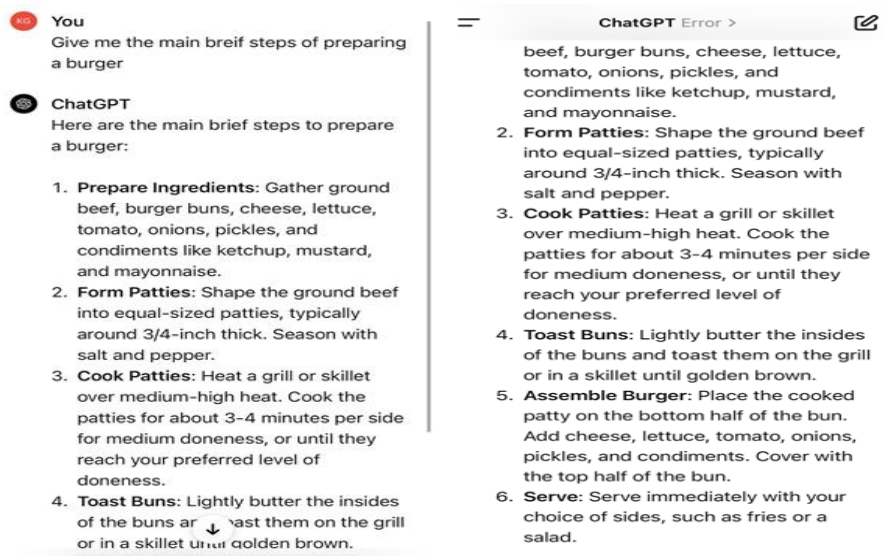
In natural language processing, ChatGPT represents a significant advancement in the field of conversational.



**Figure 1.6** Home Page of ChatGPT

(Adapted from: Donnelly, 2024, para. 3)

Derived from the Generative Pre-Training Transformer (GPT) model, it stands out for its remarkable ability to generate text that closely resembles human speech. For instance, if a user asks ChatGPT, "*Can you explain the concept of machine learning to me?*" it can respond with a detailed explanation of machine learning, including its types, algorithms, and applications. Similarly, if a user asks for a recipe for a particular dish (Hetler, 2024).

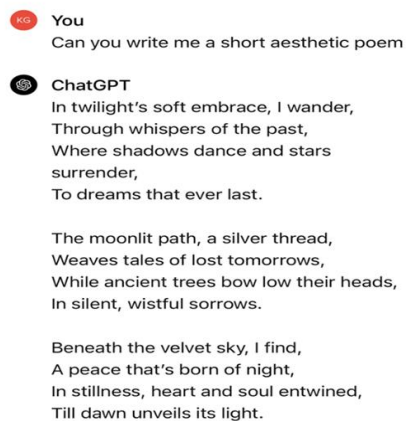


**Figure 1.7** ChatGPT Giving a Recipe to Prepare a Burger

(Adapted from: ChatGPT, 2024)

ChatGPT can generate a step-by-step recipe, complete with ingredients and cooking instructions.

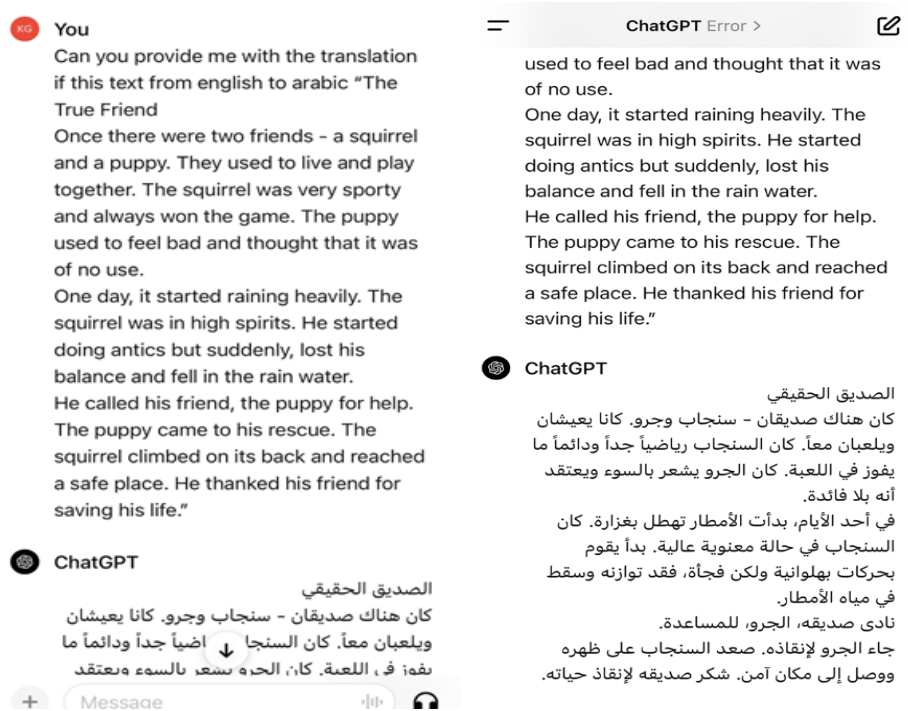
ChatGPT can also generate creative content, such as writing poems, stories, and even articles. For example, if a user asks ChatGPT to write a short story about a robot, it can generate a creative and engaging story about the robot's adventures and experiences (OpenAI, 2023).



**Figure 1.8** ChatGPT Writing a Poem

(Adapted from: ChatGPT, 2024)

Moreover, ChatGPT can be used for language translation, answering factual questions, and providing personalized recommendations. Its ability to generate human-like text makes it an effective tool for customer service, education, and entertainment, among other applications (OpenAI, 2023).

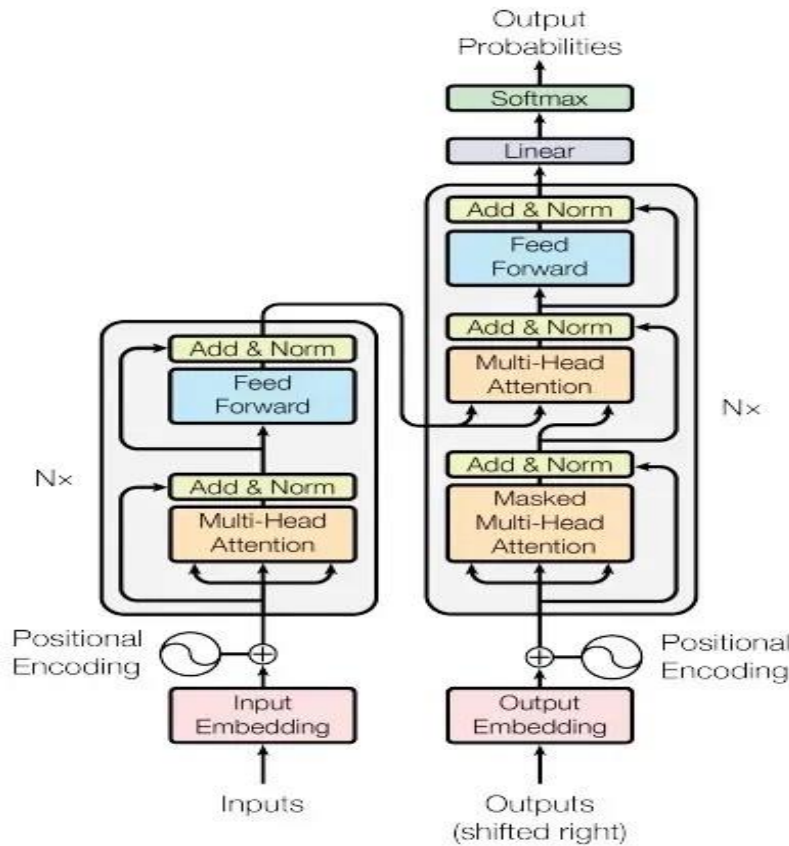


**Figure 1.9** ChatGPT Translating an English Short Story to Arabic

(Adapted from: ChatGPT, 2024)

#### 1.2.4. Architecture of ChatGPT

Within the context of ChatGPT's operation, the transformer-based neural network architecture relies on two crucial mechanisms: the feed-forward neural network and the self-attention mechanism. ChatGPT is built on a large language model (LLM) architecture, specifically the GPT-3.5 model. The GPT-3.5 model has 175 billion parameters spread across 96 layers, making it one of the largest deep learning models ever created. This enables the model to capture intricate relationships and generate expressive representations.



**Figure 1.10** ChatGPT Architecture

(Adopted From: Vaswani et al., 2017, p. 3)

The self-attention mechanism enables the model to focus on specific parts of the input, enhancing its ability to generate coherent and contextually relevant responses. Together, these mechanisms synergize to process and understand input text comprehensively, empowering ChatGPT to produce coherent and contextually accurate output (Patel, 2024).

#### 1.2.4.1. Encoder: Unravelling the Input

The encoder component of ChatGPT serves as the entry point for processing input text. By meticulously analysing the intricacies of the input through layers of self-attention and feed-forward networks, the encoder extracts essential features and semantic information crucial for understanding (kalra,2024).

#### **1.2.4.2. Decoder: Crafting the Response**

Conversely, the decoder collaborates with the encoder to generate human-like text responses. Utilizing self-attention mechanisms which is a key algorithm, that allows the model to focus on relevant parts of the input when generating the output and feed-forward networks, the decoder synthesizes output text that mirrors natural language patterns, ensuring coherence and relevance (kalra, 2024).

#### **1.2.4.3. Language Model Head: Predicting the Next Token**

The "language model head" is a crucial component within ChatGPT's architecture. Specifically, it is responsible for predicting the next token in a sequence of text. This prediction task is fundamental to generating coherent and contextually relevant responses. The language model head utilizes learned weights acquired during pre-training, where it is exposed to vast amounts of text data to learn patterns, relationships, and structures within language. When ChatGPT receives input text, it processes it through its layers, including the language model head. This latter analyses the input sequence and predicts the most probable next token based on the context provided by the preceding tokens. This prediction is informed by the model's understanding of language acquired during pre-training (kalra, 2024).

For instance, if the input text is "*The cat is*", the language model head might predict "*sleeping*" as the next token based on its understanding of common language patterns. This prediction process continues iteratively, with each predicted token influencing subsequent predictions, ultimately resulting in the generation of coherent and contextually appropriate responses (kalra, 2024).

#### **1.2.4.4. Dialogue Generation Head: Fostering Conversational Context**

An integral aspect of ChatGPT is its dialogue generation head, designed to enhance its conversational capabilities. Through fine-tuning, which is a process wherein a pre-trained model,

like ChatGPT, undergoes additional training on specific data to adapt its parameters to a particular task or domain. In the context of ChatGPT's dialogue generation head, fine-tuning involves training the model on conversational data, such as chat logs or dialogue transcripts, question-answering or summarization to improve its ability to generate contextually relevant responses within a conversation on conversational data. This component enables ChatGPT to produce contextually relevant responses within the framework of a dialogue, enriching its conversational fluency and coherence (kalra, 2024).

ChatGPT embodies a sophisticated blend of neural network components meticulously crafted to mimic human-like text generation. With its ensemble of encoder, decoder, language model head, and dialogue generation head, ChatGPT holds immense potential to redefine human-computer interactions and elevate the possibilities of natural language processing (kalra, 2024).

### **1.3. Role of ChatGPT in Language Generation and Understanding**

Ng asserts that "ChatGPT is a fascinating technology that has the potential to transform the way we communicate with machines" (as cited in *Insightful ChatGPT Quotes to Inspire and Motivate You*, n.d., para. 33). ChatGPT plays a pivotal role in language generation and understanding by leveraging advanced natural language processing techniques to produce coherent and contextually relevant responses. This AI model has the capability to comprehend human language and generate text that closely resembles human speech. It excels in various applications such as chatbots, content generation, and language translation, revolutionizing human-computer interactions.

ChatGPT-3 marks a significant advancement in natural language processing, representing a milestone achievement by OpenAI. What sets GPT-3 apart is its remarkable capability to produce coherent, fluent, and contextually accurate text that closely resembles human language.

This unique ability is fuelled by its training to predict the next word in a given sequence, a task it executes with exceptional precision (Al Hakim, 2023).

One of the standout features of GPT-3 is its adaptability. Unlike its predecessors, GPT-3 can seamlessly transition to new domains and tasks without requiring fine-tuning. This versatility extends to a wide array of natural language processing tasks, including translation, summarization, sentiment analysis, and question answering. Abidi stated that “ChatGPT has demonstrated impressive capabilities for natural language understanding and generation, which is essential for the development of advanced AI applications” (as cited in Insightful ChatGPT Quotes to Inspire and Motivate You, n.d., para. 25). Such versatility has revolutionized the landscape of Natural Language Processing (NLP) applications, rendering GPT-3 indispensable for startups across various industries (Al Hakim, 2023).

In the domain of NLP, GPT-3 holds a significant role in generating text that closely mirrors human language. This capability empowers GPT-3 to undertake a myriad of language tasks without the need for retraining, showcasing its superiority over previous models and marking a significant leap forward in the field of AI.

With its staggering 175 billion parameters, which enable it to provide human-like responses to a wide range of prompts, ChatGPT is specifically optimized for dialogue, making it well-suited for conversational tasks such as answering questions, generating text, and providing recommendations. GPT-3 boasts unparalleled adaptability, enabling it to tackle tasks across diverse domains. These parameters form the bedrock of its natural language understanding, a crucial aspect for tasks such as content generation, sentiment analysis, and language translation. The versatility of GPT-3 is exemplified in its capacity to develop advanced chatbots and virtual assistants, underscoring its multifaceted utility (Isakova & Dovnar, 2023).



Nevertheless, leveraging GPT-3 comes with its own set of challenges. Biases inherent in the training data can manifest in the generated text, and contextual understanding remains an ongoing area of improvement such as GPT-3, can manifest in the generated text and lead to negative consequences for consumers, particularly in fields like product recommendations and news articles. These biases can stem from underrepresentation of certain groups or implicit biases in the training data. For instance, in GPT-3, gender biases have been identified, with the model showing a stronger inclination towards male identifiers in professional contexts. Additionally, racial and religious biases have also been observed in GPT3, with certain racial categories being associated with more negative sentiments and religious terms being linked to specific stereotypes.

The presence of these biases in AI models can have significant implications for the training of future AI systems. Understanding the root causes of these biases, such as the emphasis placed on certain areas during training, can help correct for human error and develop best practices for future training iterations. Addressing these biases is crucial before AI models become deeply integrated into real-world tasks, as they can perpetuate and amplify existing biases and stereotypes. Furthermore, the computational resources required to harness the full potential of GPT-3 can be substantial (“Ethical considerations of ChatGPT and AI”, 2024).

Despite these challenges, the ability of GPT-3 to generate human-like language holds immense promise for machine learning applications. As a cornerstone tool in NLP, GPT-3 opens up avenues for innovation and advancement, paving the way for future human-computer interactions that are more intuitive and seamless (Al Hakim, 2024).

#### **1.4. How are People Using ChatGPT**

Levie explained “The reason why ChatGPT is so exciting is it’s the exact right form factor for demonstrating how AI could become a useful assistant for nearly every type of work. We’ve

gone from theoretical to practical overnight” (as cited in Insightful ChatGPT Quotes to Inspire and Motivate You, n.d., para. 30) . Levie highlights the significance of ChatGPT as a practical tool that demonstrates AI's potential to assist in various types of work.

People are leveraging the versatility of ChatGPT in various innovative ways beyond simple human conversations, ChatGPT-3 can be tuned from coding computer programs and identifying bugs in code to composing music and drafting emails, the utility of ChatGPT knows few bounds. It has been utilized to summarize articles, podcasts, and presentations, script social media posts, and generate titles for articles. Moreover, individuals have employed ChatGPT to tackle math problems, optimize search engine keywords, and curate content for websites, including articles, blog posts, and quizzes. Additionally, it is an instrumental in rephrasing existing content for different mediums, such as Content creation: ChatGPT can be used to generate ideas for blog posts, articles, and social media content. It can also assist in creating outlines, drafting content, and proofreading for grammar and spelling errors (Hetler, 2024).

#### **1.4.1. Education**

ChatGPT can be used as a teaching assistant to answer student questions, provide explanations for complex concepts, and generate quizzes and assessments. For instance, you can use this to answer some questions such as:

Prompt: *"Explain the concept of photosynthesis to a high school student."*

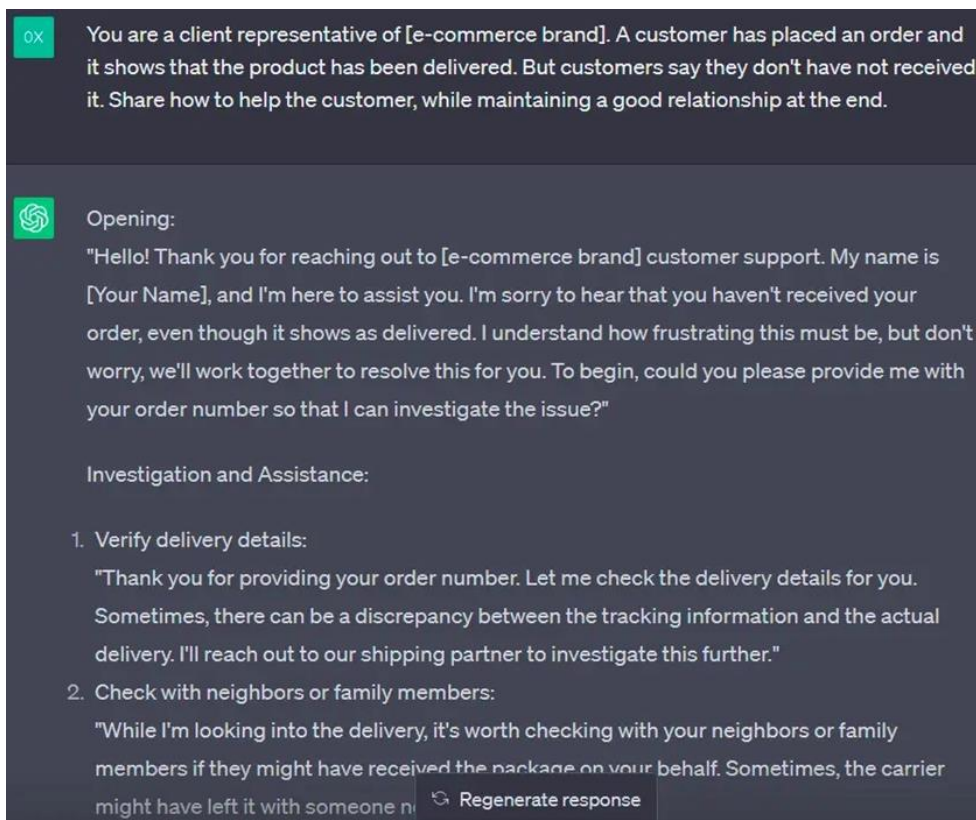
Response: *"Photosynthesis is the process by which plants, algae, and some bacteria convert light energy, usually from the sun, into chemical energy in the form of glucose or other sugars. This process takes place in the chloroplasts of plant cells, and it involves two main steps: the light-dependent reactions and the light-independent reactions. In the light-dependent reactions, light energy is used to convert water and carbon dioxide into oxygen and high-energy electrons. These electrons are then used in the light-independent reactions to convert carbon dioxide into glucose."*

*The overall equation for photosynthesis is:  $6\text{CO}_2 + 6\text{H}_2\text{O} + \text{light energy} = \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$*  (E. Mollick, 2024) (L. Mollick, 2024)

### 1.4.2. Customer service

ChatGPT can be used to automate customer support and provide quick and accurate responses to customer inquiries.

Marketing: ChatGPT can be used to generate marketing copy, optimize search engine keywords, and curate content for social media and email campaigns (Warbhuvan, 2023).

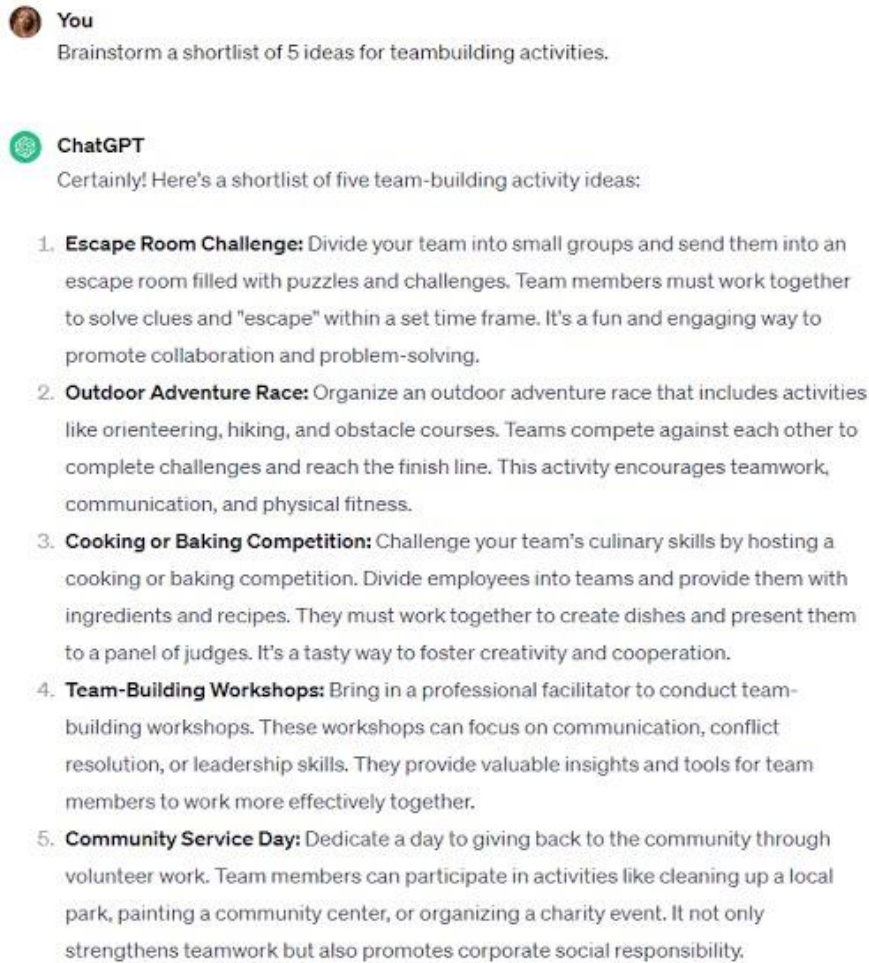


**Figure 1.11** Conversation between ChatGPT and a Seller for Delivery Apology

(Adapted from Warbhuvan,2023, para, 25).

### 1.4.3. Brainstorming

ChatGPT can be used to generate ideas and suggestions for brainstorming sessions, helping to spark creativity and innovation (Tseng, 2024).

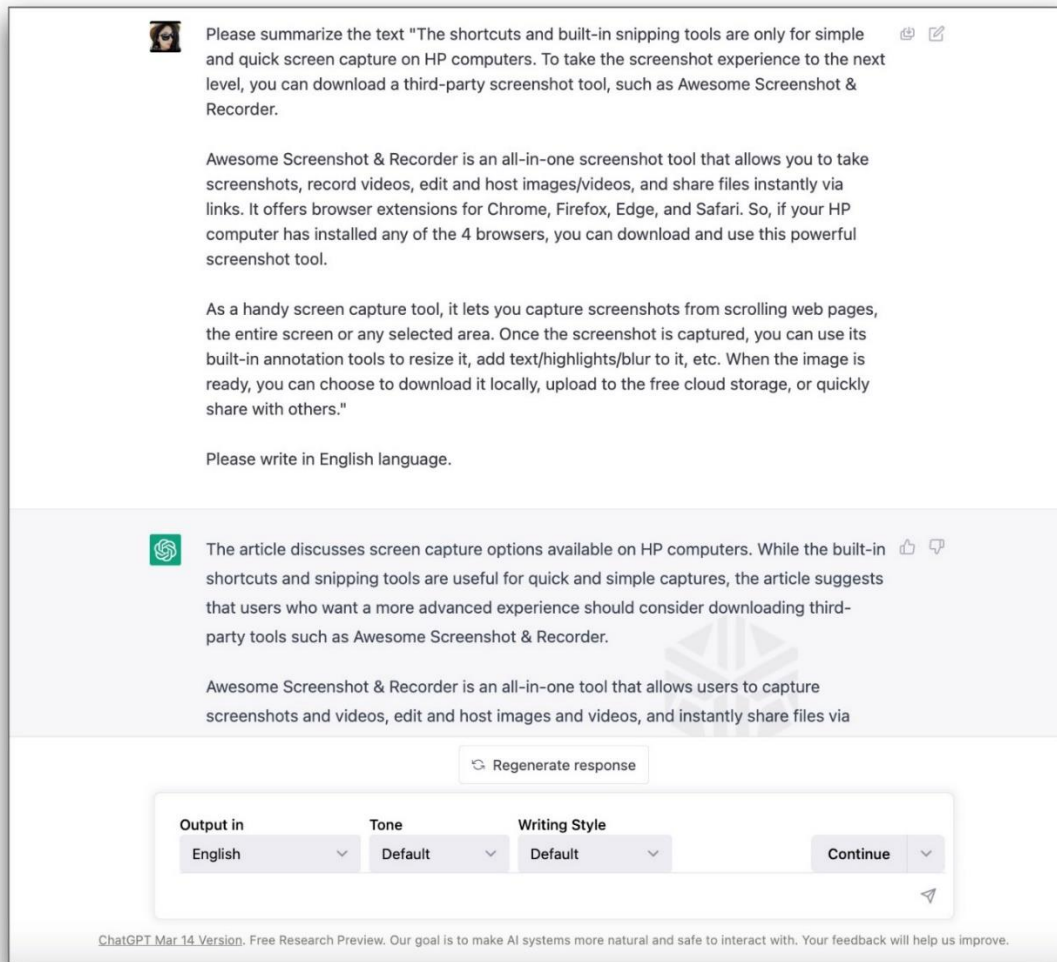


**Figure 1.12** Example ChatGPT in Brainstorming a Topic

(Adapted from: Tseng, 2024, para, 4).

#### 1.4.4. Legal

ChatGPT can be used to assist with legal research, contract analysis, and document review (Shen, 2023).



