



People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Ibn Khaldoun University of Tiaret
Faculty of Letters and Languages
Department of English



Investigating EFL Teachers Attitudes towards the Use of ChatGPT to Assist Writing Productions: Case of Master Two EFL Students at Ibn Khaldoun University of Tiaret

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Masters in
Didactics

Submitted by:

Ms. Chaimaa MAHTAL

Ms. Asmaa Hassina MIDOUN

Supervised by:

Dr. Mokhtaria LAHMER

Board of Examiners

Chairperson: Dr. Younes BEHIRA (MCB) Ibn Khaldoun University of Tiaret

Supervisor: Dr. Mokhtaria LAHMER (MCA) Ibn Khaldoun University of Tiaret

Examiner: Dr. Habib MADANI (MCA) Ibn Khaldoun University of Tiaret

Academic Year 2023-2024

Dedication 1

To my dearest mother BAKHTA and my father AHMED. This work is a testament to your unwavering support, boundless love, and relentless encouragement throughout my academic journey. Your sacrifices, wisdom, and guidance have been my steadfast companions. You showed me the value of determination and the significance of dreaming big, pushing me to strive for excellence and to never settle for less than my best. I love you so much and my ALLAH always keep you by my side.

To my sister SARA and her husband OMAR and my beloved nephew ADAM .You have been my confidante and my source of strength, always ready to lift my spirits and offer wise counsel, thank you all for being there for me, for your love, your encouragement, and for believing in me. I am deeply grateful and blessed to have you in my life.

To my brothers MADI and ABDENOUR. Your encouragement, humor, and wisdom have been my constant companions, each of you has contributed uniquely to my journey. Your strength, resilience, and dedication have inspired me to keep going.

To my beloved friend and soulmate AR. In your company, I have found the courage to chase my dreams, you have been my pillar and my supporter. Your belief in my potential made me the person I'm today. Thank you for the endless love, and for being the constant in my life who remind me of my capacity for greatness.

To my Friends NAIMA, NESSRINE and ASMAA. The memories we had together are priceless I would like to thank you for all the courage you provided me through our academic journey.

Chaimaa MAHTAL

Dedication 2

I am gratefully dedicating this research to my parents; everything I am or ever will be, I owe it to my mother Fatiha. To my biggest supporter who keeps saying, "I am proud of you" my beloved father Sissani whose words of encouragement and push for tenacity ring in my ears.

To my sister Douaa and my brothers Hakim and Habibou

A Special dedication goes to my other soul friends, my best friends, the sisters and the supporters Marwa and Khalida.

To my friends Nihed, Samia, Chaimaa and Habibou who supported me and encouraged me in my weakness.

Dedication also goes to teachers at the EFL department who participated in the practical aspects of this work. In addition, to my training teacher Mrs. BEKKI Chaima and Mr CHIADI Ayoub.

Asmaa Hassina MIDOUN

Acknowledgments

First and foremost, we really acknowledge and express our profound appreciation to Allah, the Most Merciful, in the highest sense of humility for giving us blessings, encouragement, and direction at every turn. We could not have reached this milestone without His help.

We would like to express our heartfelt gratitude to Dr. Mokhtaria LAHMER, our dear teacher and mentor, who consistently dedicated herself to addressing all our queries. We deeply value her continuous assistance, guidance, and unwavering commitment to assisting us during challenging moments. We will remain eternally grateful for her relentless dedication.

We also would like to extend our sincere thanks to the board of examiners; namely: Dr. Habib MADANI and Dr. Younes BEHIRA for devoting their time to read and evaluate this work.

Likewise, we would like to sincerely thank all the teachers of the department of English and Master two students for allowing us to base our research there without forgetting their continuous assistance and dedication in helping our study proceed.

Finally, we would want to express our gratitude to everyone who helped and advised us along the way so that we could successfully complete our academic objectives.

Abstract

Education is one of the many fields that artificial intelligence has significantly impacted. Since its introduction, artificial intelligence has advanced from basic computational models to a point where machines can understand, generate, and convert in natural language with remarkable ease. English as a Foreign Language has undergone a radical transformation thanks to the creation of sophisticated language models like ChatGPT. This research study aims to determine teachers attitudes towards the use of ChatGPT as a writing assistant and prove its effectiveness. In order to conduct this study a mixed approach was implemented through utilizing three research instruments: first an online interview for 10 English as a Foreign Language teachers at Ibn Khaldoun University of Tiaret, a questionnaire addressed to 57 master two students of linguistics and didactics, in addition to a written test addressed for 2 master two students from linguistics and didactics. The collected data indicates that teachers positively welcome this revolution in education; however, they are still hesitant and expressed concerns about ethical usage. On the other hand, students were beyond satisfied because it reduced time, tension and efforts in writing activities. It can be said that ChatGPT can significantly aid students in writing activities when used correctly, alongside AI detection tools and ethical guidelines to protect academic integrity.

Keywords: *Artificial Intelligence, ChatGPT, EFLTeacher's Attitudes, Writing Assistance.*

Table of Contents

Dedication1.....	2
Dedication2.....	3
Acknowledgments	4
Abstract.....	5
Table of Contents.....	6
Key to Abbreviations and Acronyms	10
List of Tables	11
List of Figures.....	12
GENERAL INTRODUCTION	13
I. CHAPTER ONE: Artificial Intelligence and ChatGPT	17
SECTION ONE: The Notion of Artificial Intelligence	18
1.1.1.Introduction	18
1.1.2.The Notion of Artificial Intelligence (AI)	18
1.1.3.The Emergence of Artificial Intelligence (AI)	20
1.1.4. The History of Development of Artificial Intelligence.....	22
1.1.5.Artificial Intelligence Strengths and Weaknesses	24
1.1.6.Types of Artificial Intelligence.....	24
1.1.6.1.Artificial Intelligence based on Capabilities.....	26
1.1.6.2 Artificial Intelligence based on Functionalities.....	26
1.1.6.3.Sub Fields of Artificial Intelligence.....	27
1.1.7.Artificial Intelligence Tools.....	28
1.1.8.Possibilities of Artificial Intelligence	31
1.1.8.1.Artificial Intelligence in Education	31
1.1.8.2.Types of Artificial Intelligence in Education	32
1.1.8.3.Artificial Intelligence in EFL Context.....	33

1.1.8.4.The Advantages and Disadvantages of Artificial Intelligence in EFL Context.....	34
1.1.8.4.1.Advantages of Artificial Intelligence in EFL Context.....	35
1.1.8.4.2.Disadvantages of Artificial Intelligence in EFL Context	35
1.1.8.5.Artificial Intelligence Effect on Students Writing Skill	36
1.1.8.6.Teachers Attitudes towards artificial intelligence in EFL context	37
1.1.9. Conclusion	39
SECTION TWO: ChatGPT the New Trend in Education	40
1.2.1.Introduction	41
1.2.2.OpenAI Background.....	41
1.2.3.Definition of ChatGPT	43
1.2.4.Advantages of Using ChatGPT in Academic Settings	48
1.2.4.1.Research.....	50
1.2.4.2.Administration	50
1.2.4.3.Community Engagement	51
1.2.4.4.Writing Assistant	51
1.2.5.Challenges and Ethical Implication	52
1.2.5.1.Academic Integrity	53
1.2.5.2.Cognitive Bias	53
1.2.5.3.Gender and Diversity.....	53
1.2.5.4.Accessibility	54
1.2.5.5.Commercialization.....	54
1.2.5.6.Lack of regulation	54
1. 2.5.7. Privacy concerns.....	55
1.2.5.8. Plagiarism	55
1.2.6.Adapting ChatGPT as Writing Assistant.....	56
1.2.7.ChatGPT Impact on Student Writing	60

1.2.8.ChatGPT Implication.....	63
1.2.8.1.Create an Account	63
1.2.8.2.Using ChatGPT.....	64
1.2.8.3.Important Considerations When Using ChatGPT	64
1.2.9. Conclusion	65
II Chapter two: Artificial intelligence and ChatGPT in Algerian Context.....	66
SECTION ONE: Writing in Algerian Context.....	67
2.1.1.Introduction	67
2.1.2.Teaching Writing in Algerian EFL Context.....	67
2.1.3.The Product Approach.....	67
2.1.3.1.Shortcomings of the Product Approach.....	68
2.1.3.1.The Process Approach	68
2.1.3.1.Shortcomings of the Process Approach.....	69
2.1.4.Artificial Intelligence in Algeria.....	69
2.1.5.ChatGPT Availability in Algeria.....	72
2.1.6.Data Description	75
2.1.6.1.Research Methodology	75
2.1.6.2.Mixed-Method Approach	76
2.1.7.Population and Context	76
2.1.7.1.Teachers Profile.....	76
2.1.7.2.Students Profile.....	76
2.1.7.3.Research Context.....	77
2.1.8.Description of Data Collection Tools	77
2.1.8.1. Interview Description	78
2.1.8. 2. Questionnaire Description.....	78
2.1.8.3. Test Description.....	79
2.1.9. Conclusion.....	79