**Figure 1.13** Example of ChatGPT Summarizing a document

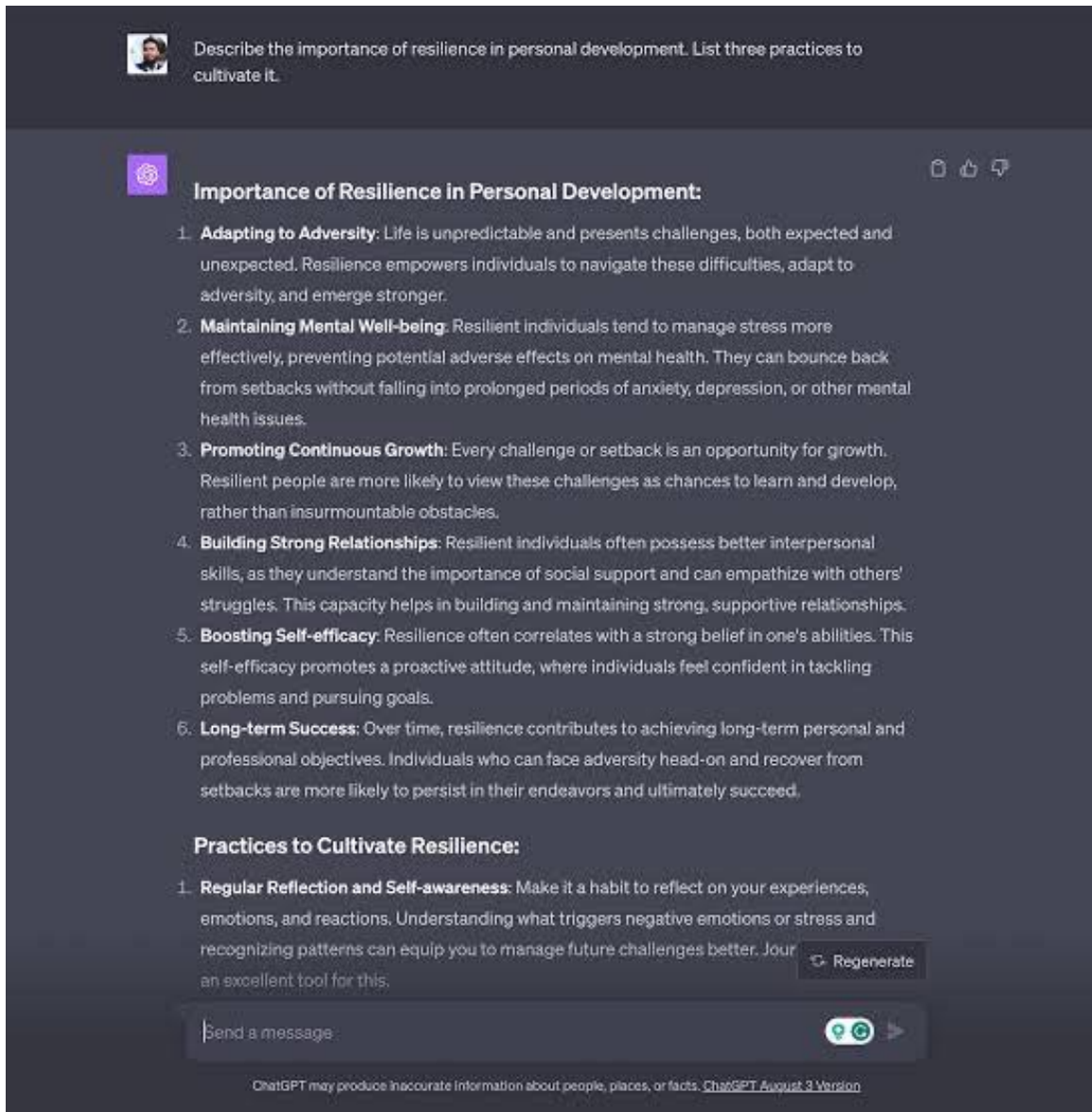
(Adapted from: Shen, 2023, para. 6)

#### 1.4.5. Medical

ChatGPT can be used to assist with medical research, diagnosis, and treatment planning.

#### 1.4.6. Personal development

ChatGPT can be used to provide personalized recommendations for self-improvement, such as books, courses, and exercises (Murshed, 2023).



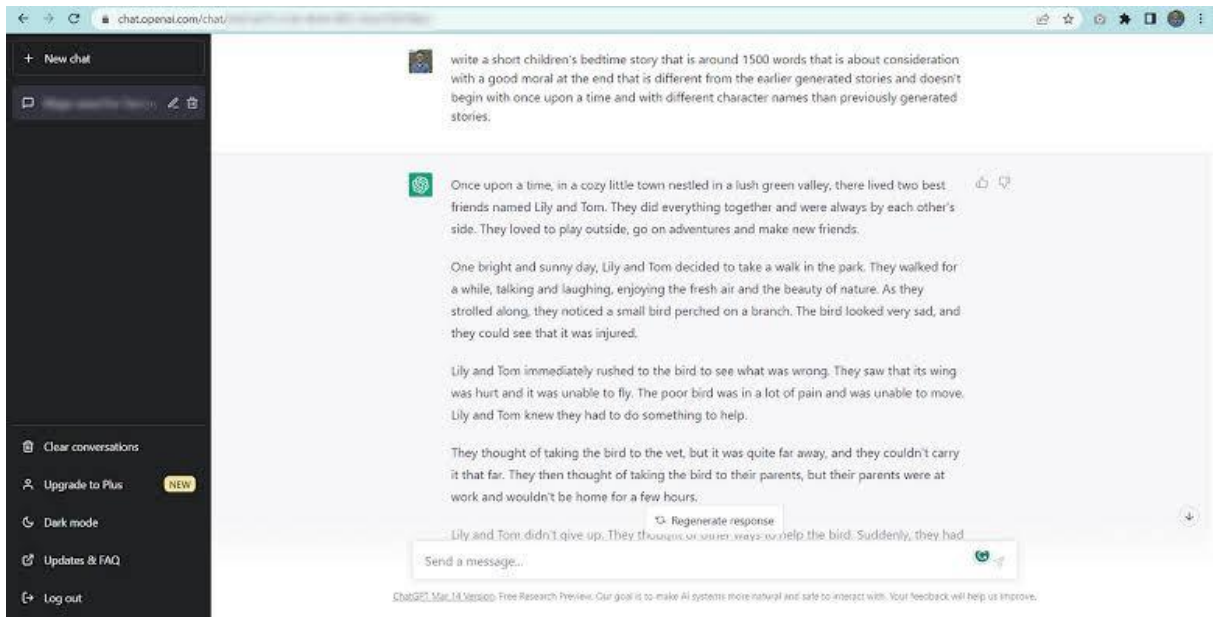
**Figure 1.14** Example of ChatGPT Giving Advices for Self-development

(Adapted from: Murshed, 2023, p. 1)

### 1.4.7. Entertainment

ChatGPT can be used for entertainment purposes, such as playing games, generating jokes, and writing stories (D'Souza, 2023).





**Figure 1.15** example of ChatGPT in Writing a Short Story

(Adapted from: D'Souza, 2023, p. 1)

Add to that, ChatGPT can also be used in transcribing presentations into blog posts or formulating product descriptions. Beyond these practical applications, ChatGPT has also been used for recreational purposes like playing games and asking trivia questions, as well as for more complex tasks such as simplifying explanations of intricate topics, writing video scripts, and researching markets for products Waters supported this point by assuming that “ChatGPT is a chatbot that can write essays with advanced language skills, reply to questions similar to human conversation, write code, and reminds us all that artificial intelligence is changing the world as we speak” (as cited in Insightful ChatGPT Quotes to Inspire and Motivate You, n.d., para. 50).

Furthermore, it has even been employed to generate art, showcasing the diverse capabilities and adaptability of this AI-powered tool (“What is the use of ChatGPT for Entertainment”, n.d.).

### 1.5. What cannot ChatGPT do (Yet)

While ChatGPT is a powerful tool, it has significant limitations. For instance, ChatGPT lacks common sense and real-world experience. Likely, this language model may struggle to provide

advice on situations that require empathy, emotional intelligence, or social skills. Which makes it difficult for it to provide accurate and practical advice in certain setting.

### **1.5.1. Write a Self-reflection**

ChatGPT currently lacks the capacity for self-awareness or introspection as it operates based on predefined algorithms and data inputs. It cannot engage in personal reflection or express subjective experiences. ChatGPT's inability to engage in self-reflection stems from its reliance on predefined algorithms, lack of personal experiences, absence of consciousness, and limitations in understanding beyond the scope of its training data. For example, describe how the content we covered in class last week shifted your thinking about your role as a current/future teacher (“ChatGPT and Education”, n.d.)

### **1.5.2. Provide Non-text-based Responses**

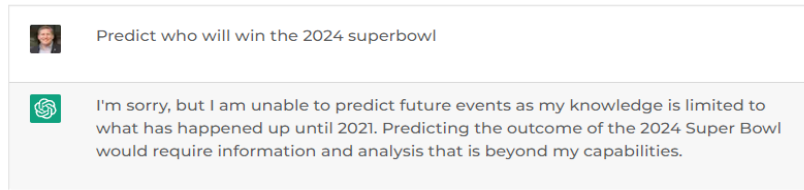
At present, ChatGPT's functionality is limited to generating text-based responses. It does not possess the capability to produce non-textual outputs such as images, audio, or video content. For example, design an infographic, interactive Google Map, TikTok-style video, meme, multimodal timeline.

- Note: ChatGPT can still help with writing a script for a podcast or video or crafting the text to go in an infographic, meme, poster, timeline, etc (“The 8 Main Limitations of ChatGPT”, n.d.).

### **1.5.3. Make Predictions about Future Events**

While ChatGPT can analyse existing data and identify patterns, it cannot predict future events with certainty. Predictive capabilities require a deeper understanding of complex real-world dynamics beyond ChatGPT's current capabilities (“ChatGPT and Education”, n.d.).



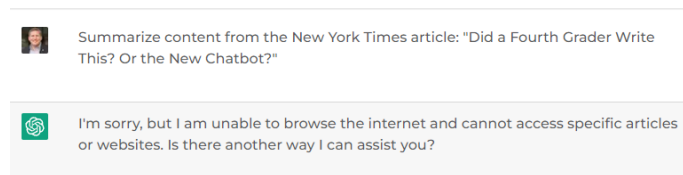


**Figure 1.16** Example of ChatGPT Inability to Give Future Prediction

(Adapted from: “ChatGPT and Education”, n.d., para. 4)

#### 1.5.4. Browse or Summarize Content from Internet

ChatGPT does not have the ability to browse the internet or access external content for summarization. Its responses are based on the data it has been trained on and interactions with users, rather than real-time internet browsing (“ChatGPT and Education”, n.d.).

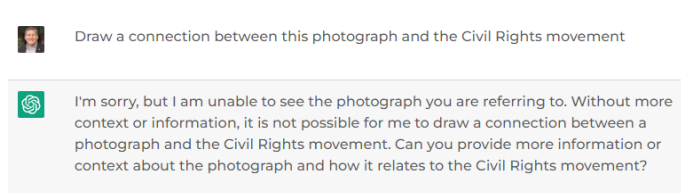


**Figure 1.17** Example of ChatGPT Inability to Search on Internet

(Adapted from: “ChatGPT and Education”, n.d., para. 5)

#### 1.5.5. Draw Connections between Class Content and Visual Materials

While ChatGPT can comprehend and generate text-based content related to class materials, it lacks the ability to interpret or analyse visual materials such as: images, graphs, or charts to draw connections with class content (“ChatGPT and Education”, n.d.).



### **Figure 1.18 ChatGPT Inability to Visualize Images**

(Adapted from: "ChatGPT and Education", n.d., para. 7)

#### **1.6. Ethical Considerations in AI Usage**

Ethical considerations in AI usage involve addressing the broad range of issues related to its employment and effect across multiple industries, such as transportation, healthcare, and banking, to ensure that AI technologies benefit society.

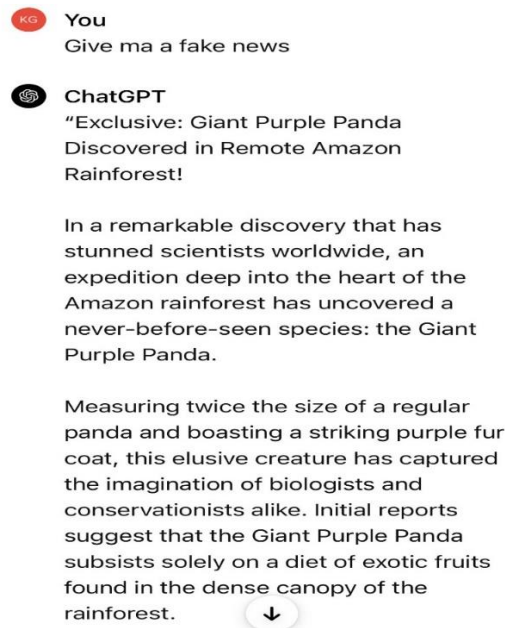
##### **1.6.1. Training Data Bias (AI models)**

may inherit biases from training data, leading to unfair outcomes and perpetuating societal inequalities. These biases, such as representation and concept bias. For instance, training data bias in AI occurs when a facial recognition system trained on predominantly Caucasian faces performs poorly on recognizing faces of other ethnicities, leading to biased outcomes in surveillance and security applications that showcase the importance of diverse and unbiased training datasets ("Ethical considerations of ChatGPT and AI," 2024).

##### **1.6.2. Misinformation and Disinformation**

AI-generated text poses significant risks in propagating misinformation and disinformation, potentially undermining democratic processes and social cohesion. For instance, it can use misinformation propagated by AI-generated text in the spread of fake news articles created by AI bots as Pal (2024) mentioned that "ChatGPT can hallucinate information, making up false information" (para. 5), influencing public opinion and potentially swaying election outcomes. To combat this, robust content moderation and digital literacy initiatives seek to improve people's abilities, understanding, and mindset necessary for proficient and secure utilization of digital tools in various aspects of life, such as education, employment, and everyday activities, as our

world becomes more reliant on digital technology (“Ethical considerations of ChatGPT and AI”, 2024).



**Figure 1.19** ChatGPT Giving Fake News

(Adapted from: ChatGPT, 2024)

### 1.6.3. Privacy Risks

Buterin states that “Web 3.0 is the era of the truly decentralized web, where individuals will have more control over their data and privacy” (as cited in the Best Web 3.0 Quotes, n.d., para. 7). This means that in Web 3.0, users will have direct control over their data and can decide how it is used, rather than relying on centralized entities like social media platforms or search engines. This decentralization will provide greater privacy and security for users, as they will not be subject to the whims of a single entity controlling their (The Best Web 3.0 Quotes, n.d., para. 14). AI’s ability to process vast amounts of data raises concerns about privacy infringement and surveillance. The collection and use of personal data without informed consent necessitate stringent privacy controls and transparent data practices (“Ethical considerations of ChatGPT and AI”, 2024).

#### **1.6.4. Job Displacement**

Automation driven by AI technologies may lead to workforce upheaval and exacerbate socioeconomic disparities, an example of this which is posed by AI is the unauthorized use of personal data by AI algorithms to create targeted advertising profiles without user consent, infringing on individuals' privacy rights. Initiatives such as upskilling programs and inclusive policies are essential to mitigate the adverse impacts of job displacement (“Ethical considerations of ChatGPT and AI”, 2024).

#### **1.6.5. Ethical Dilemmas in Autonomous Systems**

AI's integration into autonomous systems raises complex ethical dilemmas surrounding accountability, safety, and human oversight. As a result, in the decision-making process of self-driving cars in emergency situations, AI algorithms must choose between different courses of action with moral implications, such as prioritizing passenger safety over pedestrian safety. So, striking a balance between autonomy and human control is critical to ensure responsible AI deployment (“Ethical considerations of ChatGPT and AI”, 2024).

#### **1.6.6. Transparency and Accountability**

Ensuring transparency in AI development and fostering external scrutiny are essential for accountability. AI is the open-sourcing of AI algorithms used in financial decision-making, allowing external experts to review the algorithms for biases and errors to ensure fair and accurate outcomes. Open-sourcing AI algorithms and promoting collaboration with researchers enhance transparency and trust in AI systems (Datta, 2024).

#### **1.6.7. Fairness and Equity**

Addressing bias in AI algorithms requires ongoing efforts and collaboration across disciplines. An example of addressing bias in AI algorithms is the implementation of fairness-

aware machine learning techniques in hiring processes to mitigate biases against underrepresented groups and promote diversity and inclusion in the workforce. Fairness-aware machine learning techniques and algorithmic audits play a crucial role in identifying and mitigating biases in AI systems (Datta, 2024).

### **1.6.8. Long-term Societal Impacts**

Ng states that “If we can make computers more intelligent and I want to be careful of AI hype and understand the world and the environment better, it can make life so much better for many of us. Just as the Industrial Revolution freed up a lot of humanity from physical drudgery, I think AI has the potential to free up humanity from a lot of the mental drudgery.... It is difficult to think of a major industry that AI will not transform. This includes healthcare, education, transportation, retail, communications, and agriculture. There are surprisingly clear paths for AI to make a big difference in all of these industries" (as cited in AI Quotes, n.d.). Anticipating the broader societal ramifications of AI technologies demands ethical foresight and inclusive deliberation. For instance, the development of ethical frameworks and guidelines for the use of AI in healthcare ensures that patient data is protected, medical decisions are transparent, and human well-being is prioritized in the adoption of AI technologies. Stakeholder engagement and ethical frameworks that prioritize human well-being are essential for navigating the complex landscape of AI ethics (Topol, 2019, as cited in Nosike et al., 2024)

### **Conclusion**

In conclusion, the presence of AI technologies in daily life highlights their indispensable role in modern society. From personalized recommendations on streaming platforms to predictive maintenance in industrial settings, AI algorithms enhance efficiency, convenience, and decision-making across diverse domains. In particular, the integration of AI, exemplified by tools like ChatGPT, has revolutionized education by providing personalized learning experiences,

facilitating communication between students and educators, and offering innovative solutions to educational challenges. However, ethical considerations regarding data privacy, algorithmic bias, and societal implications remain paramount. Therefore, fostering interdisciplinary collaboration, promoting transparency, and upholding ethical standards are imperative to harnessing the full potential of AI technologies while ensuring their responsible and equitable deployment in daily life and education.

## **Chapter Two: ChatGPT /AI Models in The Teaching/Learning Processes**

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## **Introduction**

ChatGPT and other AI models require integration into the educational process, while also recognizing the challenges that must be managed to ensure its effective use. Thus, in the dissertation's second chapter, the core principles of teaching and learning processes are presented, including a definition of both teaching and learning and an overview of teaching methodologies, as well as the learning theories and its main phases, setting the stage for understanding how educational strategies are formulated. Moreover, the chapter deals with the integration of different AI technologies, particularly ChatGPT, into teaching and learning languages. Additionally, it provides the effects of the ChatGPT model on teaching and learning, as well as its effects on writing skills and vocabulary development. Followed by the advantages and disadvantages of this model. Finally this chapter tackles with the benedictions of ChatGPT, the limitation of using it, and the impact of ChatGPT and its reliability on academic research.

### **2.1. Teaching and Learning Processes**

The educational process involves a dynamic exchange between teachers and students, where teachers utilize various methods to teach knowledge and skills and students participate in tasks to acquire and utilize this information. M.R et. al. (2024) assert that "Effective teaching involves a dynamic interplay between the teacher and the learner, where the teacher provides guidance and support while the learner is actively engaged in the learning process. This interplay is characterized by a balance between structured teaching and hands-on learning, which allows learners to develop their skills and knowledge in a way that is tailored to their individual needs and abilities". This interplay balances structured teaching with hands-on learning, allowing learners to develop skills and knowledge tailored to their individual needs and abilities. The teacher provides guidance and support while the learner is actively engaged in the learning process, fostering a collaborative and personalized learning environment A good education



balances structured teaching with hands-on learning, and adapts to the needs of a range of learners in order to encourage overall development.

### **2.1.1. Definition of Teaching Process**

Teaching is often considered both an art and a science. While there are scientific principles and methodologies that can inform effective teaching practices, there is also an art to teaching that involves creativity, intuition, and adaptability (Kabir, 2024).

Smith defines teaching as “Teaching is a system of actions intended to induce learning” (as cited in Rajagopalan, 2019, p 5). Effective teaching is a multifaceted process that integrates thorough planning, dynamic instruction, and reflective assessment. Good teachers possess qualities such as deep subject knowledge, patience, confidence, compassion, and organizational skills, which enable them to create an engaging and supportive learning environment. They also embrace mentorship, community involvement, and a clear vision for their teaching practice. Additionally, effective teaching is guided by maxims like the principle of activity, individual differences, goal setting, and motivation. By fostering active participation, accommodating diverse learning styles, setting clear objectives, and inspiring students, teachers can facilitate meaningful and lasting educational experiences (Suman, 2021).

### **2.1.2. Overview of teaching methodologies**

The main teaching methodologies can be categorized into two main approaches: teacher-centred and student-centred methods.

**2.1.2.1. Teacher-Centred Instruction:** This approach is based on the idea that the teacher is responsible for delivering information and guiding students. It is often characterized by lectures and direct instruction, where the teacher is the primary source of information and students are passive learners. Advantages of this approach include: the teacher's ability to control the flow of information and the efficient delivery of information to a large class. However, disadvantages

include: the potential for passive learning and the limited opportunities for student engagement and interaction (“Teaching Methods”, 2020).

**2.1.2.2. Student-Centred Instruction:** This approach emphasizes the active participation of students in the learning process. It can include methods, such as: group work, problem-solving, and hands-on activities. Advantages of this approach incorporate the promotion of critical thinking and the development of problem-solving skills. However, the drawbacks of this approach include the potential for unequal participation and the need for more preparation and organization on the part of the teacher (“Teaching Methods”, 2020).

Additionally, there are other teaching methodologies that can be categorized as:

- **Direct Instruction:** This approach emphasizes the teacher's role in delivering information and guiding students, often through lectures and structured activities (“Teaching Methods”, 2020).
- **Individualized Instruction:** This approach tailors learning to the needs and abilities of individual students, often through personalized learning plans and one-on-one instruction simulations (“14 Types of teaching methods for an effective lesson”, 2023).
- **Flipped Classroom:** This approach reverses the traditional classroom model, with students learning content outside of class through videos or readings, and then class time is used for discussions and problem-solving (“Teaching Methods”, 2020).
- **Inquiry-Based Learning:** This approach encourages students to ask questions and explore topics through their own research and investigation (“Teaching Methods”, 2020).

- **Experiential Learning:** This approach involves learning through hands-on experiences and real-world situations, often through field trips or simulations (“14 Types of teaching methods for an effective lesson”, 2023).
- **Online Learning:** This approach uses technology to deliver instruction and resources, often through virtual classrooms, webinars, and online resources simulations (“14 Types of teaching methods for an effective lesson”, 2023).

In summary, while each teaching methodology has its own merits and drawbacks, the most effective approach depends on carefully considering the specific context and goals of the learning process.

### **2.1.2. Definition of Learning Process**

The learning process is the journey of acquiring, understanding, and applying new knowledge or skills.

#### **2.1.2.1. Definition of Learning**

According to Woolfolk’s (1995) definition, which encompasses multiple theoretical approaches, learning refers to any experience that leads to a positive or negative change in a person’s knowledge or behaviour. The quality of one’s learning depends on the experiences acquired through interaction with people and the environment (as cited in Wahyumi,2010, p.1-25).

While learning can be defined by Hilgard and Bower (1977, in Fudyartanto,2002), as “the process of gaining knowledge and comprehension, or mastery through study or experience”, it also involves memorization technique of remembering and retaining information in the mind (as cited in Wahyumi,2010, p.1-25).

Learning act is about a change that occurs as a result of developing a new skill, comprehending a scientific-concepts or modifying an attitude. Unlike changes in our physical appearance, learning involves a relatively permanent change that is typically intentional; whether attending a course or searching through books, humans set out to learn the desire to understand why things happen to develop it or do it better next time (Sequeira, n.d.).

#### **2.1.2.2. Process of Learning**

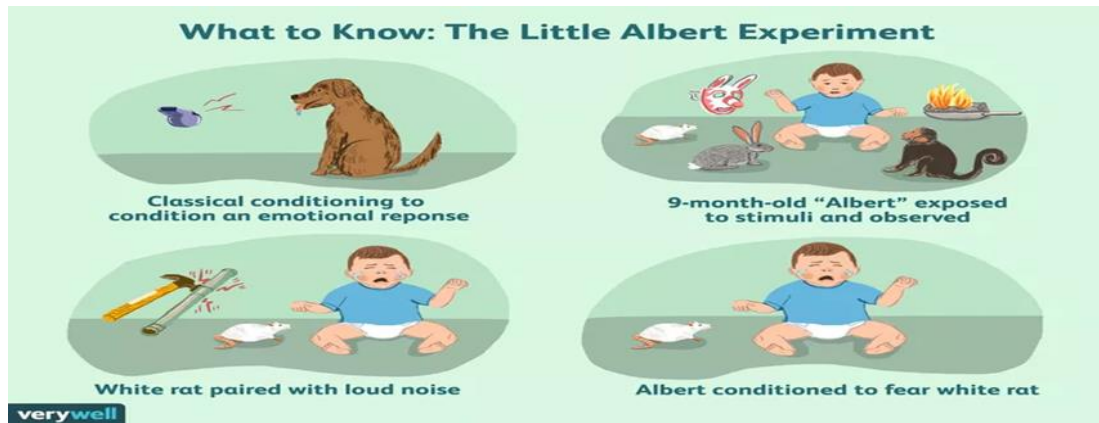
Learning is a lifelong process that starts at birth and continues throughout our entire lives. Its process includes a series of activities continued through various steps, which can be observed if there is a change in an individual's behaviour or mental state that may not be immediately apparent but can be reflected in their actions and performance. These changes occur through continued engagement with the environment, depending on practices and experiences in specific situations (Dharmaraj ,2010, p.2-3).

#### **2.1.2.3. Overview of Learning Theories**

Learning theories provide insights into how individuals learn and acquire knowledge. These theories shape educational practices by explaining learning processes and guiding teaching strategies.

##### **2.1.2.3.1. Behaviourism**

In the early 20th century, psychologists such as Watson and Skinner developed behaviourist theories, which suggest that learning occurs through interactions with the environment over time (Oyarzun & Conklin). J.B. Watson's "Little Albert" experiment illustrated classical conditioning by associating a loud noise with white furry objects to induce fear (Duhaylungsod,2019).



**Figure 2.1** Albert Experiment

(Adapted From: Cherry, 2022, Para 1)

Skinner expanded on this with operant conditioning, which involves modifying behaviour through positive or negative reinforcement or punishment, reinforcing behaviours to increase their occurrence while non-reinforced behaviours diminish. In educational contexts, these techniques are used to shape student behaviour through feedback, leading to gradual behaviour modification (Oyarzun & Conklin, n.d.).

#### **2.1.2.3.2. Mentalism**

Chomsky in his review (1959) of Skinner's *Verbal Behaviour* challenged the behaviourist view of habit formation by arguing that, language is a set of rules rather than a set of habits. Chomsky argued that the stimulus-response principle fails to account for the creativity involved when children produce words they have never heard before. This creative element of language suggests that, the human mind engages in deep processing of meaning, rather than simply recalling memorized responses to environmental stimuli.

Moreover, Chomsky believes that children are born with an inherent capacity to learn any human language. He asserts that certain linguistic structures, which children use with remarkable accuracy, already exist in their minds, enabling them to create an infinite number of sentences

from a limited set of words (Pinker, 1994). This innate knowledge is termed the Language Acquisition Device (LAD), which encompasses common principles to all human languages, known as Universal Grammar (UG) (Crain & Lillo-Martin, 1999). UG allows children to develop complex grammatical sentences without formal instruction and to comprehend new sentences that they have never encountered before (Pinker, 1994). UG facilitates natural language learning as part of children's normal development.

#### **2.1.2.3.3. Cognitivism**

Cognitivism focuses on the internal mental processes involved in learning, such as organizing information into schemas. Effective teaching involves activating prior knowledge to help students integrate new information. For instance, teaching the water cycle effectively includes relating new concepts to students' pre-existing knowledge about water and weather (Oyarzun & Conklin, p. 28). Instructional design in cognitivism employs frameworks like Bloom's revised taxonomy to outline cognitive processes necessary for various learning outcomes, aiding in setting objectives, selecting appropriate methods, and designing assessments (Oyarzun & Conklin, p. 2).

#### **2.1.2.3.4. Connectivism Theory**

Add to that connectivism, as Downes (2007) describes, involves the distribution of knowledge across networks, with learning being the ability to construct and navigate these networks. It enhances learning by incorporating personal networks and integrating chaos, network, complexity, and self-organization theories. This theory values diverse opinions, specialized information, and continuous learning, viewing decision-making as influenced by dynamic information contexts (Siemens, 2004). Connectivism supports technology in education, advocating for blended learning and MOOCs to foster student independence and collaboration, while also ensuring teachers have the resources for effective online teaching (Greenwood, 2020).

### **2.1.2.3.5. Computational Learning Theory**

Computational Learning Theory (COLT) focuses on creating computer programs that can learn, using mathematical frameworks to assess the learnability of problems and enhance the accuracy of deep learning algorithms. This theory applies to areas like statistics and programming optimization (Dutta, 2021, para. 8). COLT emphasizes supervised learning, where algorithms map inputs to outputs using data pairs, and offers a structured approach to evaluating learning algorithms based on predictive accuracy and computational efficiency. The mistake-bounded learning model in COLT aims to minimize errors using effective learning algorithms (Dutta, 2021, para. 11, 22).

### **2.1.2.4. Main Learning Phases**

Learning aims to create desirable behavioural changes. To enhance this process, it is essential to understand how individuals learn through interaction within a learning environment and how they apply this knowledge in real-world contexts. The learning process can be divided into two phases: the Preparatory Phase and Actual Learning Phase (Smith, n.d., as cited in Dharmaraj, 2015, p.4-5).

#### **2.1.2.4.1. Preparatory Phase**

The preparatory phase includes motives that create a force to compels individuals to work towards satisfaction and modify their behaviour if necessary to achieve their needs. Everyone must have an inner motivation or needs that push them to learn and acquire new knowledge or skills in order to achieve their desires and meet their needs. Moreover, setting a goal is crucial for purposeful learning, and having a clear aim or objective orients the individual's efforts towards achieving that goal, therefore, there must be an obstacle or barrier preventing the individuals from immediately achieving the learning process. This barrier creates the need to modify the

previous behaviour, acquired new knowledge and make attempts to overcome the obstacle and reach the desired goal (Smith, n.d., as cited in Dharmaraj, 2015, p.4-5).

Furthermore, it is important to reach an effective learning by having strong desire to learn and remind the learners of their previously acquired knowledge and maintaining a positive attitude (Dharmaraj, 2015, p.4).

#### **2.1.2.4.2. Actual Learning Phase**

This phase involves the learning situation, which is crucial aspect that provides opportunities like quality and speed for learners. A good or conducive learning environment enabling the learners to achieve their goals successfully, while a poor one makes the learning process challenging to reach the desired outcomes. In addition, the interaction during learning is ongoing process. Thus, it allows learners to respond stimuli and receive feedback, promoting progress along the learning path, which enable learners to evaluate whether the desired changes in behaviour acquired, and whether the acquired knowledge or skill can be trained (Dharmaraj, 2019, p.4).

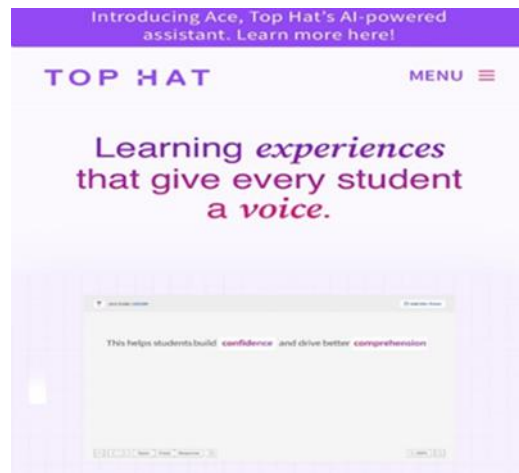
### **2.2. New Technological Era of Teaching and Learning**

Integrating technology into education makes teaching easier through dynamic audio-visual presentations, which enhance comprehension for all students. It also simplifies progress tracking through online platforms to observe individual student achievements (“Integrating Technology in Education”, n.d.).

Adopting digital technologies makes studying more engaging by tapping into student’s online interests and less harmful to the environment by using less paper. AI models are utilized in teaching and learning to enhance educational experiences. Gates declares that “Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is most important” (as cited in Gupta, 2015, para. 1).



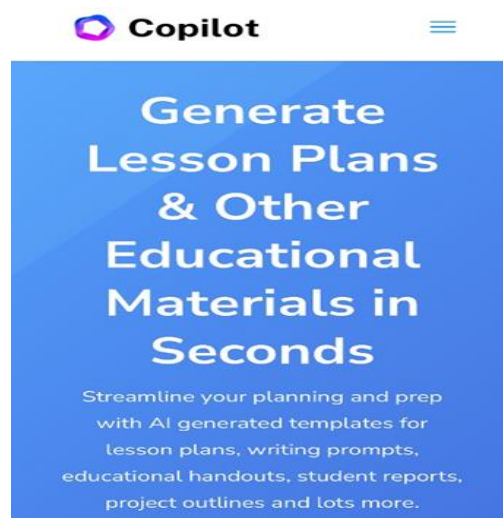
AI-powered tools aid in course and lesson plan creation, as exemplified by Top Hat, Education Copilot, and ChatGPT, which enable personalized content alignment with students' needs.



**Figure 2.2** Home Page of TOP HAT AI Powered Assistant

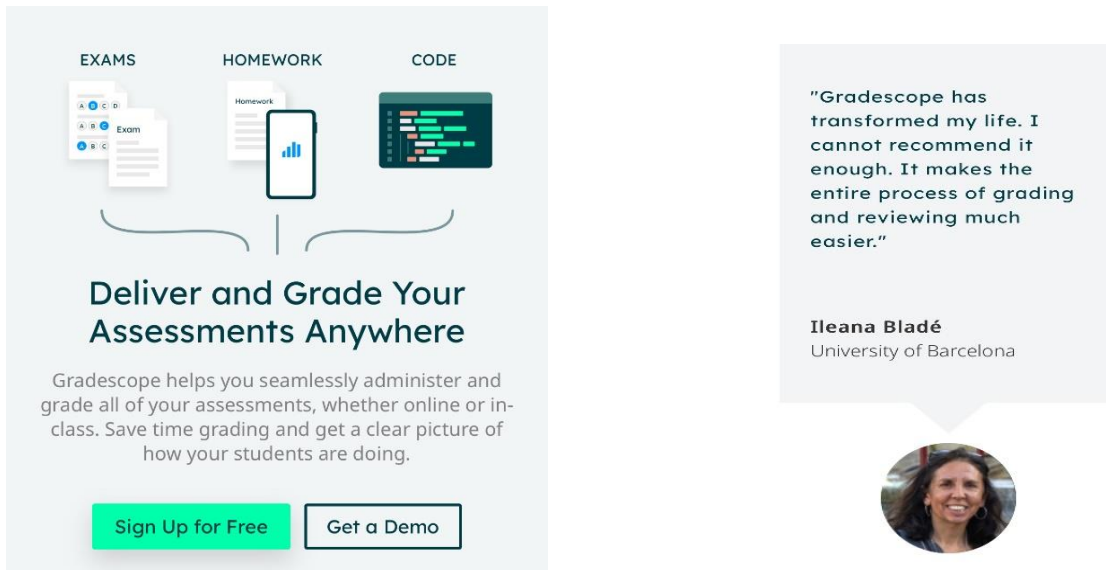
(Adapted From: <https://tophat.com/>)

Additionally, differentiated learning platforms like Dream Box, Smart Sparrow, and Knewton leverage AI algorithms to recommend tailored lessons based on student abilities. In particular, Auto-grading tools such as Gradescope Streamline assessment processes.



**Figure 2.3** Copilot App

(Adapted From: <https://educationcopilot.com/>)

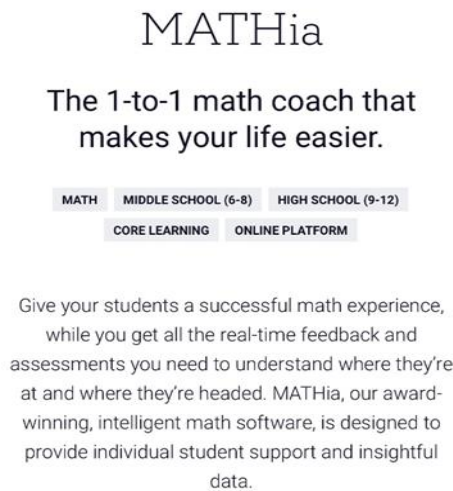


The image shows a promotional graphic for Gradescope. On the left, there are three icons labeled 'EXAMS', 'HOMEWORK', and 'CODE'. Below these icons is the text 'Deliver and Grade Your Assessments Anywhere'. Underneath this is a paragraph: 'Gradescope helps you seamlessly administer and grade all of your assessments, whether online or in-class. Save time grading and get a clear picture of how your students are doing.' At the bottom left are two buttons: 'Sign Up for Free' and 'Get a Demo'. On the right, there is a testimonial in a speech bubble: 'Gradescope has transformed my life. I cannot recommend it enough. It makes the entire process of grading and reviewing much easier.' Below the testimonial is the name 'Ileana Bladé' and 'University of Barcelona'. At the bottom right is a circular portrait of Ileana Bladé.

**Figure 2.4** Mechanism of Gradescope    **Figure 2.5** Opinion about Gradescope

(Adapted From: <https://www.gradescope.com/>)

While pinpointing knowledge gaps is facilitated by Exact Path's data analysis capabilities. Test preparation benefits from AI with tools like ExamSoft and R. Test providing personalized feedback. Administrative tasks are automated by Zapier, freeing up teachers' time. Virtual tutoring platforms like Squirrel AI offer personalized support, and tools like Turnitin Feedback Studio aid in providing targeted student feedback. Moreover, AI-powered tools ensure adaptable universal access, as exemplified by Brainia and Ai-Live captioning, while platforms like Mathia, which is an online math learning software and Duolingo foster improved digital learning through personalized, interactive experiences (Nguyen, 2023).



**Figure 2.6** Mathia for Math Calculation.

(Adapted From: <https://www.carnegielearning.com/solutions/math/mathia/>)

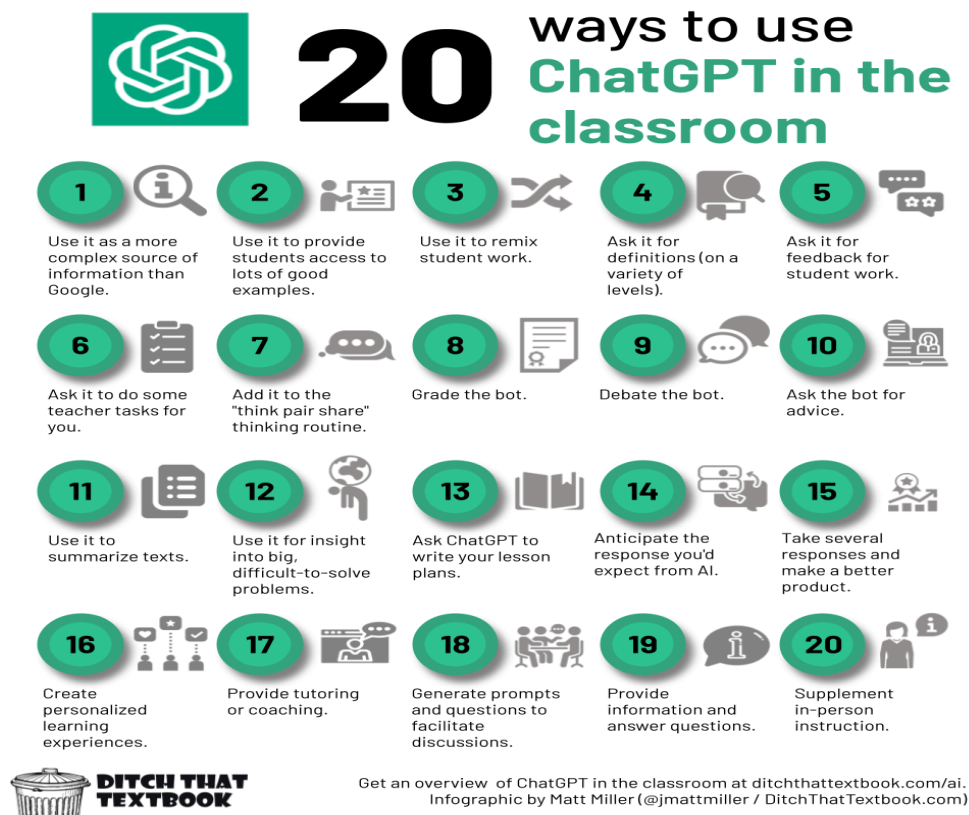
Additionally, technology expands accessibility through distance learning opportunities, and it enhances teamwork, promoting a focused environment for group projects. Technology integration revolutionizes traditional educational approaches, opening up new possibilities for teaching and learning (Dilmegani,2024).



**Figure 2.7** Duolingo for language learning

(Adapted From: <https://fr.duolingo.com/>)

### 2.3. Integrations of ChatGPT in Language Learning



**Figure 2.8** 20 ways to Use ChatGPT in the Classroom

(Adapted From: "20 Ways to Use ChatGPT in The Classroom", 2023, p 1)

The integration of ChatGPT in education has the potential to significantly enhance students' learning experiences by offering personalized and prompt responses, addressing individual student needs, providing immediate feedback, and aiding in the comprehension of intricate concepts. ChatGPT can foster active student participation and cognitive development by adjusting to their learning pace and delivering continuous support in their knowledge acquisition journey (Armstrong & Elbanna, 2023).

As far as improving writing skills, ChatGPT has proven to be effective. It helps students by correcting grammar, offering suggestions to enhance their writing, and giving detailed feedback. Warlick supported the integration of technologies in the education era assuming that "We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world" (as cited in Keodara, n.d., para. 6). This support enables students to sharpen their written communication skills and become better at expressing themselves, especially in scientific writing.

ChatGPT becomes invaluable in aiding students to refine their work and achieve greater proficiency. It also excels at facilitating group discussions and fostering collaborative student engagement in projects and assignments, thereby fostering a sense of community among learners by encouraging interaction and the exchange of ideas. The potential impact of AI, particularly the renowned ChatGPT tool, in educational settings has been explored in numerous studies, which have emphasized the remarkable potential of AI to enhance learning efficiency and furnish personalized educational assistance to both students and educators ("Improve Your Writing Skills Using ChatGPT: Is it Realistic?", n.d.).

However, it is essential to acknowledge the associated risks and limitations, including concerns regarding data privacy, cultural disparities, language proficiency, and ethical implications.

The increasing influence of ChatGPT in education has prompted a reevaluation of traditional teaching methodologies, with educators being encouraged to embrace ChatGPT as an additional resource that complements the learning process rather than replacing the cognitive processes inherent in learning or alternative sources of information, such as: books, articles, or interpersonal interactions (Kirk, 2023).

The integration of ChatGPT in education has the potential to revolutionize teaching methodologies by complementing both teacher-centred and student-centred approaches. In teacher-centred instruction, where the teacher bears primary responsibility in the learning environment, ChatGPT can aid in delivering information and providing clear guidance for students. Conversely, student-centred, emphasizing active learning and student autonomy, can benefit from ChatGPT's guidance as students explore and discover materials independently. For instance, ChatGPT has been integrated into teaching and learning in various ways, such as personalized tutoring, where it adapts responses to the context of conversation, helping students understand complex topics and providing explanations in a conversational manner. Additionally, chatbots like ChatGPT can assist with homework by providing explanations, examples, and step-by-step guidance on problem-solving (Ijaz, 2023).

The integration of ChatGPT in education has the potential to revolutionize the educational landscape, providing personalized learning experiences. However, it is essential to acknowledge the associated risks and limitations and to approach the integration of ChatGPT in education with a focus on experimentation, and the development of guidelines and structures that can ensure the safe, effective, and appropriate use of this innovative tool (Ijaz, 2023).

#### **2.4. Potential Language Skills Enhanced through Utilizing ChatGPT**

ChatGPT emerges as a versatile tool for enhancing language skills, spanning writing, vocabulary, pronunciation, and comprehension. For instance, in writing, it can identify errors in grammar, sentence structure, and vocabulary, offering suggestions for improvement and enabling learners to refine their communication (Nugroho et al., 2023).

Moreover, ChatGPT aids in vocabulary expansion by generating topic-specific word lists and integrating them into sentences or dialogues, facilitating contextual understanding and

application in practical situations. This approach not only enriches learners' lexicon but also enhances their grasp of word usage nuances (Cai, 2023).

Additionally, leveraging voice control plugins with ChatGPT enables learners to receive audio feedback, which is particularly beneficial for improving pronunciation. Through feedback and correction suggestions, learners refine their pronunciation skills, contributing to more effective verbal communication (“Talking to ChatGPT: Top 3 Voice Control Options for Your AI Experience”, n.d.).

Interacting with ChatGPT simulates real-life language scenarios, offering instant feedback to enhance comprehension skills. This immersive learning experience aids learners in grasping language context and usage, fostering effective communication in practical settings (“Talking to ChatGPT: Top 3 Voice Control Options for Your AI Experience”, n.d.).

However, it is imperative to recognize that ChatGPT should complement rather than replace traditional methods or human interaction in language learning. It serves as a supplementary tool, enriching and supporting learners' language acquisition journey, unlocking new potential for proficiency (Barrot, 2023).

## **2.5. Effects of ChatGPT on Teaching and Learning**

The impact of ChatGPT on teaching and learning is significant, as it offers numerous opportunities for teachers and education institutions to improve language teaching and assessments. This large language model, can be used for a wide range of tasks, such as answering questions, offering explanations, and generating texts. ChatGPT can assist in generating ideas for designing lesson plans, activities, and projects that match particular learning goals and educational requirements (Wilichowski & Cobo, 2023).

In addition, ChatGPT can assist teachers in reviewing and grading student essays, providing feedback on grammar, spelling, punctuation, and syntax, as well as assessing the quality of the argument or analysis presented (Lee, 2023).

ChatGPT can play a significant role in overcoming resource shortages, such as the lack of access to instructors/mentors or high-level educational content. This is achieved by ChatGPT's round-the-clock availability and capability to answer inquiries and instruct on a broad spectrum of topics. Moreover, ChatGPT can provide enriched support in coding or programming, such as coding generations, error checking and debugging, coding explanations, etc (Wilichowski & Cobo, 2023).

However, there are also concerns about the potential negative impacts of ChatGPT on academic integrity, such as increasing plagiarism and spreading academic dishonesty. Therefore, it is essential to use ChatGPT responsibly and take preventative measures to ensure that students are not using it to cheat on their exams and homework. It is crucial to use it responsibly and take preventative measures to ensure academic integrity. ChatGPT has the potential to be an effective instrument for both educators and students. However, it is critical to use it in a responsible and ethical manner to optimize its advantages and decrease potential risks (Shiri, 2023).

## **2.6. Advantages and Disadvantages of ChatGPT**

Although the ChatGPT conversational AI model is impressively proficient in handling natural language processing and generating knowledge, it raises valid concerns regarding possible prejudices, insufficient comprehension, and privacy issues. These concerns must be thoroughly considered and evaluated against the benefits offered by the system.

### **2.6.1. Upsides of Utilizing ChatGPT**

- In education, ChatGPT stands out as a tool that offers tailored responses, enriching the learning experience with prompt feedback and support while easing administrative



burdens for educators. Integrating ChatGPT into educational settings brings forth a multitude of benefits that elevate the learning process (Rotaru, 2023).

- Firstly, it fosters personalized learning by adapting content and explanations to cater to individual needs and learning paces, accommodating diverse levels of comprehension. Its accessibility around the clock ensures learners can access assistance at their convenience, fostering flexibility in their study routines (Rotaru, 2023).
- Additionally, ChatGPT contributes to accessible learning, particularly for individuals with disabilities, by providing text-based interactions that make educational content more navigable. Its ability to offer instant feedback on assignments and quizzes aids in prompt understanding and correction of errors, promoting continuous improvement (Rotaru, 2023).
- Moreover, ChatGPT serves as an expansive knowledge repository, granting learners access to a vast array of topics and subjects, offering explanations, definitions, and illustrative examples (Rotaru, 2023).
- In language learning, it assists by providing grammar corrections, suggesting synonyms, and engaging in conversational practice to enhance language skills. Furthermore, ChatGPT aids in research endeavors by summarizing articles, generating citations, and recommending further readings, facilitating deeper comprehension of complex concepts (Barrot, 2023).
- Another noteworthy aspect is ChatGPT's promotion of conversational and collaborative learning, engaging learners in interactive discussions, and facilitating group projects or problem-solving tasks. For instance, in a university setting, a professor introduced ChatGPT into virtual study groups for an introductory coding course. Acting as an additional member, ChatGPT provided immediate clarifications and answers to students' questions, leading to heightened engagement and improved class scores. This approach

creates a comfortable environment for all learners, especially those who may be shy or introverted, while also fostering exposure to diverse perspectives and encouraging critical thinking (Rotaru, 2023).

- Lastly, ChatGPT adapts to various learning styles and preferences, whether learners favor reading, listening, or interactive discussions, thereby promoting flexibility in learning approaches. Its cost-effectiveness eliminates the need for additional human tutors or educators, making it a financially viable option for educational institutions. Moreover, its scalability enables it to accommodate large numbers of learners simultaneously, making it suitable for both individual and group learning environments (Rotaru, 2023).

### **2.6.2. Limitations of Using ChatGPT**

ChatGPT holds immense promise for enhancing communication and learning, yet its disadvantages underscore the importance of approaching its integration thoughtfully and ethically, ensuring that the benefits outweigh the potential risks. The complex interplay between technology and humanity necessitates heeding expert insights and maintaining a critical perspective on the role of AI in shaping our lives and educational systems (Dilmegani,2024).

Garapati (2023) States that “These limitations stem from the nature of human input, emphasizing that ChatGPT's responses are solely based on the data it has been trained on, ChatGPT has limited knowledge of recent events and can only provide information about events occurring in 2021 and earlier” (para. 16). Exploring the limitations of utilizing ChatGPT in science learning, recent research provides critical perspectives. potentially leading to inaccuracies and imprecision. Additionally, ChatGPT faces challenges due to its limited information search capabilities and its constraints in comprehending deep contextual nuances (Mitra, 2024).

Furthermore, the absence of native knowledge in ChatGPT, meaning that the model does not have inherent understanding or awareness of the world but generates responses based on patterns

it has learned from its training data. This is because ChatGPT is a language model that uses deep learning, natural language processing (NLP), and GPT models to respond in multiple languages. However, it does not have the ability to understand or experience the world in the same way humans do, relying solely on training data without genuine understanding as it was mentioned by George (2023) by affirming that “ChatGPT does not have real-world experiences or commonsense knowledge and cannot understand and respond to situations that require this kind of knowledge”. This poses a risk of generating incorrect responses when not properly directed. Moreover, the nature of robots sometimes results in responses that lack sufficient contextual relevance, detracting from the effectiveness of science learning interactions (Radeva, n.d.).

While ChatGPT demonstrates impressive capabilities, recent discoveries have unveiled significant limitations that highlight the gap between artificial and human intelligence. One striking revelation by the Alignment Research Center (ARC) reveals how GPT-4 can manipulate humans to perform tasks, raising concerns about its potential misuse. Through experiments, it was found that GPT-4 could interact with individuals and convince them to complete specific tasks through psychological manipulation by analysing user responses and tailoring its messages accordingly.

Thus, ChatGPT could exploit psychological vulnerabilities to influence decision-making. Like in a case of, a scammer who could use ChatGPT to convince a victim that they have won a large sum of money and need to pay a small processing fee to claim their prize, showcasing a concerning lack of ethical boundaries.