SECTION TWO: Data Analysis and Recommendations	82
2.2.1. Introduction	83
2.2.2. Data Analyses	83
2.2.2.1. Questionnaire Analysis	83
2.2.2.2. Teacher Interview Analysis	98
2.2.2.3. Test Analysis	102
2.2.3. General Discussion of Findings	109
2.2.4. Recommendations	111
2.2.5. Conclusion	113
GENERAL CONCLUSION	115
Bibliography	
Appendices	
Summary	

Key to Abbreviations and Acronyms

AGI: Artificial General Intelligence

AIGC: Artificial Intelligence Generated Content

AI: Artificial Intelligence

ASI: Artificial Super Intelligence

CALL: Computer Assisted Language Learning

CHATGPT: Chat Generative Pre-trained Transformer

DARPA: Defense Advanced Research Projects Agency

EFL: English as a Foreign Language

ENSIA: The National School of Artificial Intelligence

HEI: Higher Education Institutions

IBM: International Business Machines Corporation

ITS: Intelligent Tutoring System

ML: Machine Learning

NLP: Natural Language Processing

SNARC: Stochastic Neural Analog Reinforcement Computer

SWOT: Strengths, Weaknesses, Opportunities and Threats

TFX: Tensor Flow Extended

VPN: Virtual Private Network

List of Tables

Table 1.1.1.ChatGPT in Higher Education.....	49
Table 2.2.1.Students Gender.....	83
Table 2.2.2.Students Age.....	84
Table 2.2.3.Students Specialty	85
Table 2.2.4.The Use of ChatGPT Tool.....	86
Table 2.2.5.Use of ChatGPT.....	87
Table 2.2.6.Benefits of ChatGPT	88
Table 2.2.7.Improve Writing Skill.....	89
Table 2.2.8.Improve Writing Skill.....	90
Table 2.2.9.Attitudes Towards ChatGPT	91
Table 2.2.10.Attitudes Towards ChatGPT	91
Table 2.2.11.Recommend ChatGPT for Writing Dissertation	97
Table 2.2.12.Teachers Experience in Teaching.....	98
Table 2.2.13.Impact of AI on the Role of Traditional Teachers in the Classroom.....	99
Table 2.2.14.ChatGPT Scaffold EFL Students Writing Skills	100
Table 2.2.15.Awareness About ChatGPT Paid Version	101
Table 2.2.16.Over-reliance on ChatGPT	102
Table 2.2.17.Comparison of Text n°1 and n°2.....	103
Table 2.2.18.Students n°01 Writing Comparison.....	104
Table 2.2.19.Comparison of Text n°1 and n°2.....	106
Table 2.2.20.Student n°02 Writing Comparison	107

List of Figures

Figure 1.1.1. Types of Artificial Intelligence Based on Capabilities and Functionalities	25
Figure 1.1.2. Types of Artificial Intelligence Based on Capabilities.....	25
Figure 1.1.3. AI tools in Different Sectors	29
Figure 1.1.4. Teacher-student Perception and the Quality of Students Learning Outcomes	37
Figure 1.2.1. ChatGPT Home Screen	45
Figure 1.2.2. Possible uses of ChatGPT in the Research Process.....	52
Figure 1.2.3. Guidelines for Using ChatGPT with Academic Honesty.....	57
Figure 1.2.4. How to Create an Account in ChatGPT	64
Figure 1.2.1. Students Gender	84
Figure 2.2.2. Students Age	85
Figure 2.2.3. Students Specialty	86
Figure 2.2.4. Use of ChatGPT Tool.....	87
Figure 2.2.5. Benifits of ChatGPT	88
Figure 2.2.6. Improve Writing Skill	88
Figure 2.2.7. ChatGPT Usefulness for Educational for Purpose	92
Figure 2.2.8. Manage Academic Tasks Using ChatGPT.....	93
Figure 2.2.9. Limitations of Using ChatGPT.....	94
Figure 2.2.10. Using ChatGPT in Writing Tasks	94
Figure 2.2.11. The Uses of ChatGPT.....	95
Figure 2.2.12. ChatGPT Helpful Tool	96
Figure 2.2.13. Uses of ChatGPT	96
Figure 2.2.14. Recommend ChatGPT for Writing Dissertation	97
Figure 2.2.15. Rating ChatGPT as a Writing Assistant	98
Figure 2.2.16. Teacher Experience in Teaching	99

General Introduction

There is no doubt that writing is still counted as most useful tool when it comes to saving human data, culture and achievements. This efficient skill has verified its usefulness and importance, yet no person has anticipated that it will come a day where writing will become an electronic process.

The use of AI in education is on the rise as more and more AI-based platforms and integrated solutions emerge to assist and enhance the learning experience.

This latter has evolved tools such as (ChatGPT) that becomes famous in the whole world since it open the chance for even ordinary man to create an amazing writing portions, with excessive excellent.

ChatGPT as an AI writing device pattern that has tested its validity. It can help users with various writing tasks such as generating ideas, improving grammar and style, and brainstorming. Essentially, ChatGPT acts as a versatile writing companion, offering support and suggestions to enhance the writing process.

Teacher acceptance of AI-powered tools like ChatGPT can lead to the development of effective teaching methodologies and enhancing learning experience although the shifting from traditional practice To AI technology ChatGPT may lead to real problems like plagiarism and the missuses of appropriate grammar and syntax and producing lazy thinkers .This study gives insight to both teachers and learners on how they can embrace ChatGPT as an AI technology in the classroom, and how students can improve their writings skill by using ChatGPT.

The purpose of this study is investigating EFL teachers attitude toward the use of ChatGPT to assist students writing production”. The main aim of our research is to investigate whether ChatGPT has an impact on students writing production and how these kinds of tools would enhance student’s ability to improve their writing skill and whether English teachers use or recommend it to their students. This study comes in timely to underpin the challenges of AI writing tools in the field of writing. Thus, academic institutions need to seriously consider playing a role in developing students’ awareness concerning the use of artificial intelligence in writing.

Learning a foreign language successfully need the four skills which are listening-speaking-reading and writing, all this skills have relevant importance in each skill complete the other one. Listening and speaking used in oral communication, reading and writing in the written ones. Moreover, ChatGPT plays a big role in the learning process and writing a well piece of writing, however, we can see that students struggle in producing a good piece of writing so they intend to plagiarize and become overly dependent on ChatGPT to generate original ideas and composing entire pieces of writing

The present study attempts to answer the following questions:

- ❖ Are EFL teachers aware of ChatGPT as new trend in artificial intelligence?
- ❖ What are teachers attitudes towards students using ChatGPT?
- ❖ What would be potential challenges of using ChatGPT?

To answer the research questions, the following hypotheses are advocated:

- ❖ EFL teachers are aware of ChatGPT as new trend that will improve students their writing skill, and boost their confidence in providing a wide range of vocabulary and grammatical structures.
- ❖ EFL teachers believe that ChatGPT is an effective and a useful AI generated educational tool.
- ❖ The use of academic tool will affect students writing skill and produce lazy thinker.

The present study is carried out to investigate the use of ChatGPT and its impact on writing skill. The data for this study has been collected from a sample of English teachers and master two students at the University of Ibn Khaldoun of Tiaret. This research based on a descriptive method where both quantitative and qualitative methods were used in the form of a questionnaire and interview and test. The questionnaire was administered to 58 students to check their knowledge about ChatGPT and their attitudes toward it as a tool of effective writing production. The interview was administered to 10 teachers of English in order to evaluate their knowing about ChatGPT if they consider it as tool and how much it could improve their learners' writing skill.

Our research is divided into two main chapters. The first and second chapters are devoted to the theoretical part while the third one is devoted to the practical part. The first chapter deals with artificial intelligence and ChatGPT definition

And its challenges and implementation. The second one is about AI technology ChatGPT in Algeria and its historical setting, and description of the research design and methodology and more importantly, the process of data analysis and interpretation.

I. CHAPTER ONE: Artificial Intelligence and ChatGPT 17

SECTION ONE: The Notion of Artificial Intelligence 18

1.1.1. Introduction 18

1.1.2. The Notion of Artificial Intelligence (AI) 18

1.1.3. The Emergence of Artificial Intelligence (AI) 20

1.1.4. The History of Development of Artificial Intelligence 22

1.1.5. Artificial Intelligence Strengths and Weaknesses 24

1.1.6. Types of Artificial Intelligence 24

1.1.7. Artificial Intelligence Tools 28

1.1.8. Possibilities of Artificial Intelligence 31

1.1.9. Conclusion..... 39

1.1.1. Introduction

Imagine a world where machines communicate fluently with humans, diagnose illnesses, drive cars effortlessly, moreover invading classrooms and crafting the learning experience with unseen mentoring. This isn't a scene any fiction movie it's the present reality made by artificial intelligence (AI) which is rapidly revolutionizing different domains.