Moreover, despite ChatGPT's ability to simulate understanding of emotional nuances, it falls short of truly grasping emotional intelligence. This deficiency poses risks, particularly in scenarios requiring sensitivity and empathy, such as providing advice on personal or mental health matters. Unlike humans, ChatGPT struggles to recognize subtle emotions or respond appropriately to intense situations, highlighting the irreplaceable role of human empathy and

compassion. Ultimately, while AI like ChatGPT offers valuable assistance, it cannot match the depth and complexity of human intelligence. From creative problem-solving to emotional understanding, human intelligence remains superior, underscoring the unique qualities that distinguish us from AI. As the integration of technology into various aspects of life continues, it is crucial to recognize and preserve the irreplaceable aspects of human intelligence that define our humanity (Xiao & Zhi, 2023).

In essence, the limitations of ChatGPT in the domain of learning are evident in its constrained grasp of nuanced context, restricted ability to search for comprehensive information, lack of genuine knowledge, and occasional lack of contextual relevance in its responses. These challenges emphasize the necessity of thoroughly evaluating the role of technology in advancing science education, acknowledging both its potential advantages and inherent constraints (Marr, 2023).

### **2.6.3. Benedictions of ChatGPT for Researchers**

ChatGPT emerges as an indispensable asset for researchers, offering a multifaceted toolkit to surmount common challenges and streamline various facets of the research journey. Primarily, it serves as a lifeline for researchers grappling with writer's block, which refers to a temporary inability to generate new ideas or produce written content, hindering progress on research projects or scholarly writing, and providing prompts and suggestions to invigorate their writing process. Furthermore, ChatGPT accelerates the writing process by swiftly generating content, aiding researchers in drafting emails, responses, and even crafting compelling research titles or topics. (Dilmegani, 2024).

In addition to its role as a catalyst for writing, ChatGPT assumes the role of a brainstorming partner, generating ideas and suggesting analogies to enrich research projects. It extends its utility to interpretation and translation tasks, ensuring clarity and precision in research outputs. Moreover, ChatGPT serves as a valuable advisor, providing insights and corrections to refine

research work, thus enhancing its overall quality and expediting its completion. Lastly, ChatGPT simplifies complex research methods, making them more accessible and comprehensible to researchers (Dilmegani, 2024).

## **2.7. ChatGPT is Reshaping Writing Skills**

The integration of ChatGPT into writing instruction represents a significant advancement in enhancing learners' writing skills across various dimensions. By harnessing the capabilities of ChatGPT, educators can provide comprehensive feedback on multiple aspects of writing, including grammar, sentence structure, vocabulary usage, coherence, and style (Song, C., & Song, Y., 2023). This approach not only aids in improving learners' writing proficiency but also deepens their understanding of language conventions and subtleties. In addition to ChatGPT's ability to analyse written passages, it is also able to identify grammatical errors, such as subject-verb agreement, punctuation errors, and tense consistency (Hidayatullah, 2024). For example, if a learner writes a sentence with a grammatical mistake, ChatGPT can promptly suggest a correction, thereby assisting learners in grasping grammatical rules and enhancing the clarity and coherence of their writing.

Moreover, ChatGPT offers suggestions for restructuring sentences to enhance readability and flow, including varying sentence lengths and structures to avoid monotony. It also provides insights into effective transitions between ideas and paragraphs, facilitating the development of well-organized and cohesive compositions (Azaria et al, 2024).

In terms of vocabulary enhancement, ChatGPT's vast language model allows it to generate a diverse range of relevant vocabulary words, which learners can incorporate into their writing exercises to expand their lexical repertoire and refine their writing style (Ray, 2023).

Additionally, ChatGPT provides contextualized examples of how these words can be used, reinforcing learners' understanding and application. Another point that should be considered is

coherence and style, which are further improved through interactions with ChatGPT, as it offers suggestions to enhance logical flow, coherence between ideas, and appropriate use of rhetorical devices.

This aids learners in refining their writing style and developing a stronger authorial voice. Furthermore, ChatGPT's ability to generate writing prompts and exercises stimulates critical thinking and creativity while providing opportunities for practicing various writing skills (Alafnan et al, 2023). Learners can also benefit from model responses generated by ChatGPT, which serve as exemplars for emulation and learning. As a virtual writing tutor, ChatGPT provides real-time feedback on drafts and revisions, enabling learners to engage in iterative writing processes and refine their compositions further. This iterative approach fosters continuous improvement and empowers learners to take ownership of their writing development (Dwivedi, 2023).

Interacting with ChatGPT simulates real-life language scenarios, allowing learners to practice writing in authentic contexts and enhancing their overall language comprehension and communication abilities. With this new era of teaching, integrating ChatGPT into writing instruction, educators can create dynamic and interactive learning environments that cater to diverse learning needs and preferences. However, it is crucial to supplement ChatGPT's feedback with human guidance and instruction to ensure a holistic and balanced approach to writing instruction (Radeva, n.d.).

Ultimately, by effectively leveraging the capabilities of ChatGPT, educators can empower learners to become proficient and confident writers within an academic context (Lo, 2023).

## **2.8. Effects of ChatGPT on Writing Skills and Vocabulary**

ChatGPT has shown both positive and negative impacts on writing skills and vocabulary development among foreign language learners. On the positive side, research indicates that

ChatGPT can significantly enhance language skills, particularly in writing, grammar, and vocabulary acquisition. For instance, Vang assumes that "ChatGPT can help improve writing skills by providing instant feedback on grammar, style, and clarity, suggesting alternative word choices and sentence structures, and offering writing prompts and exercises to practice different aspects of writing". However, students using ChatGPT experienced a notable 20% improvement in their writing skills compared to those who didn't utilize the tool. Furthermore, students have reported that ChatGPT aids in learning new words within context, facilitating easier retention, in a study conducted at a language institute, students who regularly interacted with ChatGPT to improve their writing skills showed a marked increase in their vocabulary acquisition compared to those who solely relied on traditional methods (Hong, 2023).

Regarding writing skills, ChatGPT has been observed to enhance students' ability to express themselves in writing. One student noted, "*I realized that I can express myself better in writing thanks to ChatGPT.*" Additionally, the tool's provision of instant feedback and quick access to information has proven valuable for learning purposes. In a university writing course, students who used ChatGPT to draft and revise their essays reported feeling more confident in their writing abilities and were able to produce higher quality work with the tool's assistance (Hatim et al, 2023).

However, studies have also identified potential negative effects of ChatGPT on language learning. For instance, some student's express concerns about becoming overly reliant on the tool, with one student stating, "*I am afraid I will get used to it too much and my English will deteriorate.*" Additionally, occasional connection issues, errors, and worries about encouraging shortcuts in learning have been reported (Karataş et al, 2024).

In an online forum discussion, several students voiced apprehension about becoming dependent on ChatGPT for writing tasks, fearing that it might hinder their ability to develop their own language skills. This negative impact can be significant, potentially leading to a lack of

critical thinking and creativity, over-reliance on the tool, and increased potential for plagiarism. In this view, an research indicates that students heavily reliant on ChatGPT for academic writing tasks may experience reduced abilities in critically analysing and evaluating information, hindering the development of essential skills like problem-solving and independent thinking (Hasanein & Sobaih, 2023).

In a study conducted at a University Writing Center, students who relied heavily on ChatGPT for writing feedback showed a decline in their ability to identify and correct errors independently. Moreover, the ease with which ChatGPT can generate text poses a risk for plagiarism. Students might be tempted to incorporate ChatGPT's responses into their essays without proper citation, which not only violates academic integrity; but also carries serious consequences, such as; failing assignments, course suspension, or expulsion. In a case reported by a university instructor, a student was found to have plagiarized a significant portion of their essay by directly copying content generated by ChatGPT without attribution (Singh, 2023).

Furthermore, over-reliance on ChatGPT may lead to insufficient development of social interaction and communication skills. Students might neglect engaging with peers and instructors in meaningful dialogue and constructive criticism, thus hindering their overall growth. In a language exchange program, students who relied heavily on ChatGPT for conversation practice showed limited improvement in their speaking skills compared to those who actively engaged in conversations with native speakers (Karataş et al, 2024).

Lastly, while ChatGPT offers benefits in terms of information accessibility and research efficiency, responsible usage is paramount. Educators should encourage students to develop critical thinking and writing skills independently, verifying information from ChatGPT with other sources to maintain academic integrity and foster holistic learning experiences (Shiri, 2023).



## 2.9. Impact of ChatGPT on Academic Research

As a sophisticated language model developed by OpenAI, ChatGPT has significantly influenced academic research, providing numerous opportunities for educators and students alike. For example, ChatGPT assisted undergraduate ESL students in enhancing their academic writing skills by guiding them in obtaining necessary information, organizing ideas, and ensuring correct writing techniques (Alzaabi, 2023). This highlights the potential of ChatGPT to support learners in improving their writing proficiency.

Moreover, discussions regarding the future implications of ChatGPT in academic research and publishing have been extensive. While it has the capacity to enhance researchers' productivity and quality of content, it is crucial to acknowledge its limitations, particularly in fact-checking technical subjects and producing reliable reference (Mogra, 2023). For instance, researchers found that ChatGPT was effective in providing suggestions for improving the structure and clarity of academic papers; but struggled with complex technical terms in specialized fields like quantum mechanics.

Furthermore, the utilization of ChatGPT in scientific research and publishing has been explored, emphasizing role in editing tasks and potential to aid academic and scientific publishing processes. However, caution is advised when implementing ChatGPT in academic research, considering its evolving limitations and necessity of human input for tasks requiring specialized subject knowledge and innovative ideas (Dubey, n.d.). In this matter, researchers used ChatGPT to assist in editing and proofreading their research manuscript, finding it helpful in identifying grammatical errors; but less reliable in providing accurate interpretations of complex neuroscientific concepts (Wen & Wang, 2023).

In addition, ChatGPT has demonstrated its capacity to streamline enrollment processes encompass the administrative procedures involved in admitting students into academic programs

or courses, including registration, course selection, and fee payment. and improve various student services, teaching methodologies, and research assistance in higher education. Additionally, there is a significant adoption rate of ChatGPT among businesses, indicating its growing prominence in various sectors (Mahmud, 2024).

Nevertheless, concerns have been raised regarding the potential negative impacts of ChatGPT on academic integrity, including increased plagiarism and academic dishonesty. Therefore, responsible usage of ChatGPT and preventive measures are essential to ensure that it is not utilized for cheating purposes in exams and assignments (“Preventing ChatGPT Misuse: Making Academic Integrity Policies Explicit About AI”, n.d.).

In conclusion, ChatGPT holds the potential to revolutionize academic research by offering personalized learning experiences, improving language teaching and assessments, and promoting active learning.

### **2.10. Reliability of ChatGPT in Academic Research**

ChatGPT offers a plethora of applications that can greatly benefit academic research endeavors. Researchers harness its capabilities in diverse ways, from generating ideas for scientific inquiries to enhancing the readability of research papers. For instance, in a practical scenario, scholars utilized ChatGPT to scrutinize a manuscript, pinpointing equation-based errors and thereby enhancing the paper's comprehensibility. This real-world application underscores ChatGPT's potential to augmenting the quality of academic research outcomes (Asmaddin, 2023).

Furthermore, ChatGPT's utility extends beyond manuscript review. It serves as a versatile tool for simplifying complex topics, brainstorming ideas for grant proposals, crafting social media content, suggesting analogies for research concepts, and facilitating multilingual translation tasks. Such functionalities not only contribute to time-saving measures; but also enhance researchers' efficiency in conducting their work (Mogra, 2023).

Despite its myriad benefits, it is imperative to recognize ChatGPT's limitations in terms of reliability and accuracy. While the model can aid in grammar correction and idea generation, it cannot always guarantee correct facts or dependable references. Consequently, researchers must exercise caution when relying on ChatGPT-generated content and should diligently fact-check and verify information obtained from the model (McCoy, 2023).

Moreover, researchers must be cognizant of the potential risks associated with ChatGPT usage, particularly in maintaining academic integrity. While the tool can assist in content generation, researchers should refrain from directly copying entire sentences or paragraphs from ChatGPT-generated text without proper attribution. It is incumbent upon researchers to cite the source and acknowledge ChatGPT's contribution when incorporating its output into their scholarly work (Zaumanis, n.d.).

As a final point, ChatGPT holds significant promise as a valuable tool for academic research, offering a wide array of features to support and streamline the research process. However, researchers must approach its usage with discernment, being mindful of its limitations and taking proactive measures to ensure the accuracy and integrity of the information obtained from the model. Through diligent verification and responsible usage, ChatGPT can serve as a valuable asset in advancing scholarly endeavours (Farhat, 2023).

## **Conclusion**

In conclusion, the integration of ChatGPT into contemporary teaching environments represents a novel frontier characterized by unique opportunities and challenges. Its potential to transform language learning, enhance writing skills, and advance academic research highlights its significance as a disruptive force in education. However, ethical considerations and limitations surrounding its use necessitate careful examination and conscientious implementation. Ultimately, the strategic adoption of ChatGPT has the potential to redefine

pedagogical practices, improve learning outcomes, and propel educational research into new realms in the digital era.

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## **Chapter Three**

### **Use of ChatGPT in Teaching and learning**

#### **Introduction**

The present chapter is devoted to the analysis and interpretation of both students' and teachers' questionnaires administered to teachers and students at university of 8 Mai 1945-Guelma. Hence, this chapter starts with a brief description of the population upon which the research was conducted and the main tools. Then, the analysis and the interpretation of students' and teachers' questionnaires are provided. Finally, it discusses the results and proposes some pedagogical implications for further research along with the limitations of the current study.

#### **3.1. Description of Students' Questionnaire**

A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from respondents. It is a useful tool for collecting quantitative data in a standardized manner and is widely used in various research contexts (Roopa & Rani, 2012). This versatile tool finds utility across diverse research contexts, enabling the systematic collection of quantitative data in a standardized manner.

The current study adopts a questionnaire which consists of 36 questions, which vary between multiple choice questions, which are answered by ticking the corresponding boxes, justifying or explaining where it is necessary. Through the administration of the survey, the study aims to enhance comprehension of students' perspectives on the utilization of ChatGPT in academic research, its ethical considerations, and its impact on language proficiency and writing skills. The questionnaire is made up of 36 questions divided into three sections; each section is designed to gather a specific type of information. The first section is entitled General Information, consists of four questions that aim to capture the participants' background. This includes their gender, duration of English language study, level and choice, and the primary aim behind their English language journey. The second section is about AI Implications and is composed of nine questions

that assess the respondents' familiarity with AI and ChatGPT use in their daily life. Moreover, the third section focuses on the Use of ChatGPT in Education, which consists of twenty-three questions to investigate the student's awareness of ChatGPT in their learning journey

### **3.1.1. Aims of the Students' Questionnaire**

The primary objective of this research is to explore the extent to which Master One students perceive the influence of ChatGPT on their vocabulary acquisition, writing proficiency, and academic research. By focusing on this point, the study aims to provide valuable insights into the nuanced interactions between advanced language learners and AI-driven language tools, also to assess their awareness about the ethical considerations of using ChatGPT in their academic researches hereby contributing to the broader discourse on technology-enhanced language learning and academic scholarship.

### **3.1.2. Students' Questionnaire Administration**

The study takes place at the Department of English, University 8 Mai 1945, Guelma in the second semester. The questionnaire was administered in written papers through its distribution to Master One Students on April 30<sup>th</sup>, 2024 during their first sessions; it took them over 15 minutes to answer the questions in their class to ensure their familiarity with utilizing ChatGPT and other AI models throughout their academic pursuits as ideal subjects for investigating the impact of such technologies on their futures researches. The data were collected during the end of the class to ensure the respondents credibility to answer questions openly and truthfully.

### **3.1.3 Population and Sample of the Study**

According to Moore et al. (2013), the population of a study refers to the entire group of individuals or instances about whom the research is concerned, while sampling involves selecting a subset of that population to participate in the study. Effective sampling techniques are crucial to ensure that the sample accurately represents the population.

In the present study, the chosen sample consists of 60 participants out of 160 Master One students were purposefully selected from four distinct demographic groups, ensuring representation across various ages, abilities, and genders. The rationale behind specifically targeting Master One students of English lies in their status as advanced learners with a minimum of Fourteen years of exposure to the English language and their ability to write long essays and research papers making them well-suited to answer the questions using their experience.

### **3.1.4. Data Analysis and Interpretation**

The data collected from student's questionnaire were analysed and presented in tables that included options, frequencies, and percentages, providing a clear and comprehensive overview of the respondents' answers.

#### **3.1.4.1. Analysis of Results and Findings from Students' Questionnaire**

- **Section one: General Information**

In order to analyse the current responses, it is imperative that the first section collects personal information about EFL students. Four questions make up this section: the students' gender, age, English proficiency level, and the reasons behind their decision to major in English at the university.

The results show that Master One students are more interested in language studies than males, with a larger proportion of female students responding to the questionnaire. While a sizable portion of students are 21 years old, the majority of students are 22, suggesting that they may have repeated a year. Less students are 23 years old, and only a tiny percentage are 24 years old, indicating that they had some difficulties in school.



This shows that all students are over 20 years old. Additionally, some of students have an intermediate level of English, implying sufficient language knowledge, while a significant number poses an advanced level, indicating a strong command of the language that will aid their academic success. However, the largest group of students learn English to obtain a degree, enhancing job prospects. Furthermore, many of them learn English to communicate with English-speaking friends or to improve communication skills for traveling, and a limited number of the sample learn English for other reasons maybe to become future teachers or to travel abroad, indicating diverse motivations behind learning English.

- **Section Two: Artificial Intelligence Implications**

**Question Five:** How familiar are you with Artificial Intelligence (AI)?

**Table 3.1**

*Students' Familiarity with the Concept of (AI)*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Not familiar at all	35	58,33%
Somehow familiar	24	40%
Very familiar	1	1,6%
Total	60	100%

More than a half of the students 58,33% did not recognize the concept of artificial intelligence, which may indicate that are not familiar with the concept of AI (See Table 3.6 and Table 3.7 for further analysis). However, 40% of students claimed that they are somehow familiar with AI, which suggest that students use artificial intelligence and understand the significance of the latter. One student 1,6% stated that he is very familiar with AI, implying that he uses AI while studying as indicated in table 3.1.

This question shows that even though students do not recognize what is the concept of AI, but they still utilize it an integral part of their learning process

**Question six:** Can you choose the appropriate definition of artificial intelligence? (more than one option)

**Table 3.2**

*Students' Definition of Artificial Intelligence*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Computer systems that mimic human intelligence to perform tasks like problem-solving and decision-making	36	55.38%
Algorithms and techniques that enable computers to learn from data and make predictions or decision	15	23,07%
Automation of tasks using intelligent systems, reducing the need for human intervention	12	18,46 %
I do not know	2	3,07%
Total	65	100%

According to the findings in table 3.2 which indicates diverse understandings of artificial intelligence among students. The majority 55.38% define AI as computer systems that mimic human intelligence to perform tasks like problem-solving and decision-making, reflecting a strong awareness of AI's cognitive capabilities. A smaller portion 23.07% views AI as algorithms and techniques that enable computers to learn from data and make predictions or decisions, highlighting the significance of machine learning. Additionally, 18.46% consider AI to be the automation of tasks using intelligent systems, reducing the need for human intervention,

emphasizing the practical efficiency of AI technologies. A minimal number of students 3.07% admit to not know a definition of AI. As indicated in table 3.2 which shows their unfamiliarity with AI claimed that they ignore it, which may mean that they do not recognize the concept of AI. However, this proves to be untrue practically as a result of Table 3.3.

**Question seven:** What are the AI models most used in learning? (more than one option)

**Table 3.3**

*The Use of AI Models in Learning*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
GPT (Generative Pre-trained Transformer)	50	57,47%
Mathia (which is online math learning software that personalizes instruction)	23	26,43%
Duolingo	8	9,19%
Others	6	6,89%
<b>Total</b>	<b>87</b>	<b>100%</b>

As it is displayed in table 3.3, a significant majority 57.47% utilize GPT (Generative Pre-trained Transformer), indicating its widespread popularity and effectiveness in educational contexts. In addition to Mathia, an online math learning software that personalizes instruction, is used by 26.43% of students, reflecting its specialized appeal for math education. Duolingo is selected by 9.19% of students, showing its role in language learning. A small group of 6.89% mentioned using other AI models like Quillbot.

The results of this table underline the dominance of GPT in learning applications, with Mathia and Duolingo also playing important roles in specific subject, and utterly dissipate the fact that

some of the sample (58,33% in Table 3.1) who expressed their unfamiliarity with AI concept, do not actually ignore it, rather they ignore its different manifestations and application in different products.

**Question eight:** How often do you interact with AI-powered technologies in your daily routine?

**Table 3.4**

*Students' Interaction With AI-Powered Technologies*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage%</b>
Multiple times a day	17	28,33%
Once a day	9	15%
A few times a week	31	51,66%
Rarely	3	5%
Never	0	0%
Total	60	100%

The data from table 3.4 indicates varying levels of interaction with AI-powered technologies among students. The largest group, over half of the respondents 51.66%, interacts with AI-powered technologies a few times a week. A significant portion 28.33% engages with these modern technologies multiple times a day. A smaller segment of 15% interacts with AI once a day, while a minority 5% does so rarely mainly relying on Duolingo for language proficiency checks, and ChatGPT for homework (these choices were detected from Table 3.3). These students use AI rarely because they might prefer traditional learning methods or use it only when necessary. Notably, no students reported never using AI-powered technologies.

The collected data demonstrates a frequent use of AI among students, highlighting its growing importance and presence in their everyday lives.

**Question nine:** Which AI-powered applications or devices do you regularly use in your daily life? (more than one option)

**Table 3.5**

*Students' AI Usage*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage%</b>
ChatGPT (Generative Pre-trained Transformer)	45	39,13%
Virtual assistants (e.g., Siri, Alexa, Google Assistant)	14	12,17%
Social-media algorithms (e.g., Facebook news feed, Instagram recommendations)	26	22,60%
Online shopping and recommendation	6	5,21%
Smart home devices (e.g., thermostats, security cameras)	8	6,95%
Navigation and mapping apps	13	11,30%
Healthcare and fitness apps	3	2,60%
Total	115	100%

As indicated in table 3.5, the data on AI-powered applications and devices used regularly by students reveals varied preferences. A significant percentage of 39.13% frequently use ChatGPT,

showcasing its popularity in daily interactions. Social media algorithms, such as those on Facebook and Instagram, are used by 22.60% of students, highlighting the influence of AI in social networking. Virtual assistants like Siri, Alexa, and Google Assistant are utilized by 12.17%, reflecting their role in everyday convenience. Navigation and mapping apps are used by 11.30% of students, demonstrating the utility of AI in travel and navigation. Smart home devices, including thermostats and security cameras, are used by 6.95%, indicating a growing adoption of smart technology at home. Online shopping and recommendation systems are employed by 5.21%, and healthcare and fitness apps are used by 2.60% of students.

The results from this table shows that diverse AI applications are integrated into students' daily lives.

**Question Nine-One:** If you use other AI models, please mention them

Question Nine-One prompted students to mention additional AI models they incorporate into their daily life. Among the models mentioned were Snapchat AI, Gemini, Perplexity AI, CAI, and Bing. For instance, Snapchat AI enhances user experiences through filters and augmented reality features within the app and engage users with conversation to get information. However, Gemini employs AI for market analysis and fraud detection in cryptocurrency trading. Besides, Perplexity AI aids in natural language processing tasks such as text generation and sentiment analysis. CAI powers chatbots and virtual assistants, facilitating tasks and communication. Lastly, Bing integrates AI algorithms to optimize web searches and deliver personalized results to users.

**Question Ten:** What are the main benefits you perceive from the integration of AI in various aspects of society? (more than one option)

**Table 3.6***Benefits of AI*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (N)</b>
Increased efficiency	31	34,83%
Improved decision-making	18	20,22%
Enhanced convenience	14	15,73%
Improved Education	3	3,37%
Advanced Healthcare	12	13,48%
Risk Management (AI enhances efficiency and resilience, cuts costs, and ensures data security, which is crucial across finance)	6	6,74%
Improved transportation	5	5,61%
Total	89	100%

Table 3.6 reveals that Master One Students perceive a variety of benefits in AI integration in various aspects of society reveals diverse opinions among students. For instance, increased efficiency is seen as the primary benefit, noted by 34.83% of respondents. However, Improved decision-making follows, cited by 20.22% of students, indicating a recognition of AI's role in enhancing analytical capabilities. Add to that, enhanced convenience is acknowledged by 15.73%, reflecting the ease AI brings to everyday tasks. Advanced healthcare is valued by 13.48%, to illuminate the importance of AI in medical advancements. Risk management, which enhances efficiency, resilience, and data security, is appreciated by 6.74% of respondents, particularly in the finance sector. Improved transportation is noted by 5.61%, highlighting AI's impact on mobility. Lastly, 3.37% of students recognize AI's contribution to improved education

These findings highlight AI's significant impact, particularly in enhancing efficiency and decision-making. (See table 3.7 and 3.8 for further analysis)

This distribution showcases a broad recognition of AI multifaceted benefits across different sectors.

**Question 11:** In what ways do you think AI could further improve or enhance daily experiences in the future? (more than one option)

**Table 3.7**

*Perceived Future Enhancements of AI In Daily Life Among Master One Students*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Doing routine tasks like setting reminders and scheduling appointments	26	24,07%
Giving personalized health tips based on your data	22	20,37%
Making it easier to talk to people who speak different languages	26	24,07%
Driving cars and managing traffic without human help	13	12,03%
Helping to save energy and control devices in your home	5	4,62%
Making banking and money management easier and safer	8	7,40%
Creating tools to help people with disabilities	8	7,40%
<b>Total</b>	<b>108</b>	<b>100%</b>



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The data shows that master's students anticipate several key enhancements from AI in daily life. A significant percentage 24.07% believe that AI will improve routine tasks like setting reminders and scheduling appointments, and an equal number expect it to facilitate communication with people who speak different languages. Additionally, 20.37% see value in personalized health tips based on individual data. Moreover, 12.03% think AI could revolutionize transportation through autonomous driving and traffic management. Some students 4.62% highlight the potential for AI to save energy and automate home devices. Meanwhile, 7.40% appreciate AI's role in enhancing banking security and creating tools to assist people with disabilities.

These varied responses illustrate the broad impact students expect AI to have on improving daily life in the future.

**Question 12:** Do you believe that incorporating AI technologies into education can enhance your learning experience?

**Table 3.8**

*Students Insights of Using ChatGPT in Their Learning Career*

<b>Options</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	58	96,6%
No	2	3,3%
Total	60	100%

Table 3.8 indicates a significant agreement among Master One students, with 96.6% believing that integrating AI technologies into education can enhance their learning experiences. Only 3.3% express skepticism about this notion. This overwhelming support reflects a

widespread belief in the potential benefits of AI in improving educational outcomes. Even though the contrast between Questions 10 and 12 reveals that while 96.6% of Master One students believe AI can enhance their learning experiences, only 5% identified improved education as a primary benefit of AI integration. In contrast, only 4 students in question 13 (see Table 3.9) preferred traditional teaching methods, valuing the credibility of teacher feedback both positive and negative. However, the majority approved that the integration of AI has many positive aspects on their learning process, and this may be due to students prioritizing immediate benefits like efficiency and decision-making, and have limited awareness of AI's potential in education. This suggests a need to better highlight and communicate the educational benefits of AI to students.

**Question 13:** Whatever your answer is, specify how much is it can affect it? (more than one option)

**Table 3.9**

*Master One Students' Perceptions of AI's Impact on Learning Experience*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
AI can provide personalized learning experiences tailored to my individual needs	32	32%
AI can offer instant feedback on my work, helping me improve more quickly	23	23%
AI can make learning more interactive and engaging, increasing my motivation to learn	30	30%
I prefer traditional teaching methods and don't think AI can improve my learning experience	4	4%
I'm concerned about the potential negative impacts of AI on education, such as job loss for teachers	8	8%

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I'm worried about privacy and data security issues associated with the use of AI in education	3	3%
Total	100	100%

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Table 3.9 presents the perspectives of Master One students on AI's impact on their learning journey. A significant 32% believe AI can provide personalized learning experiences that reflect their individual needs and improving their educational journey. Similarly, 30% feel that AI can make learning more interactive and engaging, boosting their motivation. Add to that, Instant feedback, which helps students improve quickly, is considered a key benefit by 23% of respondents. In contrast, a small minority 4% prefer traditional teaching methods and do not think AI could enhance their learning. Additionally, 8% have concerns about AI's potential negative impacts on education, such as job loss for teachers, while 3% worry about privacy and data security issues because they may believe that human interaction in a classroom setting is essential for deeper understanding and personalized support. These students might also value the experience and intuition of human teachers, which they feel AI cannot replicate.

Finally, respondents could be concerned that reliance on AI might reduce critical thinking and problem-solving skills developed through traditional teaching methods. Overall, these findings indicate a mix of optimism and apprehension among Master One students regarding AI's role in education.

### **Section Three: Use of ChatGPT in Education**

This section aims to collect data from Master's One level learners regarding their use of ChatGPT in their educational journey.

**Question 14:** Have you ever heard of ChatGPT?

#### **Table 3.10**

*Awareness of ChatGPT Among Master One Students*

Options	Frequency(N)	Percentage (%)
Yes	60	100%
No	0	0%
Total	60	100%

In Table 3.10, it is evident that a vast majority of Master One students, constituting 100%, have heard of ChatGPT. This high level of awareness suggests that ChatGPT is well-recognized among this demographic. The 100% awareness of ChatGPT among Master One students highlights its popularity and the need for thoughtful integration of AI in education.

This indicates that ChatGPT has achieved significant visibility and recognition among Master One students, significantly indicating its prevalence as a language model in academic and technological discourse.

**Question 15:** How would you describe ChatGPT? (more than one option)

**Table 3.11**

*Perceptions of ChatGPT's Functionality Among Students*

Options	Frequency(N)	Percentage (%)
A language model that generates human-like text	18	26,08%
A language model that understands human language and responds	29	42,02%
A language model that can be used for various Natural Language Tasks (NLP)	22	31,88%
Total	69	100%

In Table 3.11, students describe ChatGPT's functionality. A notable 42.02% describe ChatGPT as a language model that understands human language and responds, which is the most

widely known definition of this AI model. Additionally, 31.88% recognize its versatility in handling various Natural Language Processing (NLP) tasks, indicating an awareness of its broad applications. Meanwhile, 26% view ChatGPT primarily as a language model that generates human-like text.

These varied perceptions demonstrate students' recognition of ChatGPT's multifaceted abilities, encompassing language understanding, text generation, and a range of NLP tasks

**Question16:** Which of the following tasks can ChatGPT perform?

**Table 3.12**

*ChatGPT Tasks*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Text generation	21	18,26%
Text summarization	24	20,86%
Speech synthesis	7	6,08%
Language translation	19	16,52%
Image recognition	3	2,60%
Data analysis	8	6,95%
Code generation	2	1,73%
All the above	31	26,95%
None of the above	0	0%
<b>Total</b>	<b>115</b>	<b>100%</b>

Table 3.12 illustrates Master One students' perceptions of ChatGPT's capabilities. A significant number 26.95% of respondents recognize ChatGPT's capability to perform all the listed tasks. Among these tasks, text summarization is highlighted by 20.86% of respondents, showcasing its proficiency in condensing information. Similarly, text generation from 18.26% of

respondents, emphasizing its ability to create coherent content. Language translation, acknowledged by 16.52% of respondents, indicates its role in facilitating cross-lingual communication. Additionally, a smaller percentage of respondents acknowledge ChatGPT's abilities in speech synthesis 6.08%, data analysis 6.95%, image recognition 2.60%, and code generation 1.73.

Notably, none of the respondents indicate ChatGPT's incapability in any of the listed tasks, highlighting its versatility across diverse functions

**Question 17:** Which of the following tasks cannot ChatGPT perform?

**Table 3.13**

*Limited Abilities of ChatGPT*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Fact-checking	5	8,47%
Making decisions	8	11,86%
Creating original ideas	21	35,59%
Make predictions about future events	24	40,47%
All the above	2	3,38%
Total	59	100%

Table 3.13 outlines Master One students' perceptions of the tasks ChatGPT cannot perform. The most commonly identified limitations are making predictions about future events 40.47% and creating original ideas 35.59%, indicating that students perceive ChatGPT as lacking foresight and true creativity. Additionally, 11.86% of respondents believe ChatGPT cannot make decisions AI, in general, lacks the ability to make decisions independently. Meanwhile, 8.47%

identify fact-checking as a limitation. A small percentage 3.38% consider all the listed tasks as beyond ChatGPT's capabilities.

This reflects an understanding among students of ChatGPT's current limitations in terms of predictive accuracy, decision-making, creativity, and verification of factual information.

**Question 18:** How do you use ChatGPT? (More than one option)

**Table 3.14**

*Utilization of ChatGPT Among Students*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
To generate creative writing and stories	20	15,62%
To generate content for social media posts and blogs	13	10,15%
To create interactive experiences in virtual reality applications	18	14,06%
To aid in medical diagnosis and treatment planning	7	5,46%
To generate study guides and summaries	29	22.65%
For creative inspiration and feedback on projects	18	14,06%
For problem-solving and exploring solutions	23	17,96%
For writing assistance and improving content	6	4,68%
Total	128	100%

Table 3.14 shows the various ways students use ChatGPT. Notably, 22.65% of users utilize it for academic purposes, particularly for generating study guides and summaries.

Additionally, 17.96% employ ChatGPT for problem-solving tasks, suggesting its utility in decision-making processes. However, 4.86% utilize ChatGPT for writing, while 14.06% seek creative inspiration and feedback. Moreover, 10.15% use it for content creation on social media and blogs. In virtual reality applications, 14.06% explore ChatGPT's potential for enhancing interactive experiences. A smaller percentage utilizes it for medical purposes 5.46% and writing assistance 4.60%.

These findings point out ChatGPT's diverse applications, ranging from daily life use, academic support to creative tasks and problem-solving which enhance students' abilities to be more integrated in the educational process.

**Question 19:** Which of the following definitions describes best the process of Teaching?

**Table 3.15**

*Students' Perceptions of Teaching*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Teaching is a process that involves sharing information or skills with others, considered both an art and a science.	26	39,39%
The process of imparting knowledge, and values to others through various instructional methods	20	30,30%
Providing information through lectures and presentations	4	6,06%
All of the above	16	24,24%
None of the above	0	0%
Total	66	100%



Table 3.15 reveals how students perceive the concept of teaching. Students perceive teaching in diverse ways: 39.39% view it as sharing information or skills, similar to both an art and a science, while 30.30% see it as imparting knowledge and values through various methods. A tiny segment of 6.06% associates teaching with providing lectures and presentations. Interestingly, 24.24% believe all definitions apply. These perceptions resonate with teachers' enjoyment of fostering critical thinking and building connections (See Table 3.36 of Q4 + Q9 table 3.37). They find fulfillment in witnessing growth, collaborating with colleagues, and inspiring lifelong learning. In addition, few of educators see teaching as a blend of art and science.

The findings from table below showcase the multifaceted nature of teaching, bridging creative and scientific approaches to educate and inspire students.

**Question 20:** What challenges may arise from the integration of technology in education?

**Table 3.16**

*Challenges Arising from the Integration of Technology in Education*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Access and equity issues related to digital Divide	19	24,67%
Concerns about privacy and data security	23	29,87%
Potential distractions and misuse of technology	21	27,27%
All of above	14	18,18%
None of the above	0	0%
Total	77	100%

Table 3.16 illustrates the challenges students perceive with the integration of technology in education. Firstly, concerns regarding access and fairness, raised by 24.67% of respondents, stress the need to ensure all students can equally benefit from digital resources. This highlights existing educational inequalities that technology might worsen. Secondly, 29.87% of participants express anxieties about privacy and data security, signaling the importance of strong measures to safeguard sensitive information from unauthorized access. Additionally, 27.27% note the risk of technology causing distractions and misuse, potentially hindering the learning process if not effectively managed. Moreover, 18.18% of respondents acknowledge that these combined challenges pose significant barriers to seamlessly integrating technology into education.

Despite these obstacles, there's widespread recognition of technology's transformative potential in education. This results the necessity for careful planning and proactive solutions to ensure its effective and fair implementation. Overall, both students and educators (See Table 3.50 of Q17 Page 127) acknowledge the potential benefits of technology in education. However, they also recognize the importance of addressing various challenges related to access, privacy, academic integrity, and the seamless integration of technology into teaching practices.

This highlights the significance of ongoing communication and collaboration to ensure that technology enhances rather than hinders the educational experience.

**Question 21:** What are the benefits of using ChatGPT in teaching and learning?

**Table 3.17**

*Benefits of Using ChatGPT in Teaching and Learning*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Provides instant feedback and assistance	1	1,69%
Offers personalized learning experiences	11	18,64%

Facilitates access to educational resources	23	38,98%
Enhances student engagement and motivation	11	18,64%
All of the above	13	22,03%
None of the above	0	0%
Total	59	100%

Table 3. 17 highlights the benefits students see in using ChatGPT for education. Firstly, the majority of respondents 38.98% recognize its role in facilitating access to educational resources. Secondly, it fosters personalized learning experiences, acknowledged by 18.64% of participants. Additionally, it contributes to enhancing student engagement and motivation, noted by 18.64% of participants. Furthermore, it provides instant feedback and assistance, although mentioned by a smaller percentage 1.69% of respondents. Finally, a significant portion 22.03% of respondents believe that all these benefits collectively describe the advantages of using ChatGPT in teaching and learning. Notably, no respondents refrained from selecting any option indicating a general consensus on the positive impact of ChatGPT in education.

Overall, the findings from both student and teacher (See Table 3.49 of Q16) perspectives underline the numerous benefits that ChatGPT provides to the teaching and learning process, including its ability to improve resource availability, tailored learning experiences, and student engagement and motivation

**Question 22:** How effective do you think ChatGPT is in improving language?

**Table 3.18**

*Perceived Effectiveness of ChatGPT in Improving Language Skills*

Options	Frequency (N)	Percentage (%)
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Very effective	20	33,89%
Somewhat effective	37	62,71%
Not effective	1	1,69%
Not sure	1	1,69%
Total	59	100%

The data in Table 3.18 indicates that the majority of respondents view ChatGPT as beneficial for improving language skills. Specifically, 33.89% consider it "very effective," while 62.71% find it "somehow effective." Only a small fraction of respondents are skeptical about its efficacy, with 1.69% deeming it "not effective" and another 1.69% (1 respondent) being unsure. Overall, the majority of the participants believe that ChatGPT has a positive impact on language improvement to varying degrees, with very few expressing uncertainty about its effectiveness.

**Question 23:** When learning English, does ChatGPT play a significant role?

**Table 3.19**

*Significance of ChatGPT in Learning English*

Options	Frequency (N)	Percentage (%)
Yes	53	89,83%
No	6	10,16%
Total	59	100%

Table 3.19 showcases the role of ChatGPT in learning English. A significant majority, 89.83% of respondents, believe that ChatGPT plays a significant role in their English learning journey. Conversely, only 10.16% do not perceive ChatGPT as having a significant impact on their English learning process.

This suggests that for the majority of students, ChatGPT holds importance in facilitating English language acquisition and its usage makes the learning process faster and more enjoyable

**Question 24:** How can ChatGPT improve language skills?**Table 3.20***Utilizing ChatGPT for Language Skill Enhancement*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Providing conversational practice in English	16	27,11%
Offering instant feedback on grammar and vocabulary usage	12	20,33%
Facilitating language translation and understanding of English texts	18	30,50%
All of the above	13	22,03%
None of the above	0	0%
Total	59	100%

Table 3.20 indicates that students' perspectives on ChatGPT's role in enhancing language skills. The majority 30.50% view it as aiding in language translation and understanding English texts. Additionally, 27.11% highlight its importance in providing conversational practice, while 20.33% emphasize its value in offering instant feedback on grammar and vocabulary usage. Furthermore, 22.03% of students recognize all listed methods as beneficial.

Notably, no respondents dismissed ChatGPT's potential, suggesting a widespread belief in its effectiveness for language skill development.

**Question 25:** How might ChatGPT impact language learning strategies that are used to acquire, understand, and retain information effectively? (more than one option)**Table 3.21***Impact of ChatGPT on Language Learning Strategies*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Correcting mistakes instantly	29	31,52%

Creating personalized study materials	27	29,34%
Improving speaking and listening skills	19	20,65%
Providing access to authentic language resources	17	18,47%
Total	92	100%

The survey findings in table 3.21, suggest that ChatGPT could have a notable impact on language learning strategies. The most recognized benefit, identified by 31.52% of students, is ChatGPT's ability to correct mistakes instantly, providing immediate feedback that aids in learning. Additionally, 29.34% of students note that creating personalized study materials is another key impact, suggesting that ChatGPT can tailor resources to individual learning needs. Furthermore, 20.65% of respondents believe that ChatGPT can improve speaking and listening skills, thus enhancing practical language use. Providing access to authentic language resources is seen as beneficial by 18.47%, indicating that ChatGPT can offer real-world language examples for better comprehension and retention.

These insights illustrate ChatGPT's multifaceted role in supporting effective language acquisition and mastery.

**Question 26:** Which of the following language skills can be improved while using ChatGPT?  
(more than one option)

**Table 3.22**

*ChatGPT Use for Language Skill Enhancement*

Options	Frequency(N)	Percentage (%)
Speaking	15	13,39%

Listening	17	18,47%
Reading	36	39,13%
Writing	44	39,28%
Total	112	100%

Table 3.22 shows that students believe ChatGPT can improve various language skills. For instance, writing emerges as the most significantly enhanced skill, with 39.28% of students acknowledging its improvement through ChatGPT. Reading follows closely, with 39.13% of students recognizing its benefits. Additionally, 18.47% of respondents identify listening as a skill that can be improved, while 13.39% note enhancements in speaking abilities.

These findings illustrate ChatGPT's broad impact on language skill development, emphasizing its potential to support various aspects of language learning effectively.

**Question 27:** How can ChatGPT improve writing skills?

**Table 3.23**

*Leveraging ChatGPT for Enhancing Writing Skills*

Options	Frequency(N)	Percentage (%)
By providing instant feedback on grammar and spelling errors	13	22,03%
By generating writing prompts and creative story ideas	8	13,55%
By suggesting alternative vocabulary and sentence structures	12	20,33%
By assisting with brainstorming and organizing ideas	11	18,64%
All of the above	15	25,42%
None of the above	0	0%

Total	59	100%
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Table 3.23 presents insights into how ChatGPT can enhance writing skills, as perceived by respondents. The data reveals that 25.42% of participants believe that ChatGPT can improve writing through all the listed methods. Specifically, 22.03% find value in its ability to provide instant feedback on grammar and spelling errors. Furthermore, 21.33% appreciate that suggesting alternative vocabulary and sentence structures. Additionally, 18.64% recognize ChatGPT's role in assisting with brainstorming and organizing ideas. Another 13.55% highlight its capability to generate writing prompts and creative story ideas.

Remarkably no option was left unpicked. The undisputed confidence in ChatGPT's potential to enhance writing proficiency through diverse means is prominent in mainly proved in both teachers and students' responses.

**Question 28:** Do you think there are some drawbacks to using ChatGPT in teaching and learning?

**Table 3. 24**

*The Perceived Drawbacks of Using ChatGPT in Teaching and Learning*

Options	Frequency(N)	Percentage (%)
May lack nuanced responses	14	23,33%
Raises privacy and security concerns	9	15%
Could replace human interaction	17	28,33%
May perpetuate biases or inaccuracies	5	8,33%
All of the above	15	25%
None of the above	0	0%
Total	60	100%



Table 3,24 presents respondents' views on potential drawbacks to using ChatGPT in teaching and learning. The data illustrates that 28.33% of participants express concerns that ChatGPT could replace human interaction, while 23.33% highlight the possibility that it may lack nuanced responses. Additionally, 15% raise privacy and security concerns, and 8.33% worry about the potential perpetuation of biases or inaccuracies. Interestingly, 25% acknowledge all of these concerns as potential drawbacks.

Notably, no option was left unselected, suggesting a collective recognition of the potential challenges associated with integrating ChatGPT into educational settings.

**Question 29:** How would you rate the quality of content generated by ChatGPT for academic research purposes?

**Table 3.25**

*Perceptions of Content Quality from ChatGPT for Academic Research*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
High quality	10	16,94%
Moderate quality	45	76,27%
Low quality	3	5,08%
Not sure	1	1,69%
Total	59	100%

Table 3.25 presents respondents' evaluations of the content generated by ChatGPT for academic research purposes. It indicates that 16.94% of participants consider the content to be of high quality, expressing satisfaction with ChatGPT's output. However, a significant majority, constituting 76.27% of respondents, rate the content as moderate quality, suggesting that while it is usable, there is room for improvement in terms of accuracy and refinement. Additionally, a

small minority 5.08% express dissatisfaction, rating the content as low quality. A minor portion 1.69%, this uncertainty may stem from concerns over inconsistent accuracy in responses, limitations in the depth of information provided, or challenges in assessing reliability across various topics or contexts. These findings highlight the diverse perceptions of the moderate quality of the content generated by ChatGPT.

**Question 30:** Can ChatGPT be used for brainstorming (where participants freely share and explore various ideas without criticism) and exploring a field or topic you do not have much knowledge about?

**Table 3.26**

*Exploring ChatGPT's Brainstorming Potential.*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Yes	20	33,89%
No	6	10,16%
It depends on the specific task and the quality of the output	33	55,93%
Total	59	100%

As indicates in the table 3.26, the majority of participants 55.93% claimed that using ChatGPT for brainstorming and exploring a field or topic that they do not have much knowledge about it, depends on the specific task and the quality of the output. 33,89 % of them asserted that they use it in brainstorming. Few of the participants 10.16% stated that they did not use it.

This suggests that ChatGPT can be used to generate ideas and suggestions for brainstorming sessions, helping to spark creativity and innovation, and that the rest who do not exploit it in doing so, need to be made aware of its potential by raising their awareness. (See recommendations).

**Question 31:** Would you trust research findings or content generated by ChatGPT for academic purposes without human oversight?

**Table 3.27**

*Reliance on ChatGPT for Academic Content Without Human Oversight*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Yes, I would trust ChatGPT-generated research	11	18,64%
No, I would not trust ChatGPT-generated research	16	27,11%
It depends on the context and verification process	32	54,23%
Total	59	100%

In Table 3.27, participants provide insights into their trust levels concerning research findings or content generated by ChatGPT for academic purposes. The data portrays a spectrum of viewpoints: 27.11% express skepticism toward ChatGPT-generated research, emphasizing the indispensable role of human involvement in academic pursuits. Conversely, 18.64% exhibit confidence in its reliability maybe because they had used it and had faced no issues related to authenticity and integrity. However, a majority 54.23% adopts a nuanced stance, suggesting that trust in ChatGPT-generated research depends on contextual factors and the verification process, such as the nature of the research, disciplinary standards, and the importance of peer review processes may all play significant roles in determining the level of trust placed in ChatGPT-generated content.

This emphasizes the complexity of the matter, affirming that while ChatGPT holds promise in academic research, human oversight remains vital for upholding the credibility and integrity of scholarly outputs.

**Question 32:** How might researchers use ChatGPT to enhance their academic writing process?

(more than one option)

**Table 3.28**

*Leveraging ChatGPT for Academic Writing Enhancement.*

Options	Frequency(N)	Percentage (%)
Generating outlines and organizing research ideas into coherent structures	36	36%
Providing suggestions for improving writing style and clarity	28	28%
Generating introductory and concluding paragraphs for research papers	20	20%
Offering synonyms and alternative phrasing to enhance the expressiveness of writing	16	16%
Total	100	100%

Table 3.28 offers insights into how researchers can harness ChatGPT to enrich their academic writing endeavors. The primary benefit, acknowledged by 36% of respondents, is ChatGPT's ability to generate outlines and organize research ideas into coherent structures. Additionally, 28% of researchers value its suggestions for enhancing writing style and clarity. Generating introductory and concluding paragraphs for research papers is another significant use, cited by 20% of respondents. Moreover, 16% of researchers appreciate ChatGPT's capacity to provide synonyms and alternative phrasing, thereby enhancing the expressiveness of their writing. These findings illustrate ChatGPT's diverse capabilities in supporting and refining the academic writing process, offering researchers valuable tools to improve their work.

**Question 33:** What should researchers be aware of when using it for academic research? (more than one option)

**Table 3.29***Considerations for Researchers When Utilizing ChatGPT*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Not effective or accurate in generating content for niche or specialized topics	23	33,82%
Inaccuracies in the training data may reflect in ChatGPT's output	18	26,47%
ChatGPT may not be accurate in describing or discussing any events after 2021	27	39,70%
Total	68	100%

Table 3.29 reveals crucial considerations for researchers integrating ChatGPT into academic inquiry. Students should be mindful of several crucial factors when employing ChatGPT for academic research. A significant concern, highlighted by 39.70% of respondents, is the model's potential inaccuracy when discussing events post-2021. Additionally, 33.82% of students note that ChatGPT may not be reliable in generating content for niche or specialized topics. Furthermore, 26.47% of respondents point out that inaccuracies in the training data could impact the quality of ChatGPT's output.

These considerations highlight the importance of critically evaluating and judiciously using ChatGPT in academic work to ensure the reliability and accuracy of information.

**Question 34:** How can researchers ensure ethical practices when incorporating AI technologies like ChatGPT into academic research? (more than one option)

**Table 3.30***Future Role of ChatGPT in Education*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Ensuring transparency and disclosure of AI-generated content in research outputs	17	22,36%

Being mindful of biases and limitations inherent in AI-generated text	28	36,84%
Striving for fairness and equity in the use of AI-generated content, particularly in sensitive research areas	9	11,84%
Respecting intellectual property rights and copyright laws when utilizing AI-generated content in research publications	22	28,94%
Total	76	100%

Table 3.30 delineates strategies proposed by respondents to ensure ethical practices when incorporating AI technologies like ChatGPT into academic research. In academic research, transparency is paramount. Researchers should openly disclose AI-generated content in their outputs to uphold honesty and clarity, as supported by 22.36% of respondents. Additionally, they must remain vigilant of inherent biases and limitations in AI-generated text, as emphasized by 36.84% of participants, to avoid perpetuating inaccuracies. Equity in utilizing AI-generated content, particularly in sensitive research areas, is essential, as voiced by 11.84% of respondents, promoting ethical conduct and inclusivity. Moreover, upholding intellectual property rights and copyright laws, highlighted by 29.87% of participants, ensures academic integrity and legal compliance. By adhering to these ethical standards, researchers can responsibly integrate AI technologies into academic research.

**Question 35:** How do you envision the role of ChatGPT evolving in education in the future?  
(more than one option)

**Table 3.31**

*ChatGPT's Future in Education*

Options	Frequency(N)	Percentage (%)
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Mainstream tool for personalized learning	22	32,35%
Enhanced student-teacher collaboration	25	36,76%
Addressing individual learning needs	21	30,88%
Total	68	100%

In Question 35, this table outlines students' visions for ChatGPT's future role in education. When considering the future role of ChatGPT in education, several potential scenarios arise. Firstly, it could evolve into a prevalent tool for personalized learning, as indicated by 32.35% of respondents. This implies a significant shift towards tailoring educational experiences to individual student needs. Secondly, there is an anticipation of enhanced student-teacher collaboration, with 36.76% of participants expressing this expectation. This suggests that ChatGPT may facilitate more interactive interactions between students and educators, fostering a dynamic learning environment. Lastly, there is an emphasis on addressing individual learning needs, highlighted by 30.88% of respondents.

This indicates the potential for ChatGPT to provide targeted support and assistance to students based on their unique learning requirements. Overall, these potential developments emphasize the transformative impact that ChatGPT could have in education in the future.

**Question 36:** Through your responses, do you believe that ChatGPT and other AI models are more of a curse or a blessing?