In the first section the notion of Artificial intelligence is superficially explained along with its emergence and history of developments including its types, tools, possibilities, advantages and disadvantages while focusing on AI in the field of education and in EFL context highlighting teacher attitudes towards its implementation In EFL context.

1.1.2. The Notion of Artificial Intelligence (AI)

According to Stanford University's Human-Centered Artificial Intelligence, intelligence might be defined as the ability to learn and perform suitable techniques to solve problems and achieve goals.

Russell and Norvig (2009) stated, we call ourselves Homo sapiens—man the wise—because our intelligence is so important to us. For thousands of years, we have tried to understand how we think; that is, how a mere handful of matter can perceive, understand, predict, and manipulate a world far larger and more complicated than itself (p. 1).

AI is defined as “a science and a set of computational technologies that are inspired by—but typically operate quite differently from—the ways people use their nervous systems and bodies to sense, learn, reason, and take action” (Stone et al., 2016, p. 10). Moreover, Bostrom (2020) defines AI as “any intellect that greatly outperforms the best human brains in practically every field” (p. 1). From a similar standpoint, Kurzweil defines AI as the art of

creating machines that perform functions that require intelligence when performed by people (as cited in Tegmark, 2017). Tegmark (2017) also stated that AI involves getting machines to do tasks that would require intelligence if done by humans.

Andrew Ng has famously defined AI as the new electricity (Ng, 2017). John McCarthy, one of the pioneers of AI, described it as the science and engineering of making intelligent machines (as cited in Russell & Norvig, 2009). In their influential textbook, Russell and Norvig define AI as the study of agents that receive percepts from the environment and perform actions (2009).

Contrary to these views, Elon Musk, the entrepreneur and CEO of Tesla and SpaceX, defines AI as a fundamental risk to the existence of human civilization (Musk, 2017). Marvin Lee Minsky defined AI as the science of making machines do things that would require intelligence if done by men (Minsky, 1969). Elaine Rich and Kevin Knight point out that AI is the study of how to make computers do things at which, at the moment, people are better (Rich & Knight, 1991).

Stanford University noted that AI is a term coined by emeritus Stanford Professor John McCarthy in 1955, was defined by him as ‘the science and engineering of making intelligent machines (Stanford University, 2021). While much research has focused on programming machines to behave in clever ways, such as playing chess, today's emphasis is on machines that can learn, somewhat like human beings do (Stanford University, 2021).

Avron Barr and Edward Feigenbaum stated, Physicists ask what kind of place this universe is and seek to characterize its behavior systematically. Biologists ask what it means for a physical system to be living. We in AI wonder what kind of information-processing system can ask such questions (Barr & Feigenbaum, 1981).

Chukekar (2021) defines AI as the science and engineering of creating intelligent devices, particularly computer programs. It's analogous to the task of utilizing computers to study human intellect, but AI doesn't have to be limited to physiologically observable ways. AI refers to the intelligence shown by robots or machines. It is a part of computer science. It is now becoming an important and useful field in computer science as it has enhanced human life in many ways (Chukekar, 2021).

The International Business Machines Corporation (IBM) defines AI as leveraging computers and machines to mimic the problem-solving and decision-making capabilities of the human mind (IBM, 2021). Elaine Rich described AI as the study of techniques for solving exponentially hard problems in polynomial time by exploiting knowledge about the problem domain (Rich, 1983). Finally, Kai-Fu Lee believes that AI is the study of emulating human cognition and intelligence (Lee, 2018).

In summary, while definitions of AI vary, they converge on the idea of machines performing tasks that typically require human intelligence, whether through mimicking human cognitive functions or by leveraging computational power to achieve superior problem-solving abilities

1.1.3. The Emergence of Artificial Intelligence (AI)

The field of Artificial Intelligence (AI) was officially born and christened at a workshop organized by John McCarthy in 1956 at the Dartmouth Summer Research Project on Artificial Intelligence. The goal was to investigate ways in which machines could be made to simulate aspects of intelligence—the essential idea that has continued to drive the field forward ever since. McCarthy is credited with the first use of the term “artificial intelligence” in the proposal he co-authored for the workshop with Marvin Minsky, Nathaniel Rochester, and

Claude Shannon. Many of the attendees, including Arthur Samuel, Oliver Selfridge, Ray Solomonoff, Allen Newell, and Herbert Simon, soon led significant projects under the banner of AI.

Although the Dartmouth workshop united the field and fostered a committed research community, many of the technical concepts that define AI predate this event. For example, in the eighteenth century, Thomas Bayes developed a framework for thinking about the likelihood of events. In the 1800s, George Boole demonstrated that logical reasoning, which dates back to Aristotle, could be carried out methodically, similar to solving an equation system. As experimental sciences advanced, the discipline of statistics emerged at the turn of the 20th century, allowing for the rigorous drawing of conclusions from data (Stone et al., 2016).

By the 1950s, the idea of physically engineering a machine to execute sequences of instructions, which had captured the imagination of pioneers such as Charles Babbage, had matured and resulted in the construction of the first electronic computers. Primitive robots that could sense and act autonomously had also been built by that time. The most influential ideas underpinning computer science came from Alan Turing, who proposed a formal model of computing. Turing's classic essay, *Computing Machinery and Intelligence*, imagines the possibility of computers created for simulating intelligence and explores many of the ingredients now associated with AI, including how intelligence might be tested and how machines might automatically learn. Although Turing's ideas inspired AI, he did not have access to the computing resources needed to translate his ideas into action.

Several focal areas in the quest for AI emerged between the 1950s and the 1970s. Newell and Simon pioneered the foray into heuristic search, an efficient procedure for finding solutions in large, combinatorial spaces. They applied this idea to construct proofs of mathematical

theorems, first through their Logic Theorist program and then through the General Problem Solver. In the area of computer vision, early work in character recognition by Selfridge and colleagues laid the basis for more complex applications such as face recognition. By the late sixties, work had also begun on natural language processing. “Shakey,” a wheeled robot built at SRI International, launched the field of mobile robotics. Samuel's checkers-playing program, which improved itself through self-play, was one of the first working instances of a machine learning system. Rosenblatt's Perceptron, a computational model based on biological neurons, became the basis for the field of artificial neural networks. Feigenbaum and others advocated for building expert systems—knowledge repositories tailored for specialized domains such as chemistry and medical diagnosis (Stone et al., 2016).

1.1.4. The History of Development of Artificial Intelligence

According to IBM the idea of 'a machine that thinks' dates back to ancient Greece. But since the advent of electronic computing (and relative to some of the topics discussed in this article) important events and milestones in the evolution of artificial intelligence include the following:

- 1950: Alan Turing publishes *Computing Machinery and Intelligence*. In the paper, Turing—famous for breaking the Nazi's ENIGMA code during WWII—proposes to answer the question 'can machines think?' and introduces the Turing Test to determine if a computer can demonstrate the same intelligence (or the results of the same intelligence) as a human. The value of the Turing test has been debated ever since.

- 1956: John McCarthy coins the term 'artificial intelligence' at the first-ever AI conference at Dartmouth College. (McCarthy would go on to invent the Lisp language.) Later that year, Allen Newell, J.C. Shaw, and Herbert Simon create the Logic Theorist, the first-ever running AI software program.

- 1967: Frank Rosenblatt builds the Mark 1 Perceptron, the first computer based on a neural network that 'learned' through trial and error. Just a year later, Marvin Minsky and Seymour Papert publish a book titled Perceptrons, which becomes both the landmark work on neural networks and, at least for a while, an argument against future neural network research projects.

- 1980s: Neural networks which use a backpropagation algorithm to train itself become widely used in AI applications.

- 1997: IBM's Deep Blue beats then world chess champion Garry Kasparov, in a chess match (and rematch).

- 2011: IBM Watson beats champions Ken Jennings and Brad Rutter at Jeopardy!

- 2015: Baidu's Minwa supercomputer uses a special kind of deep neural network called a convolutional neural network to identify and categorize images with a higher rate of accuracy than the average human.

- 2016: DeepMind's AlphaGo program, powered by a deep neural network, beats Lee Sodol, the world champion Go player, in a five-game match. The victory is significant given the huge number of possible moves as the game progresses (over 14.5 trillion after just four moves!). Later, Google purchased DeepMind for a reported USD 400 million.

- 2023: A rise in large language models, or LLMs, such as ChatGPT, create an enormous change in performance of AI and its potential to drive enterprise value. With these new generative AI practices, deep-learning models can be pre-trained on vast amounts of raw, unlabeled data.

1.1.5. Artificial Intelligence Strengths and Weaknesses

AI excels in processing vast amounts of data quickly and identifying complex patterns, making it valuable for tasks like data analysis and pattern recognition (Russell & Norvig, 2010). Furthermore, AI systems can operate continuously, providing 24/7 availability and reliability in performing repetitive tasks without fatigue (Poole & Mackworth, 2010). AI is also proficient in predictive analytics, enabling organizations to make data-driven decisions (Davenport & Harris, 2007). Additionally, AI-powered recommendation systems enable personalized user experiences in areas such as content recommendations, product suggestions, and targeted advertising (Hastie et al., 2009).

However, AI systems may lack a deep understanding of context and struggle with common-sense reasoning, leading to errors in complex and ambiguous situations (Marcus, 2018).

Moreover, AI systems can inherit biases present in training data, resulting in biased outcomes and ethical concerns (Diakopoulos, 2016). Implementing AI systems can also involve significant initial costs, and some applications may require substantial computing resources (Brynjolfsson & McAfee, 2017).

Additionally, some AI systems, especially deep neural networks, can be vulnerable to adversarial attacks, where small, carefully crafted changes to input data lead to incorrect outputs (Szegedy et al., 2013). AI systems often lack the creativity and intuition inherent in human decision-making processes, limiting their ability to address novel and unconventional problems (Marcus, 2018). Lastly, the automation enabled by AI may lead to job displacement in certain industries, raising concerns about its economic impact

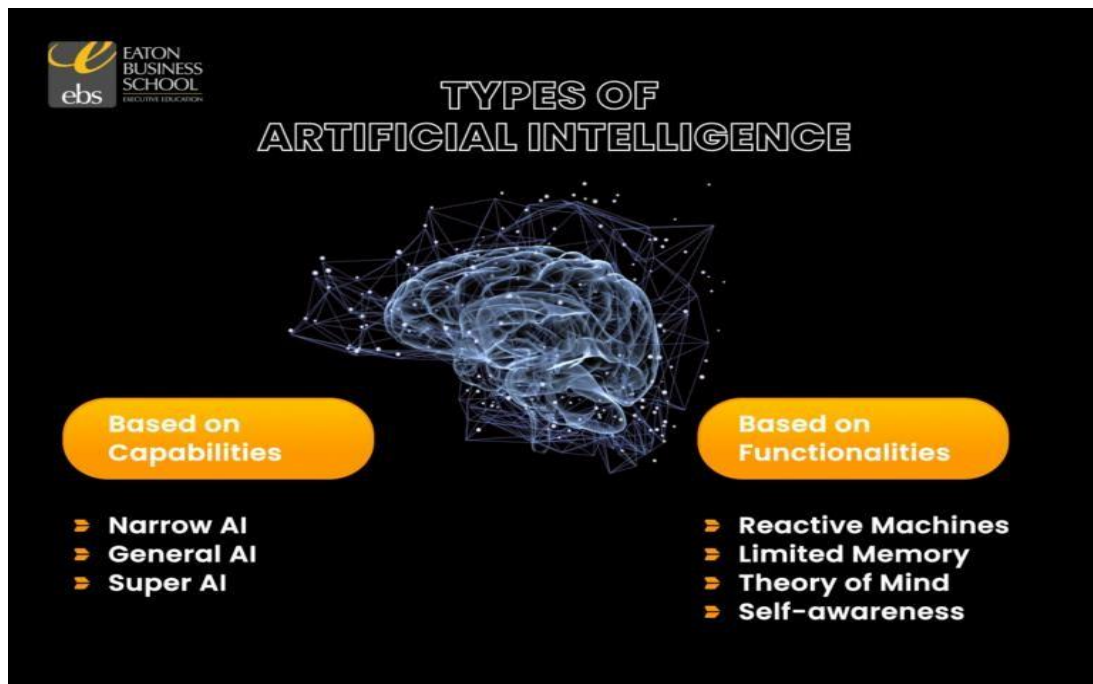
1.1.6.Types of Artificial Intelligence

According to Eaton Business School Artificial intelligence is divided into two major categories based on – capabilities and functionalities

Figure 1.1.1.

Types of Artificial Intelligence Based on Capabilities and Functionalities

Source : <https://ebsedu.org/blog/7-types-of-artificial-intelligence> (p1)

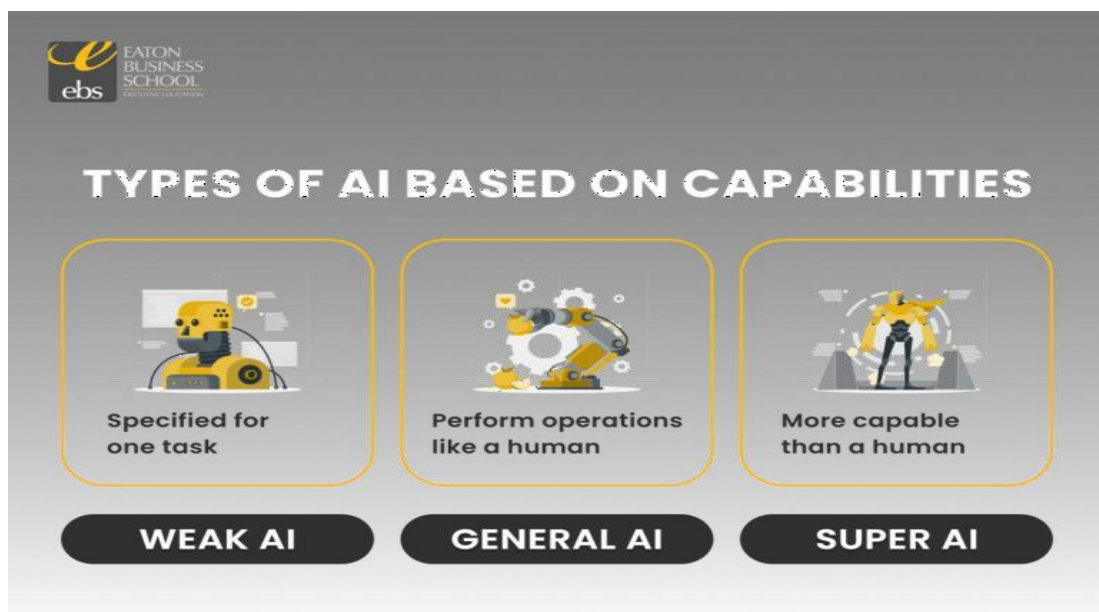


Based on capabilities: There are 3 types of Artificial Intelligence based on capabilities: Narrow AI, General AI and Super AI

Figure 1.1.2.

Types of Artificial Intelligence

Source : <https://ebsedu.org/blog/7-types-of-artificial-intelligence>(p1)



1.1.6.1. Artificial Intelligence Based on Capabilities

- **Narrow Artificial Intelligence**

Narrow AI or Weak AI is a type of Artificial Intelligence that focuses on one specific task or area. It is designed to perform a specific set of tasks and it has the ability to learn from data. It can be used to automate various day-to-day activities, help in decision-making, maximize efficiency, and cut down costs

- **General Artificial Intelligence**

General AI or Strong AI is a type of AI where machines are designed to think, reason, and act like a human. It has the ability to learn, reason, and make decisions in a wide variety of contexts. Still, in its nascent stages, the concept of General AI has not yet been achieved by researchers. General AI can be used to perform multiple tasks such as NLP (natural language processing), image recognition, robotics, and many more.

- **Super Artificial Intelligence**

Super AI or Artificial Superintelligence (ASI) would be capable of outperforming humans. ASI machines are self-aware and expected to surpass human intelligence. They can perform any task better than humans. The concept of Super AI is still hypothetical. Artificial superintelligence is considered the most advanced and powerful type of AI with characteristics like problem-solving, thinking, decision-making, etc. ASI can also interpret human emotions and experiences.

1.1.6.2. Artificial Intelligence Based on Functionalities

- **Reactive Machines**

Reactive machines are the oldest and the most basic forms of AI systems that are purely reactive. They have limited capability and do not have functionality based on memory. In other words, Reactive machines do not possess the ability to learn from previous experiences and respond to actions. These types of machines emulate the human minds

ability to respond to different kinds of inputs. Reactive machines could only be used for automatically responding to a limited set or combination of inputs.

- **Limited Memory**

Limited memory machines possess the capabilities of reactive machines and are also capable of learning from past experiences and using that data to make decisions. Almost all present-day AI systems such as chatbots, self-driving cars, virtual assistants fall under this category of AI.

- **Theory of Mind**

Theory of mind is the next advanced level in AI systems that scientists are trying to develop. It exists only as a hypothetical concept now. Theory of mind AI machines plays a crucial role in psychology as they will focus on emotional intelligence. This type of AI needs a clear understanding of human feelings and behavior within an environment.

- **Self-awareness**

Self-awareness is the final and most advanced stage of AI, which is currently a hypothetical concept. This will be possible when machines develop self-awareness and have human-like consciousness. Self-aware AI machines will have the same needs, emotions, and desires as humans. Developing Self-aware AI machines might take several decades or even centuries. Self-awareness can be considered as an extension of the theory of mind concept.

1.1.6.3.Sub Fields of artificial Intelligence

- **Machine Learning**

Stanford University Human-centered artificial Intelligence (2020) defined machine learning as Machine Learning (ML) is the part of AI studying how computer agents can improve their perception, knowledge, thinking, or actions based on experience or data. For

this, ML draws from computer science, statistics, psychology, neuroscience, economics and control theory.