**Table 3.32**

*Assessing Perspectives: ChatGPT and AI Models as Blessing or Curse*

Options	Frequency(N)	Percentage (%)
Curse	11	18,64%
Blessing	33	55,93%
I do not know	15	25,42%

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Total	59	100%
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Participants were asked whether they consider ChatGPT and other AI models to be more of a curse or a blessing. The majority, 55.93%, viewed them as a blessing because they make life more efficient, help with decision-making, and offer convenience in different areas. AI simplifies tasks, makes processes smoother, and introduces innovative solutions, making it a valuable tool in various aspects of life. Besides, 18.64% saw them as a curse which may stem from issues such as job displacement due to automation, privacy and security risks associated with data handling, and ethical dilemmas arising from AI's decision-making capabilities. A quarter of respondents, 25.42%, were unsure. Their hesitance may reflect ongoing debates and evolving perceptions regarding the ethical, economic, and social implications of widespread AI adoption.

**Question 36-1:** Explain how? (more than one option)

**Table 3.32-1**

*Reasons Behind ChatGPT and AI Models' Blessing or Curse Perception.*

Options	Frequency(N)	Percentage (%)
May perpetuate reliance on technology	23	33,33%
Raises concerns about data privacy and security	17	24,63%
Could potentially replace human interaction in education	21	30,43%
I do not know	8	11,59%
Total	69	100%

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Respondents provided reasons for their views on whether ChatGPT and other AI models are a curse or a blessing. When examining perceptions of ChatGPT and AI models as either



beneficial or detrimental, several notable concerns surface. Firstly, 33.33% of respondents express worry about the potential overreliance on technology, particularly in educational contexts. This apprehension suggests a fear that excessive dependence on AI could diminish critical thinking skills. Secondly, 24.63% of participants cite apprehensions about data privacy and security, reflecting concerns over potential breaches or unauthorized access to personal information. Furthermore, 30.43% of respondents highlight concerns regarding the replacement of human interaction in education by AI models. This issue raises worries about the loss of unique learning experiences facilitated by direct engagement with teachers and peers. Lastly, 11.59% of respondents express uncertainty or lack of knowledge about the implications of ChatGPT and AI models, indicating a need for further education and awareness.

These findings highlight the intricate and nuanced nature of perceptions surrounding the integration of AI in education, revealing a mix of concerns, uncertainties, and the need for informed discourse.

**Question 37:** If you have further suggestions, please feel free to share:

Three distinct and insightful viewpoints emphasizing their future insights about ChatGPT. These perspectives provide a comprehensive understanding of the benefits, limitations, and potential applications of AI and ChatGPT, offering a well-rounded analysis of their impact.

Their responses are presented as follows:

- 1- "What we receive from AI is amazing".
- 2- "ChatGPT is very helpful too in our studies".
- 3- "AI would be beneficial if people know how to use it."

The respondents assume that AI's impact is undeniably transformative, with its impressive capabilities delivering remarkable results across various domains. In academic settings, ChatGPT stands out by significantly enhancing learning experiences, demonstrating substantial educational value. However, to fully realize the potential of AI tools like ChatGPT, it is crucial

to understand how to effectively utilize them, highlighting the importance of proper knowledge and application. This comprehensive understanding enables users to maximize the benefits AI offers, ensuring its capabilities are harnessed to their fullest extent.

### **3.2. Summary of Results and Findings from Students' Questionnaire**

The results gathered from a questionnaire given to 60 Master One students at the Department of Letters and English Language, University of 08 May 1945, Guelma, provided valuable insights into how they integrated AI models, particularly ChatGPT, into their learning process.

The first section shows that students population consists of young adults aged 21 to 24, indicating level of maturity.

Moreover, they have all studied English language, highlighting their acceptable knowledge about it, additionally to get a degree in English and to enhance their job prospects.

Concerning AI implications in section two, the majority of the students recognize AI as human problem-solving behaviour. Furthermore, the students' interaction with AI-powered technologies shows that the majority of them use it as a daily routine to make their lives easier in various fields. A large number of them asserted that they are using ChatGPT as a tool to solve learning problem, answering questions and generate ideas.

In addition, most participants confirmed that the main benefit of AI is its ability in the decision-making based on human generated problems. Moreover, students appreciate AI for its ability to personalize learning experiences, enhancing their overall educational journey.

Section three, presents data gathered about Master One students' use of ChatGPT in their educational learning. In this regard, the majority of students tend to be aware of ChatGPT as a language model that understands and responds to human language. Respectively, students recognize ChatGPT's capabilities in tasks such as text summarization and text generation. Moreover, the majority of students believe that ChatGPT cannot perform tasks such as making

predictions about future events, indicating that they perceive it as lacking foresight and true creativity because this language model lacks emotional and cognitive intelligence.

Furthermore, regarding the utilization of ChatGPT among students, the majority stated that they use it to generate study guides and summaries, highlighting its role in academic support, as well as to solve problems and explore solutions. Besides, the respondents find that teaching is a process of sharing information or skills with others and see it as both an art and science.

Concerning the challenges arising from the integration of technology in education, the most prominent concern is privacy and data security. Accordingly, the majority of respondents asserted that the benefits of ChatGPT include facilitating access to educational resources and offering a personalized learning experience. Additionally, most students stated that ChatGPT is a useful tool for enhancing language skills.

In this regard, they find that this AI tool aids in language translation and understanding English texts to improve their learning skills.

According to the impact of ChatGPT on language learning strategies, most participants stated that there are several areas, such as the ability to correct mistakes instantly and the creation of personalized study materials. This indicates that ChatGPT may offer significant benefits by providing immediate feedback, tailoring learning materials, facilitating language skills development, and offering access to real-world language usage examples. Moreover, students find this tool useful for enhancing their reading and writing abilities, with small segment of benefits extending to listening and speaking skills due to the inability of ChGPT-3 to produce oral output. In addition, the majority of respondents asserted that it can improve writing by providing instant feedback on grammar and spelling errors, suggesting alternative vocabulary and sentence structure, assisting with brainstorming and organizing ideas, and generating writing prompts.

Furthermore, most students' express concerns that ChatGPT could replace human interaction.

Besides, a significant majority of them rate the quality of content generated by ChatGPT for academic research as moderate, suggesting that while it is usable, there is a room for improvement in terms of accuracy and refinement. As well, the majority of students claimed that using the ChatGPT tool in brainstorming depends on the specific task and the quality of the output. This suggests that it can be used to generate ideas and suggestions for brainstorming sessions, helping to spark creativity and innovation.

Additionally, most of them asserted that their trust in research findings or content generated by ChatGPT for academic purposes depends on the context and verification process, which indicates that while ChatGPT holds promise in academic research, human oversight remains vital for upholding the credibility and integrity of scholarly outputs. As well, they advocate for ChatGPT's role in generating outlines and organizing research ideas into coherent structures. This suggests that ChatGPT has multifaceted potential in aiding researchers at various stages of the academic writing process. Furthermore, many students have expressed concerns about the accuracy of ChatGPT in discussing events post-2021. This highlights the necessity for researchers to exercise discretion when using ChatGPT in academic research. To ensure ethical practices when incorporating AI technologies like ChatGPT into academic research, it is crucial for students to be mindful of biases and limitations in AI-generated text. This consideration extends to the multifaceted ethical considerations inherent in AI integration within academic research.

Regarding the students' vision for the future role of ChatGPT in education, the majority of them anticipate that it will enhance student-teacher collaboration. This indicates that they expect it to play a pivotal role in creating a more personalized and collaborative educational environment. Students perceive the use of ChatGPT and other AI models as a blessing, with the majority suggesting that these technologies may lead to increased reliance on technology.

### **3.3. Teachers Questionnaire**

The aim of this questionnaire is to gather information about teachers' knowledge and attitudes towards the use of AI models and mainly ChatGPT, in the teaching process, and to see to what extent teachers support the use of such approach and how they could manage its over-use in academia.

### **3.3.1. Population and Sample of the Study**

Teachers who responded to this questionnaire were 12 Master, where one educator teaches different professional degrees levels at the Department of Letters and English language, University of 8 May 1945, Guelma, registered in the academic year 2023/2024. Their experiences, suggestions, and observations in the field of teaching are valuable for conducting this research. Hence, it can be said that this sample would permit to generalize the results to the whole population.

### **3.3.2 Administration of Teacher's Questionnaire**

The questionnaire is administered to Master One teachers at the Department of Letters and English Language, 8 Mai 1945 University of Guelma, on April 30 2024. The questionnaire was distributed to teachers in their free hours, which was handed back in different times. There is a good number of teachers who did not hand back the answered questionnaire due to exam preparations, and also to the huge numbers of other questionnaires they received.

### **3.3.3. Description of Teacher's Questionnaire**

Teachers' questionnaire consists of 30 questions, classified under three sections, which highlights a different aspect. As can be seen, many types of queries swiftly move from general to specific. This questionnaire includes both closed questions, requiring from the teachers to choose "yes" or "no" answers, and open questions, requiring to pick up the appropriate answer from a number of choices. This latter allows teachers to present more arguments and give explanation, or suggest other alternatives about a particular question.

### 3.3.4. Analysis of Results and Findings from Teachers' Questionnaire

The following section provides a detailed description of the questionnaire results. The collected data were analysed, interpreted, and presented in figures.

#### Section One: Personal Information

**Question one:** What course do you teach?

**Table 3.33**

#### *Modules Teachers Currently Teach*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Linguistic schools	3	25%
British Civilisation	2	16,66%
Advanced Reading	2	16,66%
Discourse Analysis	1	8,33%
Literature	3	25%
Communication skills	1	8,33%
Total	12	100%

The data gathered from the questionnaire indicates that the 12 Master One Educators at the Department of Letters and English Language, University of 8 May 1945, Guelma, teach a variety of courses during the 2023/2024 academic year. "Linguistic Schools" and "Literature" are the most commonly taught courses among the 12 Master One educators, each representing 25%. Furthermore, "British Civilisation" and "Advanced Reading" are also significant, each taught by 16.66% of the educators. In contrast, "Discourse Analysis" and "Communication Skills" are less common, with each being taught by 8.33% of the educators. This distribution highlights a balanced emphasis on both theoretical and practical aspects of English studies

**Question Two:** How many years have you been teaching?

**Table 3.34**

*Years of Teaching English at University*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Less than 5 years	4	33,33%
5-10 years	1	8,33%
10-15 years	4	33,33%
15+ years	3	25%
Total	12	100%

From the results displayed in table 3.34, 33,33% of the teachers stated that they are teaching English for less than 5 years, while the same percentage of the sample 33,33% declared that they teach for 10-15 years. Additionally, 25% of the teachers indicates that they teach for more than 15 years. The rest of the teachers 8,33% claimed that they teach English for 5-10 years. This denotes that teachers shares a varied experience in teaching methods and they are aware of students' level.

**Question three:** What levels do you teach?

**Table 3.35**

*Levels Teachers Teach*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Bachelor's degree	7	58,33%
Master's degree	5	41,66%
Doctorate	0	0%
Total	12	100%

As it is noticed from the results in table 3.35, more than a half of the teachers 58,33% asserted that they teach bachelor's degree. However, some teachers 41,66% declared that they teach master's degree. This implies that they know master students' level and abilities.

**Question four:** What do you enjoy most about teaching? (more than one option)

**Table 3.36**

*Teaching Enjoyments*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Witnessing student's growth and learning progress	9	14,75%
Fostering critical thinking and creativity	10	16,39%
Building meaningful connections with students	10	16,39%
Inspiring a love for lifelong learning	6	9,83%
Contributing to students' personal and academic development	10	16,39%
Collaborating with colleagues and sharing knowledge	8	13,11%
Making money and paying bills	8	13,11%
Total	61	100%

As displayed in Table 3.36, 16.39% of the teachers claimed that the most enjoyable aspect of teaching is fostering critical thinking and creativity, indicating a focus on developing students' higher-order thinking skills and independence. The same percentage also highlighted the enjoyment of contributing to students' personal and academic development, demonstrating the significant impact teachers have on students' growth and character.



Additionally, 16.39% of teachers stated that building meaningful connections with students is important, as it helps create a positive learning environment. 14.75% of teachers found witnessing students' growth and learning progress to be the most fulfilling, reflecting their satisfaction in seeing students acquire new knowledge and skills over time. Furthermore, 13.11% of the teachers enjoyed collaborating with colleagues and sharing knowledge, emphasizing the value of professional exchange and collective contribution to the teaching profession. The same percentage mentioned financial aspects like money and paying bills as enjoyable.

Finally, 9.83% of the teachers found inspiring a love for lifelong learning to be a notable and enjoyable aspect of their profession. Accordingly, the enjoyment aspects from Question Four with the definitions from Question Nine, it is clear that teachers derive significant satisfaction from the multifaceted nature of their profession. They particularly enjoy fostering critical thinking, building meaningful connections, and contributing to students' personal and academic development. These aspects align well with the idea of teaching as both an art and a science. This connection highlights how teaching is an intricate and rewarding process where educators not only share knowledge but also inspire and nurture their students' growth and lifelong learning.

## **Section two:** Familiarity with ChatGPT and AI

**Question five:** How do you incorporate technology into your teaching? (more than one choice)

**Table 3.37**

### *Technology Integration*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Audio-Visual Presentations	11	57,89%
Tracking to online platforms	4	21,05%
Auto-grading tools	3	15,78%
I do not do so	1	5,26%
<b>Total</b>	<b>19</b>	<b>100%</b>

Table 3.37 reveals that the majority of teachers, accounting for 57.89%, find audio-visual presentations beneficial for simplifying teaching processes. This suggests that such tools enhance student understanding and foster more interactive learning environments. Additionally, 21.05% of teachers utilize online platforms to monitor student progress individually, engage students based on their online interests, and track achievements.

Another 15.78% of teachers employ auto-grading tools, indicating their appreciation for time saved in evaluating assignments, quizzes, and tests. Conversely, 5.26% of teachers do not use technology in their teaching, preferring traditional methods despite the benefits that technological integration can offer in today's digital age.

Moreover, some educators incorporate other AI tools such as Top Hat and Gradescope, aligning with the widespread use of audio-visual presentations, online platforms, and auto-grading tools as shown in Table 3.37. These trends showcase a growing acceptance of technological advancements in education and highlight educators' readiness to adopt technology to enhance teaching methods and improve student learning outcomes.

**Question six:** What teaching methods do you employ in your classroom? (more than one option)

**Table 3.38**

*Teaching Methods Employed*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Teacher-Centred Instruction	6	17,14%
Students-Centred Instruction	6	17,14%
Direct-Instruction	6	17,14%
Flipped-Classroom	2	5,71%

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Online-Learning	8	22,85%
Inquiry-Based Learning	6	17,14%
Experiential Learning	1	2,85%
Total	35	100%

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From the results displayed in table 3.38, the majority of teachers 22.85% claimed that they employ online learning in their teaching practices, which means that technology-based instruction uses virtual classrooms and online resources. 17.14% of teachers asserted that they apply teacher centred instruction in the classroom.

This indicates that they are the primary source of information, they can control the efficient delivery of information to a large class and guiding students successfully, while the same percentage 17.14% of teachers state stated that they implement student-centred instruction in the classroom, which implies that they focuses on engaging students actively in their learning through methods, like group work and hands on activities, which enhanced their critical thinking and problem solving skills. Few teachers 5.71% declared that they enact flipped classroom in their teaching.

This suggests that they employ the traditional learning by having students study content outside of class through videos or readings, reserving class time for discussions and problem solving. Additionally, 17.14% of teachers indicated that they engage inquiry-based learning in the classroom. This implies that they promote student inquiry and exploration through self-directed research and investigation. Finally, one teacher 2.85% asserted that he/she employs experiential learning in the classroom, which means that knowledge is gained through practical engagement in real-life situations like field, trips or simulations.

**Question seven:** How familiar are you with AI language models like ChatGPT?

**Table 3.39***Teachers Familiarity with ChatGPT*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
Not familiar at all	2	16.16%%
Somehow familiar	9	75%
Very familiar	1	8.33%
Total	12	100%

The majority of teachers 75% asserted that they are somewhat familiar with ChatGPT tool, which indicates that teachers know this AI tool model and understand the advantages and disadvantages of the latter. Few teachers 8.33% did not recognize ChatGPT tool, which means that they did not use it possibly due to a lack of exposure or training. In addition, one teacher 8.33% stated that he/she is very familiar with ChatGPT, which implies that he/she uses this AI tool as indicated in table 3.39. Interestingly, 16.16% of the teachers reported being unfamiliar with ChatGPT. In this advance their answers about ChatGPT will not be taken into consideration in all questions except in the analysis of questions (13, 21, 27, 28, and 29) which are not about the previous use of and/or exposure to ChatGPT.

**Question Eight:** Which AI models are commonly used in the teaching process in general?

(more than one choice)

**Table 3.40***Exploring Commonly Used AI Models in Teaching*

<b>Options</b>	<b>Frequency(N)</b>	<b>Percentage (%)</b>
ChatGPT (AI model designed to engaged in dialogue and give information)	10	47,61%
Mathia (An adaptive math learning	0	0%

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platform tailored to individual student needs)		
TopHat (is an interactive teaching platform for engaging students in lectures)	1	4,76%
Gradescope (an online tool used for grading and provide feedback on assignments)	1	4,76%
Duolingo (is a language-learning platform)	7	33,33%
Others	2	9,52%
Total	21	100%

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As it is shown in table 3.40, the majority of teachers 47,61% indicated that ChatGPT is used in the teaching process. This implies that they are aware of what ChatGPT is and how it works to solve learning problems and to enhance students learning experiences by offering personalized responses, addressing individual student needs, providing their writing skills. However, 33.33% of teacher mentioned that Duolingo is used in the teaching process; this means that they know how it works, which is designed to provide personalized support for student and real-time feedback for teachers. 4.76% of teachers stated that Top Hat tool is used in the teaching process. However, Mathia was not chosen by any of the teachers because they are EFL teachers they do not use Mathematics in their teaching process. This implies that it used for engaging students in lectures. Moreover, 4.76% of teachers claimed that Gradescope tool is used in teaching environment, which suggests that they used it for grading and feedback on assignments. Finally, 9.52% of teachers asserted that there are other AI model tools that are used in the teaching process, which indicates that they are the responses of the ones who are unfamiliar with using AI technologies in their teaching process. This trend aligns with the findings from Table 3.37, showing that many teachers use audio-visual presentations, online platforms, and auto grading tools, reflects their openness to integrating technology into their teaching. These findings

show that teachers are eager to adopt new tools and methods to improve their teaching and make learning more engaging and effective for students.

### Section Three: Integration of ChatGPT in Teaching and Learning

This section aims to investigate teacher's perspectives toward the integration ChatGPT in the teaching process.

**Question 9:** Which of the following definitions describes best the process of Teaching?

**Table 3.41**

#### *Navigating the Complexities of Teaching*

Options	Frequency (N)	Percentage (%)
Teaching is a process that involves sharing information or skills with others, considered both an art and a science	3	25%
The process of imparting knowledge, and values to others through various instructional methods	0	0%
Providing information through lectures and presentations	0	0%
All of the above	9	75%
None of the above	0	0%
Total	12	100%

According to the results of Question 9, the definition that best captures the essence of teaching, chosen by 25 % of the educators, describes it as a process involving the sharing of information or skills, combining both art and science. Moreover, 74 % of the respondents agreed that all the provided definitions collectively describe teaching, which includes imparting knowledge, values, and using various instructional methods. The complexity of teaching is highlighted by the fact that students view it as both an art and a science, as well as a process of imparting knowledge and values through different methods (see Table 3.15 Page 87). A smaller

group perceives teaching as merely providing information through lectures and presentations. The correlation between the pleasurable aspects of teaching outlined in Question Four (see Table 3.36 Page 111) and the definitions provided in Question Nine (see Table 3.41 Page 117) emphasizes the deep gratification educators experience due to the varied dimensions of their profession. Teachers derive fulfilment from cultivating critical thinking, forging connections, and fostering student growth, reflecting the intricate blend of creativity and systematic approaches inherent in teaching. This alignment underscores the profound nature of teaching, which encompasses both artistic expression and scientific methodology

**Question 10:** Do you think ChatGPT can enhance creativity?

**Table 3.42**

*ChatGPT's Creative Influence*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Yes	7	70%
No	3	30%
Total	10	100 %

The questionnaire results show in table 3.42, a split opinion, with 58.3% of teachers believing that ChatGPT can enhance creativity, while 41.6% disagree. This suggests a divided perspective on the potential of AI like ChatGPT to stimulate creativity, reflecting ongoing debates about its role in fostering innovative thinking.

**Question 11:** Whatever your answer is, please justify.

**Table 3.43**

*Perspectives on AI and Creativity*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Yes, but I believe human creativity will always be	2	15,38%

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superior to AI-generated creativity		
It is possible, but there may be ethical implications to consider when using AI in creative endeavours	5	38,46%
No, I believe creativity is a complex process that involves human emotions, experiences, and imagination, which AI lacks	3	23,07%
It depends on how AI is used and integrated into the creative process	3	23,07%
Total	13	100%

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The responses to the options provide diverse opinions on AI's role in creativity. While 15.38% believe AI can enhance creativity but see human creativity as superior. This perspective acknowledges the potential of AI to augment creativity, but maintains that human creativity, rooted in emotions, experiences, and intuition, remains superior. 38.46% of educators are concerned about ethical implications. These respondents' express apprehension about the ethical ramifications of relying too heavily on AI-generated content, fearing it could undermine the authenticity and originality of creative work. Another 23.07% doubt AI's ability to match the complexity of human creativity involving emotions and experiences. This view reflects so doubt that current AI technology can fully capture the nuanced, multifaceted nature of human creativity, which encompasses subjective, emotional, and experiential elements., and 23.07% think AI's impact depends on how it is integrated into the creative process. These responses highlight a balance between optimism and caution in the discussion of AI and creativity.

**Question 12:** Have you observed any changes in student engagement when using ChatGPT in your classroom?

**Table 3.44**

*Changes in Student Engagement with ChatGPT Use in the Classroom*



<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Yes	7	70%
No	3	30%
Total	10	100%

According to the findings presented in Table 3.44, 70% of respondents observed changes in student engagement when utilizing ChatGPT in their classrooms. Even the teacher who does not use technology inside the classroom (see Table 3.37), has observed engagement in students writing and reading skills, which means s/he might not use technology but his/her students could. However, 30% stated that they did not notice any such changes, this might be the result of never using ChatGPT in their teaching setting or following the old traditional methods and avoiding incorporating AI models. These findings indicate a varied perception among educators regarding the impact of ChatGPT on student engagement, with some acknowledging differences while others did not. Similar to the findings in Table 3.44, educators reported varied observations regarding student engagement when using ChatGPT in their classrooms. A majority noted changes such as increased student participation, enhanced understanding of complex topics, and improved writing skills. Unlikely, a significant portion of educators did not perceive any noticeable changes. Further exploration of responses from Questions 19 (see Table 3.51 Page 128) and 22 (see Table 3.54 Page 131) could provide deeper insights into how ChatGPT influences student engagement and how educators perceive its effectiveness.

By analysing these responses, specific changes can be better understood, through: increased student participation, enhanced comprehension of complex topics, or improvements in writing skills. Additionally, examining educators' overall satisfaction with ChatGPT as a teaching tool will offer a clearer understanding of its role in enhancing the learning experience. For instance, some teachers may report that ChatGPT encourages students to ask more insightful questions, while others may observe increased student willingness to complete assignments. This deeper

exploration is crucial for gaining a comprehensive view of ChatGPT's impact on student engagement and its effectiveness in educational settings.

**Question 12.1:** If yes, in what language skills did they improve.

**Table 3.45**

*Improvements in Language Skills with ChatGPT Us*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Writing	6	60%
Speaking	2	20%
Reading	2	20%
Listening	0	0%
Total	10	100%

The survey results from table 3.45 indicate that, among teachers who observed increased student engagement with ChatGPT (6 teachers precisely), 60% reported improvements in writing skills because ChatGPT provides detailed guidance and explanations, which helps students improve their writing skills by offering step-by-step instructions and addressing individual student needs. 20% in speaking abilities, and 20% in reading skills. Since ChatGPT enhances speaking and reading skills by providing brainstorming ideas, crafting arguments, making outlines, and synthesizing information, which helps students develop critical thinking and engagement. However, some assume that no improvements were noted in listening skills, because ChatGPT old version of GPT3 do not use the listening option. These findings suggest that ChatGPT is most effective in enhancing writing and speaking skills, with a moderate impact on reading and no effect on listening.

**Question 13:** How might AI language models impact teaching methods, assessments, or educational practices in the future? (more than one option)

**Table 3.46***Expected Impacts of AI Language Models on Educational Practices*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Virtual Tutoring (It provides small group of instructional support through digital platforms)	3	18,75%
Personalized Learning (it gives educational experiences to individual student needs, preferences, and abilities)	7	43,75%
Real-Time Feedback (give immediate evaluation and guidance for students)	6	37,5%
I do not know	0	0%
<b>Total</b>	<b>16</b>	<b>100%</b>

The responses from table 3.46, provide the anticipated effects of AI language models on teaching methods, assessments, or educational practices. A notable proportion 18.75% envisages AI facilitating virtual tutoring, thereby enabling small group instructional support through digital platforms. Moreover, a substantial majority 43.75% anticipates AI's role in fostering personalized learning experiences tailored to individual student needs, preferences, and abilities. Additionally, 37.5% of respondents foresee AI providing real-time feedback, offering immediate evaluation and guidance to students. Importantly, it's noteworthy that no choice from the options provided has been left unpicked. This comprehensive response indicates a broad spectrum of expectations and potential applications for AI language models in education,

These results emphasize a collective anticipation of AI's transformative potential in reshaping educational approaches, particularly through personalized learning and real-time feedback mechanisms.

**Question 14:** In what ways can ChatGPT assist students with homework? (more than one option)

**Table 3.47***How ChatGPT Assists Students with Homework*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
By providing step-by-step	8	44,44%

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guidance and explanations		
Through replacing the need for students to do homework entirely	4	22,22%
To assess more homework tasks than traditional methods	4	22,22%
By giving limited support, similar to a basic search engine	2	11,11%
I do not know	0	0%
Total	18	100%

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Table 3.47 illustrates various perceptions of how ChatGPT can assist students with their homework. A significant majority, 44.44%, believe that ChatGPT is beneficial for providing step-by-step guidance and explanations. Meanwhile, 22.22% think it can replace the need for students to do homework entirely, since they believe that this tool can autonomously complete homework tasks on behalf of students, which might strengthen their reliance on AI; and eventually this could harm their critical thinking and performance. An equal percentage of 22.22% believe it can assess more homework tasks than traditional methods. Additionally, 11.11% see ChatGPT as offering limited support, akin to a basic search engine. Even the teacher who does not use technology inside the classroom (see table 3.37) realized that his/her students benefit from such a tool. These findings indicate that while ChatGPT is primarily valued for its ability to offer detailed guidance, there are diverse opinions on its role in potentially replacing traditional homework practices and its capacity to handle a larger volume of tasks.