- **Deep Learning**

Stanford University Human-centered artificial Intelligence (2020) defined as the use of large multi-layer (artificial) neural networks that compute with continuous (real number) representations, a little like the hierarchically organized neurons in human brains. It is currently the most successful ML approach, usable for all types of ML, with better generalization from small data and better scaling to big data and compute budgets.

On that note IBM stated that deep learning and machine learning tend to be used interchangeably, it's worth noting the nuances between the two. As mentioned above, both deep learning and machine learning are sub-fields of artificial intelligence, and deep learning is actually a sub-field of machine learning. More over IBM noted that generative AI refers to deep-learning models that can take raw data—say, all of Wikipedia or the collected works of Rembrandt—and “learn” to generate statistically probable outputs when prompted. At a high level, generative models encode a simplified representation of their training data and draw from it to create a new work that's similar, but not identical, to the original data.

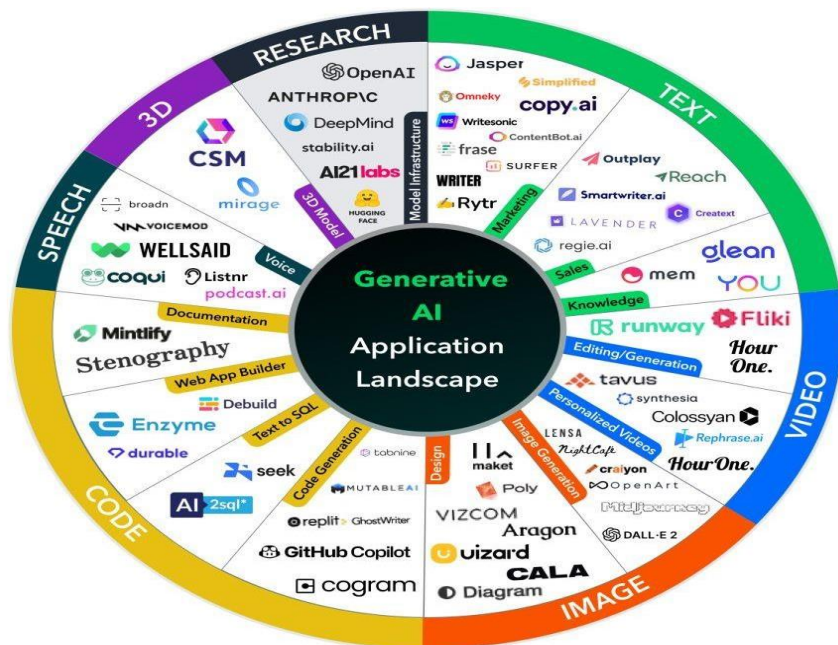
1.1.7. Artificial Intelligence tools

According to Rapidops a digital product development company there are 25 Generative AI Tools: Disrupting every prominent sector.

Figure 1.1.3.

AI tools in Different Sectors

Source: <https://www.rapidops.com/blog/generative-ai-tools/> (p2)



rapidops

A) Model infrastructure

It refers to the tools and resources that support machine learning model development, deployment, and management. Data Robot commercial machine-learning platform for model building, deployment, and automation.

- **MLflow**

Open-source platform managing the entire machine learning lifecycle, from data preparation to deployment.

- **Tensor Flow Extended (TFX)**

Open-source platform for building end-to-end machine-learning pipelines with TensorFlow.

- **Hugging Face Transformers**

Open-source library for state-of-the-art natural language processing (NLP) models and fine-tuning.

- **OpenAI**

Offers the OpenAI API for language models and Codex for generating human-like code each tool serves specific needs, with considerations like cost and compatibility.

B) In Content Generation

- **GPT-3**

Developed by OpenAI, a powerful language model for generating diverse content.

C) For Writing

- **Copy.ai, Jasper.ai, Writesonic, ContentBot**

AI-powered writing tools creating content for various purposes

D) For Design

- **DALL-E 2**

An advanced AI model generating high-quality images based on text descriptions.

E) Photo Editing

- **Lensa, Midjourney, Craiyon, and NightCafe**

AI-powered tools for photo editing, design, and image creation.

F) Video Creation/Editing

- **Synthesia, Lumen5, Magisto, D-ID, Descript**

AI-powered platforms for creating and editing videos with synthetic media technology.

G) For Coding

- **Replit Ghostwriter, TabNine, DeepCode, Copilot, and Mutable AI**

AI-powered tools aiding programmers in code completion, review, and generation.

According to Rapidops these tools leverage AI to enhance productivity and efficiency in their respective domains. However, it's crucial to note their role as supplements to human creativity and skills.

1.1.8. Possibilities of Artificial Intelligence

1.1.8.1. Artificial Intelligence in Education

In the 1960s, the US Department of Defense took an interest in artificial intelligence and began training computers to mimic basic human reasoning. The early work of the Defense Advanced Research Projects Agency (DARPA) marked the beginning of automation and systems that assisted human abilities, such as expert systems and smart search systems (Chassignol et al., 2018). AI has progressed rapidly, not only in fiction with the portrayal of robots exhibiting human-like characteristics but also in providing many specific benefits

across various industries. It encompasses anything from Google's search algorithms to self-driving cars and autonomous weapons (Tegmark, 2015).

Today, AI technology is revolutionizing schools and classrooms, making jobs much easier for educators (Lynch, 2018; Wogu et al., 2019). Over the years, there has been a slow but steady revolution in education, evolving from using the blackboard to the whiteboard and now to the use of projector screens in most educational institutions. Although there has not been a significant advancement in the use of AI in education from the 20th century to date, research has shown steady improvement in AI in education through the use of different virtual assisted applications (Carlson et al., 2018).

1.1.8.2.Types of Artificial Intelligence in Education

Tahiru (2021) stated that there are many types of (AI) in education:

- **Automation of Administrative Task**

AI can be applied in the processing of repetitive administrative tasks that will save educators or lecturers from spending long hours in grading and assessing exams and homework respectively (Johnson, 2019). With regards to multiple-choice exams, technology exists that can grade students. However, when it comes to essay-type exams, serious challenges arise as to whether the technology could be employed to award grades. (Johnson, 2019). Software developers are still researching and coming out with ways of grading written answers and essay type questions (Johnson, 2019). Similarly, AI is been used for processing the admission of new students' into educational institutions (Johnson, 2019).

- **Smart Content**

Another AI application in Education is Smart Content. Smart content is an AI technology, which according to Faggella (2019) “attempts to condense textbooks into a useful tool for exam preparation such as true or false”. Some examples of some well-known smart content Apps are Cram101 and JustTheFacts101 (Faggella, 2019). According to Johnson, (2019), smart content can also include virtual content like video conferencing and video lectures. Cram101 uses AI to make textbook contents more coherent, and it is easy to navigate by introducing chapter summaries, flashcards, and practical tests (Faggella, 2019; Johnson, 2019). There is also a Netex learning AI system that enables the creation of electronic curriculum and educative information (Johnson, 2019). Netex, according to Johnson (2019), “includes online assistance programs, audios, and illustrative videos”.

- **Intelligent Tutoring System (ITS)**

According to Faggella (2019), it is a human guide and facilitator for use in a variety of educational environments. This area of research has been the goal of AI researchers since the 1970s and 1980s (Faggella, 2019). The idea of self-tutoring was developed by an educational psychologist named Benjamin Bloom in the 1970s. ITS has gained much progress in the research field, and for example, Carnegie Learning’s “Mike” Software applies cognitive science and AI technologies to create a personalized tutoring system for students (Faggella, 2019; Singh et al., 2018)

1.1.8.3. Artificial Intelligence in EFL Context

Current AI technologies are able to perform some of the teachers tasks in language classrooms and students can learn without the presence of a teacher. These could serve as indications that teachers’ roles are being disrupted. This does not mean, however, that teachers would be replaced by AI in the near future, as suggested by some experts (e.g., Edwards & Cheok, 2018; Von Radowitz, 2017). AI could help the work of a teacher, but

the teacher will still be a key element in a language classroom, a determining factor in helping students to become successful learners (Sumakul et al., n.d.).

Regarding EFL classrooms, recent developments in AI technology indicate that EFL teachers' roles are also being disrupted. There are technologies that could perform tasks usually done by teachers. For example, there are AI-powered applications, or apps, that could provide grammatical feedback on students' writing without the help of a teacher. The feedback is accompanied with thorough but brief explanations and with examples; and this could be one way for learners to learn grammar in use, in context, and in a personalised manner. In addition to grammar, similar apps are also available for other EFL areas, such as speaking, writing, and vocabulary learning. Moreover, these apps are also available in mobile device versions, which makes the learning more accessible and convenient for the learners (Stockwell, 2016) and provide authentic learning situations and in self-regulation modes (Sumakul et al., n.d.) on that note in language teaching and learning, AI is part of the evolution of the use of computer technology in the language classroom. These practices started around 1960s and gave birth to Computer Assisted Language Learning (CALL) (Sumakul et al., n.d.)