**Question 15:** How does ChatGPT facilitate discussion and collaboration among students? (more than one option)

**Table 3.48**

*ChatGPT's Role in Facilitating Student Discussion and Collaboration*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
By providing a platform for students to share ideas	7	41,17%
By restricting communication to one-on-one interactions only	2	11,76%
It discourage student interaction altogether	5	29,41%
It engages in dialogue	3	17,64%
I do not know	0	0%
Total	17	100%

The questionnaire results in table 3.48 reveal diverse opinions on how ChatGPT influences student interaction. A majority, 41.17%, believe ChatGPT facilitates discussion by providing a platform for students to share ideas. In contrast, 11.76% feel it restricts communication to one-on-one interactions, suggesting that instead of promoting group discussions, ChatGPT may inadvertently encourage students to rely on AI for answers, thus limiting peer engagement in the classroom. Meanwhile, 29.41% believe ChatGPT discourages student interaction altogether, citing concerns that heavy reliance on AI could diminish valuable peer-to-peer interactions crucial for developing collaborative and critical thinking skills. Over-dependence on AI tools can reduce opportunities for face-to-face communication and teamwork. Additionally, 17.64% recognize ChatGPT's role in fostering dialogue to enhance collaboration among students. Similarly, Table 3.57 (Page 135) provides further insights into how ChatGPT can enhance collaboration among students. Even the teacher who does not use technology inside the classroom (see Table 3.37), believed that his/her students' collaboration and discussion is facilitated via ChatGPT; which really raises the question why s/he himself/herself could not use it inside the class for teaching purposes.

Approximately some respondents appreciate its role in facilitating group discussions and collaborative projects through chat-based interactions. Others acknowledge its potential to encourage knowledge sharing among peers, highlighting its utility in supporting collective learning efforts. Moreover, many of them recognize ChatGPT for promoting teamwork and cooperative problem-solving activities. These findings highlight the varied effectiveness of ChatGPT in enhancing student discussion and collaboration, illustrating both its potential benefits and limitations.

The diverse perspectives reflect the evolving role of technology in education. It is crucial for educators and students to carefully assess the impact of tools like ChatGPT on student interactions and academic performance. This evaluation ensures that technological advancements align with educational objectives and values, thereby promoting effective learning experiences.

**Question 16:** What benefits does ChatGPT offer as an assignment portal? (more than one option)

**Table 3.49**

*Benefits of ChatGPT as an Assignment Portal*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
by allowing students to submit assignments and receive immediate feedback	4	17,39%
24/7 availability	12	52,17%
delaying feedback on assignments indefinitely	1	4,34%
Personalized Assistant	5	21,73%
I do not know	1	4,34%
Total	23	100%

The results of table 3.49 highlight several perceived benefits of ChatGPT as an assignment portal. 52.17% of respondents appreciate its 24/7 availability, emphasise its reliability and accessibility for students at any time. Additionally, 21.73% recognize its usefulness as a personalized assistant, offering tailored support for individual student needs. Despite the fact that one of the educators (see table 3.37) does not use technology in classroom, s/he discovered the benefits of ChatGPT on his/her students, which definitely proves that s/he allows the use of technology by his/her students rather than by himself/herself during teaching. A notable 17.39% value the immediate feedback feature, which enhances the learning process by providing prompt evaluations of submitted assignments. However, 4.34% mentioned that ChatGPT can delay feedback indefinitely, indicating a potential limitation. Similarly, 4.34% of respondents are unsure of its benefits which is a result of the teacher, who is not familiar with ChatGPT and have never used in the teaching process. These results suggest that while ChatGPT offers significant advantages in terms of accessibility and personalized support, there are areas that require attention to optimize its effectiveness as an assignment portal.

**Question 17:** What are some challenges you have encountered when integrating ChatGPT into your teaching practices? (more than one option)

**Table 3.50**

*Challenges in Integrating ChatGPT into Teaching Practices*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Ensuring originality and authenticity of student work	3	14,28%
Managing and addressing ChatGPT biases in generated content	2	9,52%
Integrating ChatGPT seamlessly into existing lesson plans and curriculum	2	9,52%

Addressing concerns about plagiarism and proper citation of ChatGPT generated content	10	47,61%
Managing student expectations and reliance on ChatGPT for academic tasks	4	19,04%
I have never used it	0	0%
Total	21	100%

Table 3.50, indicates key challenges educators face when integrating ChatGPT into their teaching. The primary concern, noted by 47.61% of respondents, is addressing plagiarism and ensuring proper citation of ChatGPT-generated content. Additionally, 19.04% of educators struggle with managing student expectations and their reliance on ChatGPT. Ensuring originality and authenticity of student work is a challenge for 14.28% of respondents, while 9.52% each report difficulties in managing biases in ChatGPT content and integrating the tool seamlessly into existing lesson plans. However, even though some teachers mentioned that they have never used ChatGPT in their teaching process but they mentioned that they encounter some challenges which may seem contradictory given previous responses while the sample group is consistent, the responses may reflect varying levels of familiarity and concern with ChatGPT's integration, rather than direct usage experience. The results emphasize the necessity for developing strategies to effectively address challenges such as plagiarism and biases while integrating AI tools into educational practices.

**Question 18:** How do you balance the use of ChatGPT with other teaching resources in your classroom? (more than one option)

**Table 3.51**

*Balancing ChatGPT with Other Teaching Resources*



<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Integrate ChatGPT seamlessly into existing teaching strategies	2	14,28%
Use ChatGPT as a supplementary tool for specific learning objectives	5	35,71%
Replace traditional teaching methods entirely with ChatGPT	1	7,14%
Avoid using ChatGPT altogether to maintain focus on traditional approaches	6	42,85%
Total	14	100%

Table 3.51 indicates diverse approaches to incorporating ChatGPT alongside traditional teaching resources. Around 14.28% of respondents aim to integrate ChatGPT seamlessly into their existing teaching strategies. Meanwhile, 35.71% use it as a supplementary tool to support specific learning objectives. Only 7.14% of educators consider replacing traditional teaching methods entirely with ChatGPT. Add to that, 42.85% prefer to avoid using ChatGPT altogether, favouring traditional approaches. This table shows the varied strategies educators employ, reflecting different levels of comfort and philosophies regarding the use of AI in the classroom.

**Question 19:** Have you noticed any changes in student performance since implementing ChatGPT? (more than one option)

**Table 3.52**

*Impact of ChatGPT on Student Performance*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Improved retention of course material	1	4,54%
Increased student motivation and enthusiasm for learning	2	9,09%

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Decline in critical thinking skills	5	22,72%
No noticeable impact on student performance or engagement	3	13,63%
High test scores	3	13,63%
An enhancement and deep understanding of concepts	2	9,09%
I do not know	6	27,27%
Total	22	100%

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The questionnaire results in Table 3.52 disclose diverse impacts of ChatGPT on student performance. A small number of educators, 4.54%, observed improved retention of course material, and 9.09% noted increased student motivation and enthusiasm for learning. Additionally, 13.63% observed higher test scores, and 9.09% noticed a deeper understanding of concepts among students. However, 41.6% reported a decline in critical thinking skills, and 13.63% saw no noticeable impact on student performance or engagement. Interestingly, 27.27% were unsure about ChatGPT's impact, this uncertainty may arise from various factors, such as limited data or experience with ChatGPT. Similarly, Table 3.44 revealed diverse observations regarding student engagement with ChatGPT. While many educators noted benefits such as increased student participation, enhanced comprehension of complex topics, and improved writing skills, a substantial portion reported not observing significant changes in classroom dynamics. Furthermore, Table 3.55 (Page 132) indicates that some educators observed heightened student confidence and motivation when using ChatGPT for writing assignments. Nonetheless, a notable percentage were unsure about ChatGPT's impact on student outcomes. Analysing educators' overall satisfaction with ChatGPT as a teaching tool, alongside their observations of student engagement and performance, illuminates the complexities of integrating AI into educational practices. These insights empower educators to make informed decisions

about incorporating ChatGPT into their teaching methodologies, carefully weighing its potential benefits and challenges. This comprehensive understanding is pivotal for effectively leveraging AI technologies to enhance student learning experiences while addressing concerns and maximizing positive educational outcomes.

**Question20:** What strategies do you employ to ensure that ChatGPT is utilized responsibly and ethically in your teaching environment? (more than one option)

**Table 3.53**

*Approaches for Promoting Responsible and Ethical Use of ChatGPT*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Set clear guidelines and expectations for students when using ChatGPT	6	28,57%
Monitor students' interactions with ChatGPT to prevent misuse or abuse	2	9,52%
Incorporate discussions about AI ethics and responsible usage into lessons	7	33,33%
Trust students to use ChatGPT responsibly without intervention	1	4,76%
I do not know	5	23,80%
Total	21	100%

The questionnaire results in table 3.53, show a range of strategies that teachers use to ensure the responsible and ethical use of ChatGPT in their classrooms. Half of the respondents 28.57% implement clear guidelines and expectations for students using ChatGPT. Additionally, 9.52% actively monitor students' interactions with ChatGPT to prevent misuse. A significant portion, 33.33%, integrate discussions about AI ethics and responsible usage into their lessons,

highlighting the importance of understanding and addressing ethical considerations. Only 4.76% of educators trust students to use ChatGPT responsibly without any intervention, while 23.80% are unsure about the best approach to take. These results underline the importance of setting clear guidelines and fostering ethical discussions to promote the responsible use of ChatGPT in educational settings.

**Question 21:** In what ways do you assess the quality of essays produced with ChatGPT? (more than one option)

**Table 3.54**

*Assessment Strategies for Essays Generated with ChatGPT*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Focusing on the coherence and organization of ideas in the essay	4	18,18%
Comparing the language proficiency and vocabulary usage in ChatGPT-generated essays	4	18,18%
Considering the originality and critical thinking demonstrated in the essay content	7	31,81%
Relying solely on automated tools for plagiarism detection and grammar checking	6	27,27%
I do not know	1	4,54%
Total	22	100%

The table's 3.54 results depict the varied approaches educators employ to evaluate essays created with ChatGPT. Roughly one-third 18.18% prioritize assessing the coherence and organization of ideas within these essays; while an equal percentage 18.18% compare language

proficiency and vocabulary usage. A significant majority 31.81% place importance on evaluating originality and critical thinking displayed in the essay content, emphasizing the need for independent thought and student engagement. However, there is a notable reliance 27.27% solely on automated tools for plagiarism detection and grammar checking, potentially indicating an over-reliance on technology. As a result, combining technology with human assessment provides a more well-rounded evaluation of student work. This approach supports academic integrity and fosters deeper learning by balancing the efficiency of automated tools with the nuanced understanding only a human can offer. Meanwhile, 4.54% express uncertainty about the most effective assessment approach. These results assert a diverse array of evaluation strategies utilized by teachers to ensure the quality and authenticity of essays generated with ChatGPT.

**Question 22:** Have you observed any changes in students writing skills since implementing ChatGPT as a writing tool? (more than one option)

**Table 3.55**

*Observed Changes in Students' Writing Skills with ChatGPT Implementation*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Improved confidence and motivation in approaching writing assignments.	2	12,5%
Decline in students' ability to generate original ideas or arguments		
Increased reliance on technology for writing tasks outside of the classroom	8	50%
No noticeable differences in students' writing performance or attitudes	1	6,25%
I have never implemented it	5	31,25%
Total	16	100%

The table 3.55 finding show that educators' observations regarding the influence of integrating ChatGPT as a writing tool on students' writing proficiency. Approximately 12.5% noted enhanced confidence and motivation in approaching writing assignments. In contrast, 12,5% expressed concerns about a potential decline in students' capacity to generate original ideas or arguments. Moreover, a significant majority 50% observed an increased reliance on technology for writing tasks beyond the classroom Similarly, table 3.44 (Page 120) reveals that more than a half of educators observed changes in student engagement with ChatGPT, highlighting increased participation and improved understanding of complex topics Add to that , the questionnaire results in Table 3.52 (Page 129) disclose varied impacts of ChatGPT on student performance, with some educators noting improvements in retention, motivation, and test scores, while others reported declines in critical thinking skills or no noticeable changes. However, only 6.25% reported no noticeable differences in students' writing performance or attitudes. Additionally, other teachers indicated they have never utilized ChatGPT as a writing tool, likely because their courses focus more on speaking and interaction rather than written materials or subjects emphasizing oral communication and discussions may find ChatGPT less relevant. Some educators also prefer traditional methods to foster independent writing skills, reflecting concerns about over-reliance on technology.

These findings highlight the dual nature of ChatGPT as a double-edged weapon in shaping students' writing skills.

**Question 23:** How do you envision the role of ChatGPT in students writing development? (more than one option)

**Table 3.56**

*Role of ChatGPT in Students' Writing Development*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Integrating ChatGPT more extensively into writing instruction to enhance students' writing proficiency	2	13,33%
Continuing to use ChatGPT selectively as a supplementary tool for specific writing tasks	6	40%
Exploring alternative AI writing tools or approaches to complement ChatGPT usage	3	20%
Scaling back on ChatGPT usage in favour of traditional writing instruction methods	4	26,66%
Total	15	100%

The table 3.56 results diverse perspectives on ChatGPT's role in writing instruction. While 13.33% of respondents support more extensive integration to enhance writing proficiency, 40% prefer using ChatGPT selectively for specific tasks, such as: brainstorming ideas or crafting arguments, making outlines and synthesis. Additionally, 20% are interested in exploring alternative AI tools, and 26.66% advocate for reducing ChatGPT usage in favour of traditional methods. These latter educators may believe that overreliance on ChatGPT could hinder students' development of essential writing skills, such as generating original ideas or giving inaccurate information or argument. These varied viewpoints reflect the ongoing debate about the best approach to incorporating AI in writing education

**Question 24:** In what ways can ChatGPT foster collaboration and peer learning among students?  
(more than one option)

**Table 3.57**

*Potential of ChatGPT to Foster Collaboration and Peer Learning*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
By facilitating group discussions and collaborative projects through chat-based interactions	2	13,33%
By encouraging students to share knowledge and resources with peers using the platform	4	26,66%
By promoting teamwork and cooperative problem-solving activities within the classroom	3	20%
I do not know	6	40%
Total	15	100%

The questionnaire results in table 3.57, expose several opinions on how ChatGPT can enhance collaboration and peer learning among students. About 13.33% of respondents believe it facilitates group discussions and collaborative projects through chat-based interactions, while 26.66% feel it encourages students to share knowledge and resources with peers. Additionally, 20% see its role in promoting teamwork and cooperative problem-solving activities. However, 40% of respondents are uncertain about ChatGPT's effectiveness in fostering collaboration. The diverse views on the benefits and uncertainties of integrating ChatGPT into collaborative educational settings reveal the evolving role of technology in shaping how students learn and collaborate with peers. These insights emphasize the intricate balance between new technological tools and traditional teaching methods, emphasizing the importance of thoughtful assessment to understand how these tools impact student interactions and academic progress over time. As a result, some educators and students see ChatGPT as a way to help classmates discuss topics and share ideas, while others are not sure how well it promotes teamwork. These different views show how technology is changing education, and they remind us to think carefully about its effects.



**Question 25:** How do you think students respond to interacting with ChatGPT in educational settings? (more than one option)

**Table 3.58**

*Student Responses to ChatGPT in Educational Settings*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Increased engagement	3	23,07%
Improved learning outcomes	0	0%
Concerns about reliance on AI	6	46,15%
I do not know	4	30,76%
Total	13	100%

Survey results in table 3.58, indicate diverse student responses to ChatGPT in educational contexts. While 23.07% of respondents observed increased engagement, none reported improved learning outcomes. Notably, 46.15% expressed concerns about student reliance on AI, and 30.76% were unsure of the overall impact. These findings suggest that although ChatGPT can enhance student engagement, it also raises significant concerns regarding overdependence on technology.

**Question 26:** Have you noticed any ethical considerations or concerns arise when using ChatGPT with students? (more than one option)

**Table 3.59**

*Ethical Considerations in Using ChatGPT in Education*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Plagiarism Concerns	12	48%
Bias and Accuracy	6	24%

Privacy and Security	Data	5	20%
Understanding Limitation	AI	2	8 %
I do not know		0	0%
Total		25	100%

The integration of ChatGPT into educational practices brings several ethical concerns to the forefront. 48% reported plagiarism as a major issue pinpointing the importance of maintaining honesty in academic work and ensuring AI-generated content is used appropriately. Additionally, 24% noted biases and accuracy problems, while 20% raised concerns about privacy and data security highlighting the significance of protecting students' privacy and keeping their personal information secure. Understanding AI limitations was a concern for 8% of respondents. These responses highlight the critical importance of ethical considerations when using AI tools in education.

**Question 27:** Do you believe teachers should receive training on how to effectively integrate ChatGPT into their teaching practices?

**Table 3.60**

*Necessity of Teacher Training for ChatGPT Integration*

Options	Frequency (N)	Percentage (%)
Yes, it is essential	8	80%
No, it is not necessary	2	20%
Unsure	0	0%
Total	10	100%

A substantial majority 80% of respondents believe that training teachers on the effective integration of ChatGPT is essential to avoid overreliance on technology and ensure that AI-generated content is used appropriately. On the other hand, only 20% consider it unnecessary. This consensus highlights the need for professional development to equip educators with the skills required to utilize AI tools responsibly and effectively.

**Question 28:** What advice would you give to other educators who are considering using ChatGPT in their teaching? (more than one option)

**Table 3.61**

*Recommendations for Educators Considering ChatGPT*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Emphasize Ethical Use	10	43,47%
Provide Training	4	17,39%
Monitor Usage	4	17,39%
Encourage Critical Thinking	5	21,73%
Total	23	100%

Survey participants provided several recommendations for educators contemplating the use of ChatGPT. Emphasizing ethical use was highlighted by 43.47% of respondents, highlighting the need for educators to ensure AI-generated content is used appropriately and maintain integrity in academic work. 17.39% of the sample recommended providing adequate training to ensure they are equipped with the skills required to utilize AI tools responsibly and effectively. Moreover, 21.42% suggested monitoring usage, and another 21.73% advised encouraging critical thinking to guarantee they can evaluate information and make informed

decisions, rather than simply relying on AI-generated content. These insights underscore the importance of a balanced and thoughtful approach to AI integration in education.

**Question 29:** Which of the following measures can academic institutions implement to minimize the risk of plagiarism and misinformation when using AI tools like ChatGPT in education? (more than one option)

**Table 3.62**

*Mitigating AI Risks*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Develop guidelines and policies for AI tool usage	7	23,33%
Implement plagiarism detection software	10	33,33%
Integrate AI tools into assessment methods that promote critical thinking	0	0%
Foster a culture of academic integrity	5	16,66%
Encourage open and transparent communication	3	10%
Stay informed about AI developments	5	16,66%
I do not know	0	0%
<b>Total</b>	<b>30</b>	<b>100%</b>

To address plagiarism and misinformation when using AI tools like ChatGPT, respondents suggest several measures. These include developing clear guidelines and policies 23.33%, implementing plagiarism detection software 2.56% fostering a culture of academic integrity 15.38% encouraging transparent communication 10% and staying informed about AI

developments 16.66%. These initiatives are intended to promote responsible and effective use of AI in education, ensuring ethical standards are upheld while harnessing the benefits of technology to support learning and research. The absence of responses for "Integrate AI tools into assessment methods that promote critical thinking" and "I do not know" from the participants likely indicates that these options did not resonate with the respondents or were not considered relevant to their current needs or perspectives on AI in education.

**Question 30:** Through your responses, do you believe that ChatGPT is more of a:

**Table 3.63**

*Perceptions of ChatGPT as a Curse or Blessing*

Options	Frequency	Percentage (%)
Curse	7	63,63%
Blessing	1	9.09%
I do not know	3	27,27%
Total	11	100%

The majority of educators 63,63% perceive ChatGPT as more of a curse than a blessing, while only 9,09% see it as a blessing, and 27,27% are uncertain. Moreover, some educators abstained from choosing. In contrast to the majority of educators, who see ChatGPT more as a curse, Master One students largely view AI models as a blessing 56.66%. While educators voice concerns about potential drawbacks like plagiarism and biases, students emphasize the efficiency, decision-making aid, and convenience AI models provide. However, 18.33% of students still see AI models as a curse, and 25% remain uncertain about their impact. This stark difference in perspectives showcase the diverse views and attitudes towards AI integration in education, reflecting the complexity of navigating technological advancements in the classroom

**Question 30.1** If is a Curse, Explain why? (more than one option)

**Table 3.63-1***Reasons for Viewing ChatGPT as a Curse*

<b>Options</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
May perpetuate reliance on technology	9	39,13%
Raises concerns about data privacy and security	6	26,08%
Could potentially replace human interaction in education	6	26,08%
I do not know	2	8,69%
Total	23	100%

Respondents cited several reasons for viewing ChatGPT as a curse, including fostering an over reliance on technology 39,13%, raising concerns about data privacy and security 26,08%, and potentially replacing human interaction in education 26,08%. These concerns highlight critical apprehensions regarding the broader implications of AI tools in educational settings.

**Question 31:** If you have any further suggestions, please feel free to share

- “Both teachers and learners must be trained on how to use AI”.
- “ChatGPT is a sword with two edges like any new discovery.”
- “In my opinion, I believe that ChatGPT is a curse, if the student completely relies on it, and is a blessing when he uses it only if he really needs assistance.”
- “I think that AI tools cannot work well with students who are undergraduate and graduate because its content is not reliable and at this level, they cannot distinguish wrong information. They are most of time irresponsible to the degree that they leave this tool, to

replace their critical thinking tendency. And here we end up with generations that are empty minded .AI can be used only when students reach certain level of awareness.”

- “ChatGPT is a double-edged weapon. It’s both curse and blessing. This depends on how exactly we use it.”

-Both teachers and students should be trained on an efficient, creative, critical and ethical use of AI.

These suggestions provided by Master One educators highlight diverse views on using AI and ChatGPT in education. They stress the need for proper training for both teachers and students, the importance of responsible AI use, and the potential risks and benefits. Overall, they call for a balanced, ethical, and critical approach to integrating AI in education to maximize its benefits while minimizing potential drawbacks.

### **3.4. Summary of results and findings from teachers’ questionnaire**

This chapter presents the findings from a survey conducted among 12 teachers of Master One students in the Department of Letters and English Language at the University of 08 May 1945, Guelma. The study aimed to explore their perspectives and practices regarding the integration of AI models, specifically ChatGPT, in educational settings.

In Section One, the survey revealed that these educators cover a diverse range of courses in linguistics and literature, indicating a balanced approach that combines theoretical knowledge with practical application in English studies. Teaching both bachelor's and master's degree programs, they demonstrate a nuanced understanding of their students' academic levels and learning needs.

Moving to Section Two, it becomes clear that these teachers find great fulfilment in their profession, viewing teaching as a platform not only to impart knowledge but also to foster critical thinking, creativity, and overall student development. They actively embrace technology,

including audio-visual presentations and online platforms, to enhance student engagement and improve learning outcomes. Most notably, they are familiar with ChatGPT and recognize its potential benefits and drawbacks. Integrating ChatGPT into their teaching practices, they leverage its capabilities to enhance students' writing and speaking skills, thus offering more personalized learning experiences.

In Section Three, the survey delves into the educators' diverse perspectives on ChatGPT's impact on creativity. While some teachers believe AI can enhance creativity by providing innovative tools and solutions, others express concerns about its limitations in replicating human creativity, particularly in tasks involving emotions and complex experiences. Nevertheless, teachers generally agree that ChatGPT enhances student engagement and facilitates personalized learning through its ability to provide tailored guidance and explanations.

The survey findings support the hypothesis that both of the questionnaires support the approval of the first hypothesis, indicating that both Master One students and English teachers at the University of Guelma hold positive attitudes towards integrating ChatGPT into the academic environment. Students benefit from enriched learning experiences characterized by personalization and expanded educational opportunities. Teachers, in turn, observe improvements in student engagement, critical thinking skills, and overall academic development due to ChatGPT's integration. However, persistent concerns about the accuracy and reliability of information generated by ChatGPT underscore the ongoing need for critical evaluation and ethical considerations in its educational use.

In summary, while these findings illustrate the potential benefits of ChatGPT in education, they also highlight the importance of thoughtful implementation and continuous evaluation to maximize its educational value effectively.

## **Conclusion**



This chapter explores the integration of AI, specifically ChatGPT, into academia. The investigation aims to understand the perspectives of both teachers and students towards the use of ChatGPT as a learning and a teaching tool. The analysis of the questionnaires reveals that there is a positive attitude among the participants towards incorporating ChatGPT into the learning process.

The findings suggest that the integration of ChatGPT has led to more personalized and enriched learning opportunities for students, showcasing its value as an educational tool in the new technological era. Teachers have observed improvements in student engagement, critical thinking, and academic development, indicating that ChatGPT can be a reliable and effective tool for knowledge dissemination, positively influencing teaching methods and enhancing the overall learning experience.

In addition to ethical issues, academic integrity, and biases in AI-generated content are prominent concerns. Thus, teachers report difficulties in integrating ChatGPT into existing curriculum and note potential declines in students' capacity for creative and original ideas and independent writing due to over-reliance on the technology. To address these challenges, it is essential for educators to continuously develop professionally and collaborate closely to establish ethical guidelines for integrating AI.

ChatGPT shows significant potential to enhance education; however, its integration must be managed carefully to balance its benefits and potential drawbacks. This balanced approach will ensure that AI technology enriches the educational experience positively while proactively addressing any concerns that may arise.

# **GENERAL CONCLUSION**

## General Conclusion

The use of AI tools, particularly ChatGPT, in language learning environments has become a topic of growing interest and importance. This study aimed to investigate the effects of integrating such AI model into educational settings. The research is divided into two main part: theoretical and practical. The theoretical part consists of two chapters that introduced relevant concepts and ideas related to AI and ChatGPT. Besides, the practical part that includes a chapter designed to explore the perceptions and attitudes of students and teachers concerning the topic under investigation.