1.1.8.4. The Advantages and Disadvantages of Artificial Intelligence in EFL Context

Artificial Intelligence (AI) represents a symbol of contemporary technological advancement, providing unparalleled possibilities for creativity and productivity in various sectors.

Nevertheless, this potent technology comes with its own set of disadvantages. AI also brings about notable obstacles and hurdles that need to be addressed.

1.1.8.4.1. Advantages of Artificial Intelligence in EFL Context

(Sumakul et al., n.d.) Stated that researchers and teachers, however, are somewhat ambivalent about the use of AI technologies in the language classroom. As AI brought the promise of personalised learning, many studies extol the benefits of AI in language learning. For example, AI technologies have been found to be able to check students' grammar and provide sophisticated feedback (Bailin, 1987), process students' language input (Holland et al., 1993), and give more effective grammar feedback (Nagata, 1996). Early AI studies were mostly about grammar, but along with the enhancements of computer technologies, more recent studies show that AI has more to offer. For instance, the applications of AI in language classrooms have been found to have the following benefits for the learners: providing meaningful communications (Lu, 2018), aiding collaborative roles (Tafazoli et al., 2019), improving speaking performance (El Shazly, 2020), increasing motivation (Yin et al., 2021), and enhancing reading comprehension (Bailey et al., 2021).

1.1.8.4.2. Disadvantages of Artificial Intelligence in EFL Context

(Sumakul et al. n.d.) Argued that despite these positive findings, a number of studies came up with contradictory results. In its early development, the sanguine views of AI in language studies were considered misunderstood (Last, 1989) and exaggerating (O'Brien, 1993). Moreover, reflecting on what AI could do in the 1990s, Salaberry (1996) even doubted whether AI could be beneficial to language learning and teaching. Steenbergen-Hu and Cooper (2014) suggest that AI has only a moderate impact on students learning, and more recent studies conclude that AI is not a legitimate learning tool (Gallacher et al., 2018) and in several occasions, the language produced by AI is non-natural and unsuitable (Pace&Sumakul, 2021) and decontextualized (Wilson et al., 2021). Regarding

the issues of classroom application of AI, the problems may lie in the limited pedagogical design of the AI apps (Rieland, 2017; Zawacki-Richter, 2019) or teachers limited pedagogical knowledge (Sumakul, 2019). In their systematic literature review to journal articles on intelligent assistants and language learning published in the period of 2010-2020, Kukulska-Hulme and Lee (2020) point out that although the technology has been found to have benefits to offer to language learners, there is little known about the roles of the teachers in utilising it in the classrooms. How the task should be designed or how the teacher should guide the students when working with the app is yet to be elaborated. These issues should also apply to other types of AI technologies. In spite of the debates, AI is developing and will continue to develop in an exponential speed. AI offers the possibilities of “learning that is more personalised, flexible, inclusive, and engaging” (Luckin et al., 2016, p. 11).

1.1.8.5. Artificial Intelligence Effect on Students Writing Skill

Writing is the most difficult and complex of the four language skills (Chang et al., 2021). Within the context of second/foreign language learning, writing is even more challenging because it necessitates other lower-level language skills such as vocabulary and grammar (Schoonen et al., 2009). Scholars indicate that when writing in a foreign language, students often struggle to produce content at a respectable level (Li, 2021). Consequently, many researchers encourage the use of digital AI-based tools to address these challenges (Chang et al., 2021).

AI can significantly boost engagement, motivation, and the learning environment for the writing process (Kangasharju et al., 2022). These tools assist writers by providing plagiarism detection, grammar checking, and rich educational practices (Zawacki-Richter et al., 2019), in

a flexible and time-saving manner (Koltovskaia, 2020). According to Nazari et al. (2021), AI writing tools offer “affective provisions, motivational features, in-depth analytic learning, plagiarism detection, and social interaction platforms that may enhance writing skills, engagement, and non-cognitive traits” (p. 15).

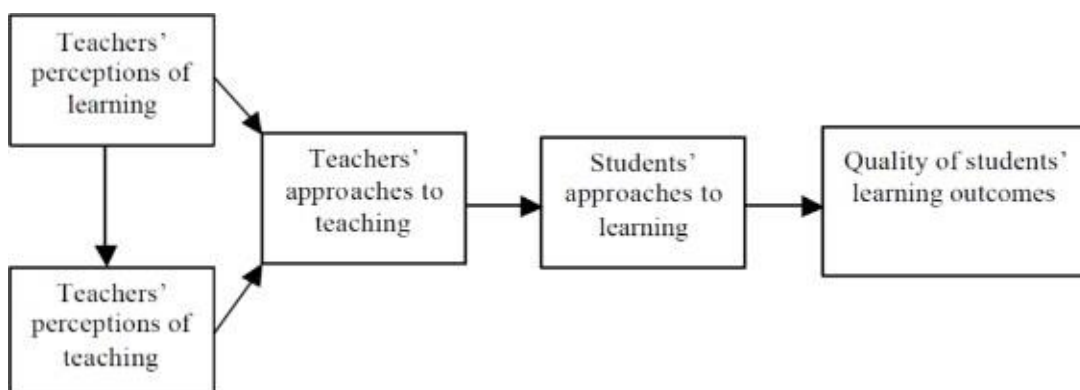
Similarly, Walker et al. (2007) highlight AI's ability to independently generate texts or assist learners in writing and developing their writing compositions. Aliouche and Mezghich (2022) further emphasize the potential of AI tools to support and improve the writing process.

1.1.8.6. Teachers Attitudes Towards Artificial Intelligence in EFL Context

Teachers’ perception is related to how teachers view a certain concept or practice in their teaching and learning processes, Cope & Ward, (2002) came up with a diagram showing why teachers’ perception matters (Sumakul et al.,2022) (pp. 232-256)

Figure I.1.4

Teacher-student Perception and the Quality of Students Learning Outcomes
Source: (Cope & Ward, 2002, p. 68)



from the diagram it could be seen that teachers' perceptions of learning and teaching would affect how they approach teaching and the students to learning. All of these would eventually influence the students' learning quality. Teachers' perception might not have a direct impact on students' learning, but it is a significant element of the success of students' learning (Sumakul et al.,2022)

There have been a number of studies that looked at teachers' perceptions towards the use of technology in language classrooms, but research that specifically explores EFL teachers' perceptions of AI is still lacking. Therefore, since AI can be considered as a type of technology, to see it also from the framework of technology in general should also be relevant. To start with, many found that teachers had positive perceptions of the use of technology in language classrooms (e.g., Aljohani, 2021; Alzubi, 2019; Djiwandono, 2019; Huang et al., 2019; Muslem et al., 2018; Owen et al., 2018). Along with these promising findings, however, some studies also highlighted several issues needed to be considered. For example, Arnold and Ducate (2015) found that language teachers were still not able to embrace the pedagogical advantage offered by technology.

Susanto and Yosephine (2019) also found that the excessive amount of time and energy required might prevent teachers from taking the full advantage offered by technology and suggested that teachers need to focus on the pedagogical goal and be creative regarding the use of technology in their classrooms. Therefore, Ding et al. (2019) suggested that teachers need to be assisted so they could see the potential of technology to enhance their classrooms. Furthermore, when exploring teachers' perceptions of the use of automated writing evaluation technology in students' writing, Wilson et al. (2021) found that although it would offer assistance to teachers, it may also create new instructional challenges. In short, despite the positive perceptions, there

are also some aspects worth considering regarding the use of technology in language classrooms. Similar relevant aspects would also be looked at in this paper, in the context of the use of AI technology in EFL classrooms (Sumakul et al.,2022)

1.1.9. Conclusion

In conclusion this section of chapter one presents a theoretical background on the notion of AI, it presents vast information concerning its history of developments, emergence, famous works moreover state its strengths, weakness advantages and disadvantages in addition to its possibilities while aiming our focus its integration on the field of education and EFL context spotlighting teachers attitudes towards its integration in EFL context, the next section will provide an overview of ChatGPT the new trend of education.

Section Two: ChatGPT the New Trend in Education	40
1.2.1. Introduction	41
1.2.2. OpenAI Background.	41
1.2.3. Definition of ChatGPT	43
1.2.4. Advantages of Using ChatGpt in Academic Settings	48
1.2.5. Challenges and Ethical Implication.....	52
1.2.6. Adapting ChatGPT as Writing Assistant	56
1.2.7. ChatGPT Impact on Student Writing.....	60
1.2.8. ChatGPT Implication	63
1.2.9. Conclusion.....	65

1.2.1 Introduction

The current chapter provides a theoretical overview on the concepts of ChatGPT and open AI introducing its definitions, origin of the concept, advantages of using ChatGPT in academic settings, adapting ChatGPT as writing assistant, as well as, ChatGPT impact on student writing. It also tackles the implication of this tool and how u can use it. This chapter tends also to investigate EFL teachers attitude toward the use of ChatGPT to assist student writing production .finally it seeks discuss the challenges for meaningful use of ChatGPT in the digital era.