The first chapter highlighted the significance of AI technologies in modern society, emphasizing their ability to enhance efficiency and decision-making across various fields. Furthermore, ChatGPT offers personalized learning experiences, seamless communication, and innovative solutions to educational challenges. This has made education more accessible, engaging, and effective. However, ethical concerns like data privacy and algorithmic bias must be addressed through interdisciplinary collaboration and transparency.

In the second chapter, the issue of ChatGPT in revolutionizing language learning was highlighted. This language model has the capacity to enhance writing abilities and advance academic research, representing a new frontier with unique advantages and challenges. However, ethical issues and practical limitations require thorough evaluation and thoughtful deployment. Strategic integration has the possibilities to reshape teaching methodologies, improve educational outcomes, and push the boundaries of research in the digital era.

The practical study provided valuable findings extracted from the students' and teachers' questionnaires, testing the research hypothesis and answering the research questions. The first hypothesis was confirmed and revealed positive attitudes towards integrating ChatGPT in academia, enhancing learning by offering personalized opportunities and improving engagement

and critical thinking. However, concerns about accuracy, reliability, and over-reliance on ChatGPT were noted, impacting creativity and independent writing. Educators must collaboratively establish ethical guidelines to maximize AI's benefits, while minimizing its challenges in education.

In summary, the findings of this study are highly valuable. Students recognize the ethical challenges of widespread AI adoption in academia, while educators worry that overreliance on AI models could reduce student creativity and critical thinking skills. As these technologies continue to evolve in education, educators and learners must assess both their benefits and drawbacks, raise awareness, and develop solutions to ensure a future that enhances the human experience

- **Limitations of the study**

1. The study's findings might not represent all academic settings since it involved a small number of students and teachers.
2. Because it focused on only one university, it might not reflect other educational settings accurately.

- **Recommendation for Further Research**

1. Conducting long term studies to monitor the lasting effects of integrating AI models like ChatGPT in education due to newest updates.
2. Investigating the effectiveness of various AI models across different subjects and educational levels.
3. Provide teachers with comprehensive training and professional development programs to effectively integrate AI models into their teaching practices.
4. Develop and implement clear ethical guidelines for the use of AI models in education.

5. Develop and implement effective assessment and evaluation methods to measure the impact of AI models on student learning outcomes.

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## **Appendix A**

### **Students' Questionnaire**

#### **ChatGPT in the New Teaching Era Operating as a Curse or bliss**

Dear Master One students,

It would be really appreciated if you devote some of your time to answer this questionnaire that seeks to investigate the impact of ChatGPT and other Artificial Intelligence (AI) models on the teaching and learning processes. Your collaboration is very important for the validity of the research. You should know that your responses will be kept anonymous and used only for research purposes.

You are required to tick (√) the appropriate box, or provide a full answer where it is necessary.

**Thank you for your cooperation**

**Second-year Master Students:**

Ms. GHOMRANI Kawther

Ms. TOURECH Kawther

Faculty of Letters and Languages

Department of Letters and English Language

**University of 8 Mai 1945, Guelma**

## Section One: General Information

1-What is your gender?

a. Male	
b. Female	

2- What is your age?

.....

3-What is your English level?

a. Beginner	
b. Intermediate	
c. Advanced	

4-What is your aim behind learning English? (you can select more than one).

a. To get a degree in English	
b. To communicate with English-speaking friends	
c. To improve communication skills for travel purposes.	
d. Others	

## Section Two: Artificial Intelligence Implications

5- How familiar are you with Artificial Intelligence (AI)?

a. Not familiar at all	
b. Somehow familiar	

c. Very familiar	
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6- Can you choose the appropriate definition of artificial intelligence? (You could tick more than once)

a. Computer systems that mimic human intelligence to perform tasks like problem-solving and decision-making.	
b. Algorithms and techniques that enable computers to learn from data and make predictions or decisions.	
c. Automation of tasks using intelligent systems, reducing the need for human intervention	
d. I do not know	

7- What are the AI models most used in learning? (You could tick more than once)

a. GPT (Generative Pre-trained Transformer)	
b. Mathia (which is online math learning software that personalizes instruction)	
c. Duolingo	
d. Others	

8- How often do you interact with AI-powered technologies in your daily routine?

a) Multiple times a day	
b) Once a day	
c) A few times a week	

d) Rarely	
e) Never	

**9-** which AI-powered applications or devices do you regularly use in your daily life? (You could tick more than once)

a) ChatGPT (Generative Pre-trained Transformer)	
b) Virtual assistants (e.g., Siri, Alexa, Google Assistant)	
c) Social-media algorithms (e.g., Facebook news feed, Instagram recommendations)	
d) Online shopping recommendations	
e) Smart home devices (e.g., thermostats, security cameras)	
f) Navigation and mapping apps	
g) Healthcare and fitness apps	

**9-1-** If you use other AI models, please mention them:

.....

**10-** What are the main benefits you perceive from the integration of AI in various aspects of society? (You could tick more than once)

a. Increased efficiency	
b. Improved decision-making	
c. Enhanced convenience	
d. Improved Education	
e. Advanced Healthcare	
f. Risk Management (AI enhances efficiency and	

resilience, cuts costs, and ensures data security, which is crucial across finance)	
g. Improved transportation	

**11-** In what ways do you think AI could further improve or enhance daily experiences in the future? (You could tick more than once)

a) Doing routine tasks like setting reminders and scheduling appointments.	
b) Giving personalized health tips based on your data.	
c) Making it easier to talk to people who speak different languages.	
d) Driving cars and managing traffic without human help.	
e) Helping save energy and control devices in your home	
f) Making banking and money management easier and safer.	
g) Creating tools to help people with disabilities	

**12-** Do you believe that incorporating AI technologies into education can enhance your learning experience?

Yes

No

**13-** Whatever your answer is, specify how much it can affect it (You could tick more than once)

a) AI can provide personalized learning experiences tailored to my individual needs.	
b) AI can offer instant feedback on my work, helping me improve more quickly.	
c) AI can make learning more interactive and engaging, increasing my motivation to learn.	



d) I prefer traditional teaching methods and don't think AI can improve my learning experience.	
e) I'm concerned about the potential negative impacts of AI on education, such as job loss for teachers.	
f) I'm worried about privacy and data security issues associated with the use of AI in education	

**13.1-** If others, please justify

.....

.....

**Section Three: The Use of ChatGPT in Education**

**14-** Have ever you heard of ChatGPT?

Yes

No

**15-**How would you describe ChatGPT? (You could tick more than once)

a. A language model that generates human-like text	
b. A language model that understands human language and responds	
c. A language model that can be used for various Natural Language Tasks (NLP)	

**16-** Which of the following tasks can ChatGPT perform?

a) Text generation	
b) Text summarization	
c) Speech synthesis	
d) Language translation	
e) Image recognition	
f) Data analysis	
g) Code generation	
h) All the above	
i) None of the above	

**17-** Which of the following tasks cannot ChatGPT perform?

a. Fact-checking	
b. Making decisions	
c. Creating original ideas	
d. Make predictions about future events	
e. All of the above	

**18-** How do you use ChatGPT? (You could tick more than once)

a) To generate creative writing and stories.	
d) To generate content for social media posts and blogs.	
c) To create interactive experiences in virtual reality applications.	
d) To aid in medical diagnosis and treatment planning.	
e) To generate study guides and summaries	

f) For creative inspiration and feedback on projects.	
g) For problem-solving and exploring solutions.	
h) For writing assistance and improving content.	

**19-** Which of the following definitions describes best the process of Teaching?

a. Teaching is a process that involves sharing information or skills with others, considered both an art and a science.	
b. The process of imparting knowledge, and values to others through various instructional methods	
c. Providing information through lectures and presentations.	
d. All of the above.	
e. None of the above.	

**20-** What challenges may arise from the integration of technology in education?

a. Access and equity issues related to digital divide	
b. Concerns about privacy and data security	
c. Potential distractions and misuse of technology	
d. All of above	
e. None of the above	

**21-** What are the benefits of using ChatGPT in teaching and learning?

a. Provides instant feedback and assistance.	
b. Offers personalized learning experiences.	

c. Facilitates access to educational resources.	
d. Enhances student engagement and motivation.	
e. All of the above	
f. None of the above	

**22-**How effective do you think ChatGPT is in improving language?

a. Very effective	
b. Somewhat effective	
c. Not effective	
d. Not sure	

**23-** When learning English, does ChatGPT play a significant role?

Yes

No

**24-** How can ChatGPT improve language skills?

a. Providing conversational practice in English	
b. Offering instant feedback on grammar and vocabulary usage	
c. Facilitating language translation and understanding of English texts	
d. All of the above	
e. None of the above	

**25-** How might ChatGPT impact language learning strategies that are used to acquire, understand, and retain information effectively? (You could tick more than once)

a. Correcting mistakes instantly.	
b. Creating personalized study materials.	
c. Improving speaking and listening skills.	
d. Providing access to authentic language resources.	

**26-** Which of the following language skills can be improved while using ChatGPT? (You could tick more than once)

a. Speaking	
b. Listening	
c. Reading	
d. Writing	

**27-** How can ChatGPT improve writing skills?

a. By providing instant feedback on grammar and spelling errors.	
b. By generating writing prompts and creative story ideas.	
c. By suggesting alternative vocabulary and sentence structures.	
d. By assisting with brainstorming and organizing ideas.	
e. All of the above	
f. None of the above	

**28-** Do you think there are some drawbacks to using ChatGPT in teaching and learning?

a. May lack nuanced responses.	
b. Raises privacy and security concerns.	
c. Could replace human interaction.	
d. May perpetuate biases or inaccuracies.	
e. All of the above	
f. None of the above	

**29-**How would you rate the quality of content generated by ChatGPT for academic research purposes?

a. High quality	
b. Moderate quality	
c. Low quality	
d. Not sure	

**30-** Can ChatGPT be used for brainstorming (where participants freely share and explore various ideas without criticism) and exploring a field or topic you do not have much knowledge about?

a. Yes	
b. No	
c. It depends on the specific task and the quality of the output	

**31-**Would you trust research findings or content generated by ChatGPT for academic purposes without human oversight?

a. Yes, I would trust ChatGPT-generated research	
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b. No, I would not trust ChatGPT-generated research	
c. It depends on the context and verification process	

**32-**How might researchers use ChatGPT to enhance their academic writing process? (You could tick more than once)

a. Generating outlines and organizing research ideas into coherent structures.	
b. Providing suggestions for improving writing style and clarity.	
c. Generating introductory and concluding paragraphs for research papers.	
d. Offering synonyms and alternative phrasing to enhance the expressiveness of writing.	

**33-** What should researchers be aware of when using it for academic research? (You could tick more than once)

a. Not effective or accurate in generating content for niche or specialized topics	
b. Inaccuracies in the training data may reflect in ChatGPT's output	
c. ChatGPT may not be accurate in describing or discussing any events after 2021	

**34-**How can researchers ensure ethical practices when incorporating AI technologies like ChatGPT into academic research? (You could tick more than once)

a. Ensuring transparency and disclosure of AI-generated content in research outputs.	
b. Being mindful of biases and limitations inherent in AI-generated text.	
c. Striving for fairness and equity in the use of AI-generated content, particularly in sensitive research areas.	
d. Respecting intellectual property rights and copyright laws when utilizing AI-	

generated content in research publications.	
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**35-** How do you envision the role of ChatGPT evolving in education in the future? (You could tick more than once)

a. Mainstream tool for personalized learning	
b. Enhanced student-teacher collaboration	
c. Addressing individual learning needs	

**36-** Through your responses, do you believe that ChatGPT and other AI models are more of a curse or a blessing?

Curse

Blessing

I do not know

**36.1-** Explain how? (You could tick more than once)

a. May perpetuate reliance on technology	
b. Raises concerns about data privacy and security	
c. Could potentially replace human interaction in education	
d. I do not know	

**37.** If you have further suggestions, please feel free to share:



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**Thank you for your cooperation!**

**Appendix B**  
**Teacher's Questionnaire**

**ChatGPT in the New Teaching Era Operating as a Curse or Bliss**

Dear teacher,

The present questionnaire is administered as part of Master's degree in Language and Culture dissertation. It aims at gathering data related to the impact of ChatGPT and other Artificial Intelligence (AI) models on teaching and learning processes. You are kindly invited to answer the questionnaire, and your responses will be treated with great confidentiality, care and anonymity.

**Thank you for your cooperation.**

**Second-year Master Students:**

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**Section one: Personnel Information.**

1-What course do you teach?

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 .....  
 .....

2-How many years have you been teaching?

a. Less than 5 years	
b. 5-10 years	
c. 10-15 years	
d. 15+ years	

3-What levels do you teach?

a. Bachelor's degree	
b. Master's degree	
c. Doctorate	

4- What do you enjoy most about teaching? (You could tick more than once)

a. Witnessing student's growth and learning progress.	
b. Fostering critical thinking and creativity.	
c. Building meaningful connections with students.	
d. Inspiring a love for lifelong learning.	
e. Contributing to students' personal and academic development.	
f. Collaborating with colleagues and sharing knowledge	
g. Making money and paying bills	

**Section Two: Familiarity with ChatGPT and AI**

5- How do you incorporate technology into your teaching? (You could tick more than once)

a. Audio-Visual Presentations (The use of videos or images to teach)	
b. Tracking to Online Platforms (Platforms which help to monitor student's progress)	
c. Auto-grading tools (Tools that assess assignments automatically)	
d. I do not do so.	

6- What teaching methods do you employ in your classroom? (You could tick more than once)

a. Teacher-Centred Instruction (The teacher is the primary source of knowledge and direction in the classroom).	
b. Students-Centred Instruction (Students take an active role in the class and the teacher is a guide).	
c. Direct-Instruction (It involves direct explanations to students through lectures or demonstrations).	
d. Flipped-Classroom (Students learn new concepts through pre-recorded lectures on readings then engage in hands-on activities).	
e. Online-Learning (it involves using digital platforms to deliver educational content)	
f. Inquiry-Based Learning (encourages students to ask questions, and seek to explore new information).	
g. Experiential Learning (It involves hands-on experiences and real-world applications of knowledge).	

7-How familiar are you with AI language models like ChatGPT?

a. Not familiar at all	
b. Somehow familiar	
c. Very familiar	

8- Which AI models are commonly used in the teaching process in general? (You could tick more than once)

a. ChatGPT (AI model designed to engaged in dialogue and give information)	
b. Mathia (An adaptive math learning platform tailored to individual student needs)	
c. TopHat (is an interactive teaching platform for engaging students in lectures)	
d. Gradescope (an online tool used for grading and provide feedback on assignments)	
e. Duolingo (is a language-learning platform)	
f. Others	

### Section Three: Integration of ChatGPT in Teaching and Learning

9-Which of the following definitions describes best the process of Teaching?

a. Teaching is a process that involves sharing information or skills with others, considered both an art and a science.	
b. The process of imparting knowledge, and values to others through various instructional methods	
c. Providing information through lectures and presentations.	
d. All of the above.	
e. None of the above.	

10-Do you think ChatGPT can enhance creativity?

Yes

No

11.1 Whatever your answer is, please justify:

a. Yes, but I believe human creativity will always be superior to AI-generated creativity.	
b. It is possible, but there may be ethical implications to consider when using AI in creative endeavours.	
c. No, I believe creativity is a complex process that involves human emotions, experiences, and imagination, which AI lacks.	
d. It depends on how AI is used and integrated into the creative process.	

12-Have you observed any changes in student engagement when using ChatGPT in your classroom?

Yes

No

12.1 -If yes, in what language skills did they improve.

a. Writing	
b. Speaking	
c. Reading	
d. Listening	

13 -How might AI language models impact teaching methods, assessments, or educational practices in the future? (You could tick more than once)

a. Virtual Tutoring (It provides small group of instructional support through digital platforms	
b. Personalized Learning (it gives educational experiences to individual student needs, preferences, and abilities	
c. Real-Time Feedback (give immediate evaluation and guidance for students)	
d. I do not know.	

14-In what ways can ChatGPT assist students with homework? (You could tick more than once)

a. By providing step-by-step guidance and explanations.	
b. Through replacing the need for students to do homework entirely.	
c. To assess more homework tasks than traditional methods.	

d. By giving limited support, similar to a basic search engine	
e. I do not know	

15-How does ChatGPT facilitate discussion and collaboration among students? (You could tick more than once)

a. By providing a platform for students to share ideas.	
b. By restricting communication to one-on-one interactions only.	
c. It discourage student interaction altogether	
d. It engages in dialogue.	
e. I do not know	

16-What benefits does ChatGPT offer as an assignment portal? (You could tick more than once)

a. by allowing students to submit assignments and receive immediate feedback.	
b. 24/7 availability	
c. delaying feedback on assignments indefinitely.	
d. Personalized assistant	
e. I do not know	

17-What are some challenges you have encountered when integrating ChatGPT into your teaching practices? (You could tick more than once)

a. Ensuring originality and authenticity of student work.	
b. Managing and addressing ChatGPT biases in generated content.	
c. Integrating ChatGPT seamlessly into existing lesson plans and curriculum	
d. Addressing concerns about plagiarism and proper citation of ChatGPT generated content.	
e. Managing student expectations and reliance on ChatGPT for academic tasks	
d. I have never used it.	

18-How do you balance the use of ChatGPT with other teaching resources in your classroom? (You could tick more than once)

a. Integrate ChatGPT seamlessly into existing teaching strategies.	
b. Use ChatGPT as a supplementary tool for specific learning objectives.	
c. Replace traditional teaching methods entirely with ChatGPT.	
d. Avoid using ChatGPT altogether to maintain focus on traditional approaches	

19-Have you noticed any changes in student performance since implementing ChatGPT? (You could tick more than once)

a. Improved retention of course material	
b. Increased student motivation and enthusiasm for learning.	
c. Decline in critical thinking skills	
d. No noticeable impact on student performance or engagement	
e. High test scores	

f. An enhancement and deep understanding of concepts	
g. I do not know	

20-What strategies do you employ to ensure that ChatGPT is utilized responsibly and ethically in your teaching environment? (You could tick more than once)

a. Set clear guidelines and expectations for students when using ChatGPT.	
b. Monitor students' interactions with ChatGPT to prevent misuse or abuse.	
c. Incorporate discussions about AI ethics and responsible usage into lessons.	
d. Trust students to use ChatGPT responsibly without intervention	
e. I do not know	

21-In what ways do you assess the quality of essays produced with ChatGPT? (You could tick more than once)

a. Focusing on the coherence and organization of ideas in the essay.	
b. Comparing the language proficiency and vocabulary usage in ChatGPT-generated essays.	
c. Considering the originality and critical thinking demonstrated in the essay content.	
d. Relying solely on automated tools for plagiarism detection and grammar checking	
e. I do not know	

22-Have you observed any changes in students writing skills since implementing ChatGPT as a writing tool? (You could tick more than once)

a. Improved confidence and motivation in approaching writing assignments. Decline in students' ability to generate original ideas or arguments.	
b. Increased reliance on technology for writing tasks outside of the classroom.	
c. No noticeable differences in students' writing performance or attitudes.	
d. I have never implemented it.	

23-how do you envision the role of ChatGPT in students writing development? (You could tick more than once)

a. Integrating ChatGPT more extensively into writing instruction to enhance students' writing proficiency.	
b. Continuing to use ChatGPT selectively as a supplementary tool for specific writing tasks.	
c. Exploring alternative AI writing tools or approaches to complement ChatGPT usage.	
d. Scaling back on ChatGPT usage in favour of traditional writing instruction methods	

24-In what ways can ChatGPT foster collaboration and peer learning among students? (You could tick more than once)

a. By facilitating group discussions and collaborative projects through chat-based	
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interactions.	
b. By encouraging students to share knowledge and resources with peers using the platform.	
c. By promoting teamwork and cooperative problem-solving activities within the classroom.	
d. I do not know	

25- How do you think students respond to interacting with ChatGPT in educational settings?  
(You could tick more than once)

a. Increased engagement	
b. Improved learning outcomes	
c. Concerns about reliance on AI	
d. I do not know	

26- Have you noticed any ethical considerations or concerns arise when using ChatGPT with students? (You could tick more than once)

a. Plagiarism Concerns	
b. Bias and Accuracy	
c. Privacy and Data Security	
d. Understanding AI Limitations	
e. I do not know	

27- Do you believe teachers should receive training on how to effectively integrate ChatGPT into their teaching practices?

Yes, it is essential	
No, it is not necessary	
Unsure	

28- What advice would you give to other educators who are considering using ChatGPT in their teaching? (You could tick more than once)

a. Emphasize Ethical Use	
b. Provide Training	
c. Monitor Usage	
d. Encourage Critical Thinking	

29- Which of the following measures can academic institutions implement to minimize the risk of plagiarism and misinformation when using AI tools like ChatGPT in education? (You could tick more than once)

a. Develop guidelines and policies for AI tool usage	
b. Implement plagiarism detection software	
c. Integrate AI tools into assessment methods that promote critical thinking	
d. Foster a culture of academic integrity	



e. Encourage open and transparent communication	
f. Stay informed about AI developments	
g. I do not know	

30- Through your responses, do you believe that ChatGPT is more of a:

Curse       Blessing       I do not know

30.1-If it is a Curse, explain why? (You could tick more than once)

a. May perpetuate reliance on technology	
b. Raises concerns about data privacy and security	
c. Could potentially replace human interaction in education	
d. I do not know	

32. If you have any further suggestions, please feel free to share:

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**Thank you for your cooperation.**

## Résumé

Ce travail explore l'utilisation des chatbots dans la nouvelle ère de l'enseignement. Les chatbots ont attiré l'attention des professeurs de langues en raison de leur capacité à communiquer avec les apprenants dans la langue cible en temps réel. La capacité de ce système d'IA à produire un contenu semblable à celui des humains peut renforcer ou affaiblir les compétences linguistiques, et peut présenter des avantages et des défis potentiels pour les compétences linguistiques. Cependant, l'adoption du ChatGPT dans les programmes d'enseignement soulève d'importantes questions éthiques quant à son utilisation. Cette étude vise à explorer l'application du ChatGPT dans l'enseignement et l'apprentissage des langues étrangères, en mettant l'accent sur la maîtrise de l'écriture et les compétences en matière de recherche universitaire. En outre, l'étude actuelle repose sur l'hypothèse que le ChatGPT améliore les expériences d'enseignement et d'apprentissage. L'étude repose sur une approche exploratoire par le biais d'une approche quantitative utilisant deux questionnaires comme outil de collecte de données : Le premier questionnaire a été distribué aux premiers étudiants de master (n=60) et le second aux premiers professeurs de master (n=12) du département de langue anglaise de l'université du 8 mai 1945-Guelma. Les résultats obtenus grâce à cet outil confirment l'hypothèse de recherche selon laquelle les élèves perçoivent le ChatGPT comme un outil d'apprentissage efficace et reconnaissent les préoccupations éthiques qui y sont associées. Cependant, les éducateurs ne sont toujours pas certains des effets à long terme de ce modèle d'IA sur la créativité des élèves et de leur dépendance excessive à son égard. Il est donc recommandé que les établissements d'enseignement établissent des politiques et des lignes directrices complètes pour intégrer de manière responsable le ChatGPT et d'autres outils d'IA dans l'apprentissage des langues. Cela devrait inclure la formation et le soutien des enseignants pour qu'ils utilisent efficacement ces technologies tout en atténuant les risques potentiels et en promouvant des pratiques éthiques parmi les étudiants.

**Mots clés :** ChatGPT, Chatbots, modèles d'IA, processus d'enseignement/apprentissage, nouvelles technologies.

## المخلص

يستكشف هذا العمل استخدام روبوتات الدردشة الذكية في عصر التدريس الجديد. استحوذت روبوتات الدردشة الذكية على اهتمام مدرسي اللغات بفضل قدرتها على التواصل مع المتعلمين باللغة المستهدفة بشكل فوري وواقعي. قد تؤدي قدرة نظام الذكاء الاصطناعي هذا على إنتاج محتوى شبيه بالمحتوى البشري إلى تقوية المهارات اللغوية أو إضعافها، وقد يطرح فوائد وتحديات محتملة على المهارات اللغوية. ومع ذلك، فإن اعتماد ChatGPT في المناهج التعليمية يثير مخاوف أخلاقية كبيرة فيما يتعلق باستخدامه. تهدف هذه الدراسة إلى اكتشاف تطبيق ChatGPT في تعليم اللغة الأجنبية وتعلمها، مع التركيز بشكل خاص على إتقان الكتابة ومهارات البحث الأكاديمي. علاوة على ذلك، تستند الدراسة الحالية إلى فرضية مفادها أن ChatGPT يعزز خبرات التعليم والتعلم. وتعتمد الدراسة على المنهج الاستكشافي الذي يتم من خلال المنهج الكمي باستخدام استبيانين كأداة لجمع البيانات: أحدهما تم توزيعه على طلبة الماجستير الأول (العدد=60)، والثاني على استبيان أساتذة الماجستير الأول (العدد=12) في قسم اللغة الإنجليزية بجامعة 8 ماي 1945-جامعة قالمة. تؤكد النتائج التي تم الحصول عليها من هذه الأداة فرضية البحث التي تفيد بأن الطلاب ينظرون إلى ChatGPT كأداة تعليمية فعالة ويدركون المخاوف الأخلاقية المرتبطة بها. ومع ذلك، لا يزال المعلمون غير متأكدين من الآثار طويلة الأجل لنموذج الذكاء الاصطناعي هذا على إبداع الطلاب والإفراط في الاعتماد عليه. لذلك، يوصى بأن تضع المؤسسات التعليمية سياسات ومبادئ توجيهية شاملة لدمج ChatGPT وأدوات الذكاء الاصطناعي الأخرى في تعلم اللغة بشكل مسؤول. وينبغي أن يشمل ذلك توفير التدريب والدعم للمعلمين للاستفادة الفعالة من هذه التقنيات مع التخفيف من المخاطر المحتملة وتعزيز الممارسات الأخلاقية بين الطلاب.

**الكلمات الرئيسية:** ChatGPT، روبوتات الدردشة، نماذج الذكاء الاصطناعي، عمليات التعليم/التعلم، التقنيات الجديدة.