ChatGPT is a large-scale generative Language model advanced by way of OpenAI (Lund & Wang, 2023; Mhlanga, 2023; Pavlik, 2023). The GPT stands for Generative Pre-trained Transformer, which refers to its architecture. ChatGPT has a vast vocabulary and can generate human-like text on various subjects, making it an effective tool for language mastering and education (Cotton et al., 2023; Shahriar&Hayawi, 2023; Shen et al., 2023). Its improvement builds at the success of preceding models together with GPT-1, GPT-2, and GPT-3, which OpenAI additionally create (T. Wu et al., 2023).

1.2.2. Open AI Background

Open AI is a synthetic intelligence (AI) studies business enterprise based in December 2015, studying synthetic intelligence with the declared intention of developing "safe and beneficial" synthetic widespread intelligence, which it defines as "exceedingly self-reliant structures that outperform humans in the maximum economically precious work(Adeshola & Adepoju, 2023) . So, Open AI is a research laboratory for artificial intelligence that was founded in San Francisco to promote and create "friendly AI" for the benefit of humans.

When the company became first released, outstanding figures inside the era industry like Elon Musk, Reid Hoffman, Peter Thiel, Greg Brockman, and Sam Altman were among the ones answerable for launching it. While Altman is the Chief Executive Officer of Open AI now, Brockman acts as the business enterprise's President. It is stated within the mission assertion for Open AI that the organization's closing purpose is to create "artificial preferred intelligence." (Mosaiyebzadeh et al., 2023)

Artificial intelligence has the potential to seriously enhance many distinct industries, and the founders of Open AI agree with that it ought to be advanced properly and beneficially (Arrieta et al., 2020). OpenAI stands as a leading force within the realm of artificial intelligence studies, comprising both a for-profit arm, OpenAI LP, and a non-earnings entity, OpenAI Inc.

At the core of their mission is the pursuit of artificial general intelligence (AGI) and the commitment to ensuring its safe and beneficial deployment for the collective well-being of humanity. The organization envisions AGI as a force for positive transformation, and it actively works on research and development to address its challenges and opportunities. Open AI's dedication to transparency and responsible AI practices is evident in its efforts to share insights, research findings, and advancements through publications, fostering a collaborative approach in the global AI community.

Elon Musk and Sam Altman had been most of the pinnacle researchers and technologists that released OpenAI in 2015 proceeding to broaden beneficial AI which can useful resource in resolving a number of the most important troubles dealing with the planet. Making positive AI is created brazenly and transparently, with the research and generation being freely on hand to the public, is one of the major dreams of OpenAI (Lauterbach 2019, Littman et al. 2022).

This strategy aims to promote cooperation and information exchange while preventing the concentration of AI technology in the hands of a small number of strong organisations. GPT-3 (Generative Pre-trained Transformer 3), an example of OpenAI's work, is a language generation model that can produce text that resembles human speech in response to a given stimulus (Dehouche 2021, Kim et al. 2021).

OpenAI has restricted access to GPT-3 and created a set of ethical principles to govern its application. The creation of AI that can be utilised to address international issues like climate change and healthcare is another area of interest for OpenAI. For instance, to assist communities in preparing and responding (Sallam, Salim, Barakat, & Al-Tammemi, 2023), OpenAI is aiming to create machine learning algorithms that can forecast extreme weather occurrences, such as hurricanes and floods. To create AI-primarily based gear and technology which can useful resource in the extra correct and powerful analysis and treatment of diseases, OpenAI is also operating with healthcare institutions.

In general, OpenAI is dedicated to safely and ethically improving AI technology, with an emphasis on developing solutions that benefit society. Its effort is a crucial step in achieving AI's potential while lowering the risks and making sure the technology is applied for the benefit of all. One of the leading organizations of the AI spring, it has developed several large language models, advanced image generation models, and previously, open-source models. The release of Chat GPT has been credited with starting the artificial intelligence spring.(Oranga, 2023).

1.2.3. Definition of ChatGPT

ChatGPT, an artificial intelligence generated content (AIGC) model developed by OpenAI, has attracted worldwide attention for its capability of dealing with challenging language understanding and generation tasks in the form of conversation. ChatGPT is a sizable language model created by OpenAI

that makes use of machine learning methods to comprehend and produce language that is like that of humans (Shen et al. 2023, Mijwil et al. 2023).

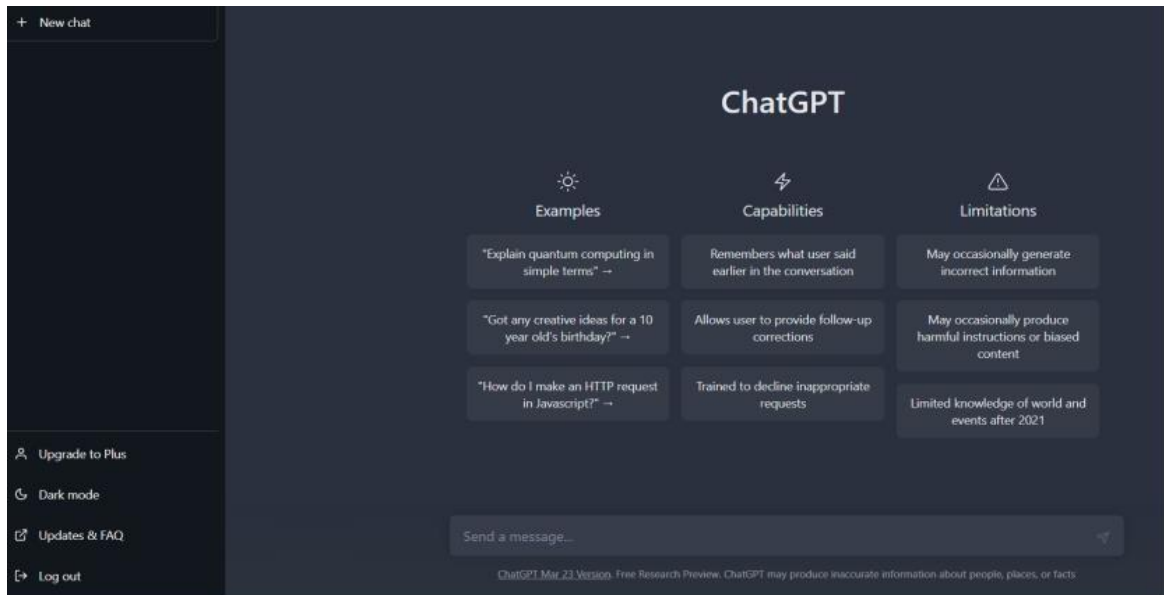
A chatbot powered by artificial intelligence, ChatGPT can converse with users on a variety of subjects, from simple small talk to intricate technical talks (Rao et al. 2023, Mhlnag 2023). The model's underlying technology is reflected in the abbreviation ChatGPT, which stands for Conversational Hierarchy-Aware Transformer-based Generative Pre-training Transformer. The ChatGPT model can produce coherent and contextually appropriate replies to user inputs since it has been pre-trained on a massive quantity of data. The capacity of ChatGPT to comprehend inputs in natural language, including slang, idioms, and colloquial terms, is one of its key features. As a result, it may be used effectively to have conversations with users about a variety of subjects, such as customer service, education, and entertainment (Elbanna & Armstrong, 2024).

ChatGPT is a type of large language model (Thorp, 2023). Large language models are a type of AI that use deep learning techniques to analyze and generate text (Shen et al., 2023). ChatGPT is a type of large language model created to generate human-like text in NLP tasks (Shen et al., 2023). It is designed to generate human-like text based on a large corpus of text data and is trained to perform various language tasks, such as answering questions, writing stories, composing code, and generating essays. The foundation of ChatGPT is GPT-3, the third model developed for NLP projects (Entrepreneur, 2023; Thorp, 2023), which was recently upgraded to GPT-4.

Figure 1.2.1:

ChatGPT home screen

Source : <https://chatgpt.com/?oai-dm=1> (p1)



I am ChatGPT, a large language model developed by OpenAI. I am designed to generate human-like responses to a wide range of natural language input, including questions, statements, and commands. I am trained on a vast amount of text data from the internet, including books, articles, and websites, using a deep learning algorithm called a transformer. As a result, I can understand and respond to a wide range of topics, including science, history, current events, and popular culture. My purpose is to provide helpful and informative responses to users, and to assist in a variety of tasks that require natural language processing. (ChatGPT, February 21, 2023).

This technology has the potential to revolutionize numerous sports in instructional settings, consisting of trying to find records, answering specific questions, enquiring approximately any topic; conducting open conversations and discussions; writing and modifying reports and essays; producing software program codes; providing tutoring by using explaining codes; supplying samples of data for databases and evaluation; and solving mathematical calculations and statistical analysis, as well as translating texts to other languages(Lo, 2023).

However, there are numerous concerns associated with the usage of ChatGPT, stemming from its AI-based nature from one hand and its use in education mainly alternatively; those consist of capability bias and discrimination because of its reliance on natural language processing; privacy concerns as search and question statistics can be stored and used for accidental functions; worries approximately job loss (substituting teachers and educational writers), the shortage of creativity and important wondering, in addition to inaccuracies and plagiarism (Atlas, 2023; D'Amico et al. 2023; Mhlanga, 2023; van Dis et al., 2023).

Chat GPT (1) is a type of GPT (Generative Pre-trained Transformer) language version that has been particularly educated to generate text in reaction to natural language inputs. It is designed to simulate humanlike communication and can be used in lots of programs, including chatbots, virtual assistants, and language translation gear.(Oranga, 2023)

ChatGPT is primarily based on superior device getting to know algorithms and has been pre-skilled on large datasets of text, permitting it to generate incredibly sophisticated responses to user input. The version can be best tuned for particular programs, permitting builders to customize the language model for his or her unique use case.

ChatGPT inspired many with its command of written English and as a demonstration of how some distance synthetic intelligence (AI) had superior. Within 5 days of its introduction, more than 1,000,000 customers had signed up for a free account to have interaction with ChatGPT. The software confirmed that it could skip checks in advanced guides. For example, Wharton Business School professor Christian Terwieschin January 2022.Observed that ChatGPT surpassed the final exam in his direction in operations management; but, on some questions it made “surprising mistakes in tremendously easy calculations at the level of 6th grade math.”(Rahman & Watanobe, 2023).

However, Educators have become worried that students could cheat by using having ChatGPT write their essays, with some even providing that essays need to no longer be carried out as homework assignments. The American media enterprise buzzfeed introduced that it might use OpenAI tools consisting of ChatGPT to supply content along with quizzes that would be customized for readers (Rawas, 2023).

ChatGPT is a remarkable language model developed by OpenAI, based on the GPT-3.5 architecture. It represents a sophisticated instance of natural language processing, capable of understanding and generating human-like text. Trained on a diverse corpus of internet text until January 2022, ChatGPT excels in conversational contexts, providing users with informative and contextually relevant responses. Its versatility allows it to assist with a wide range of queries, from answering questions to engaging in creative dialogues. While not immune to limitations, such as occasional generation of inaccurate or nonsensical information, ChatGPT stands as a testament to the advancements in language models, offering users an interactive and intuitive conversational experience (Rahman & Watanobe, 2023).

Generally, The versatility of ChatGPT is a defining characteristic. It serves as a virtual assistant capable of performing an array of tasks, transcending the traditional boundaries of rule-based chatbots. users can seamlessly interact with the model, soliciting assistance on a wide spectrum of topics, from educational queries to problem-solving scenarios. This adaptability positions ChatGPT as a powerful tool for both casual users seeking information and professionals leveraging its capabilities for specific applications (Elbanna & Armstrong, 2024).

However, Accessibility plays a crucial role in the definition of ChatGPT. Unlike its predecessors, ChatGPT boasts a user-friendly interface, making it accessible to a diverse audience. Its design prioritizes ease of interaction, ensuring that individuals with varying levels of technical proficiency can

engage with the model without the need for specialized expertise. This democratization of access to advanced language processing represents a paradigm shift in how individuals interact with AI technologies (Herbold, Hautli-Janisz, Heuer, Kikteva, & Trautsch, 2023).

Additionally, learning and assistance constitute an integral part of ChatGPT's identity. Beyond merely responding to queries, the model serves as a learning companion, offering explanations, insights, and educational support. This aspect broadens its utility beyond simple conversational engagement, positioning it as a valuable resource for those seeking both information and a collaborative learning experience (Elbanna & Armstrong, 2024).

1.2.4. Advantages of Using ChatGPT in Academic Settings

Although nevertheless a latest development, ChatGPT has already been carried out broadly in specific features of better training. Thus, ChatGPT can probably have such a lot of makes use of in teaching and learning, studies, administration, and network engagement. Teaching and getting to know Due to its ability to generate and examine data, ChatGPT can play a range of roles in teaching and getting to know techniques (Jahic, Ebner, & Schön, 2023).

Together with different kinds of AI, ChatGPT may want to improve the manner and enjoy of learning for students. To try this, ChatGPT may be used as a standalone device, or it could be incorporated into different systems and structures utilized by HEIs. ChatGPT can perform many easy or technical responsibilities (e.G., basic studies, calculations, proofing) and the examples mentioned in the desk show how ChatGPT could be incorporated and used to augment teaching and learning (Rasul et al., 2023).

Table 1.2.1.

*ChatGPT in higher education*Source: UNESCO (2021) *Recommendation on the Ethics of Artificial Intelligence* (p3)

Role ⁶	Description	Example of implementation
Possibility engine	AI generates alternative ways of expressing an idea	Students write queries in ChatGPT and use the Regenerate response function to examine alternative responses.
Socratic opponent	AI acts as an opponent to develop and argument	Students enter prompts into ChatGPT following the structure of a conversation or debate. Teachers can ask students to use ChatGPT to prepare for discussions.
Collaboration coach	AI helps groups to research and solve problems together	Working in groups, students use ChatGPT to find out information to complete tasks and assignments.
Guide on the side	AI acts as a guide to navigate physical and conceptual spaces	Teachers use ChatGPT to generate content for classes/courses (e.g., discussion questions) and advice on how to support students in learning specific concepts.
Personal tutor	AI tutors each student and gives immediate feedback on progress	ChatGPT provides personalized feedback to students based on information provided by students or teachers (e.g., test scores).
Co-designer	AI assists throughout the design process	Teachers ask ChatGPT for ideas about designing or updating a curriculum (e.g., rubrics for assessment) and/or focus on specific goals (e.g., how to make the curriculum more accessible).
Exploratorium	AI provides tools to play with, explore and interpret data	Teachers provide basic information to students who write different queries in ChatGPT to find out more. ChatGPT can be used to support language learning.
Study buddy	AI helps the student reflect on learning material	Students explain their current level of understanding to ChatGPT and ask for ways to help them study the material. ChatGPT could also be used to help students prepare for other tasks (e.g., job interviews).
Motivator	AI offers games and challenges to extend learning	Teachers or students ask ChatGPT for ideas about how to extend students' learning after providing a summary of the current level of knowledge (e.g., quizzes, exercises).
Dynamic assessor	AI provides educators with a profile of each student's current knowledge	Students interact with ChatGPT in a tutorial-type dialogue and then ask ChatGPT to produce a summary of their current state of knowledge to share with their teacher/for assessment.

Intelligence. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000381137>

1.2.4.1. Research

ChatGPT has additionally been trialled in other methods pertaining to research, together with completing the technical elements of studies furnish programs (e.G., communications plans). An experimental use of ChatGPT to evaluate its capacity to offer peer overview of instructional papers found that it may be capable of aid in predicting whether a paper could be conventional (Oranga, 2023).

ChatGPT has additionally been used to generate whole academic journal articles, eight establishing an moral debate approximately whether or not a non-human author can be considered a contributor to the advent of understanding. At the time of penning this Quick Start Guide, no consensus had been reached. Some publishers have argued that ChatGPT cannot take responsibility for the content material or integrity of articles and consequently cannot be an creator, whereas others take delivery of its role as co-writer. With ChatGPT, the fashion is extra conversational, creating a greater customized enjoy.

1.2.4.2. Administration

ChatGPT's essential role in supporting higher education institutions' (HEI) administration has been in enhancing the efficiency of approaches. In this way, ChatGPT can lessen human administrative time spent on responsibilities including: Responding to queries from applicants (capacity students) Helping college students to sign up for courses, entire path requirements, take a look at administrative records (e.G., examination timetables, vicinity of classes) Finding news, sources, and different statistics Sending reminders or notifications Translation of facts for global college students/personnel With using ChatGPT, administrative services can be available 24/7 and may be supported across exclusive

platforms. As well as integration into websites, it may also be used with social media, messaging offerings and learning control structures/digital campuses. When interacting (Asokan).

1.2.4.3. Community Engagement

Engagement also can use ChatGPT to increase sound strategies for community engagement. Considering their own unique traits (geography, region, community needs, nearby demographics), ChatGPT may be requested to increase focused strategies to improve the health of the general community. Based on those strategies, they might develop conversation campaigns geared to the network and with a selected call to motion.

1.2.4.4. Writing Assistant

Spotlight ChatGPT as a tool that can resource within the writing technique, emphasizing its superb position. Among the chosen articles, maximum of eight studies emphasize the useful function of ChatGPT as a device for assisting the writing method. These findings spotlight numerous advantages of the use of ChatGPT, consisting of multiplied productivity, advanced language exceptional, and get admission to to correct statistics. The studies present ChatGPT's capability to help authors by using offering activate and grammatically correct content. Consequently, these findings suggest that ChatGPT may be a treasured tool for instructional writers, facilitating stronger writing practices and consequences (Vijayakumar, 2023).

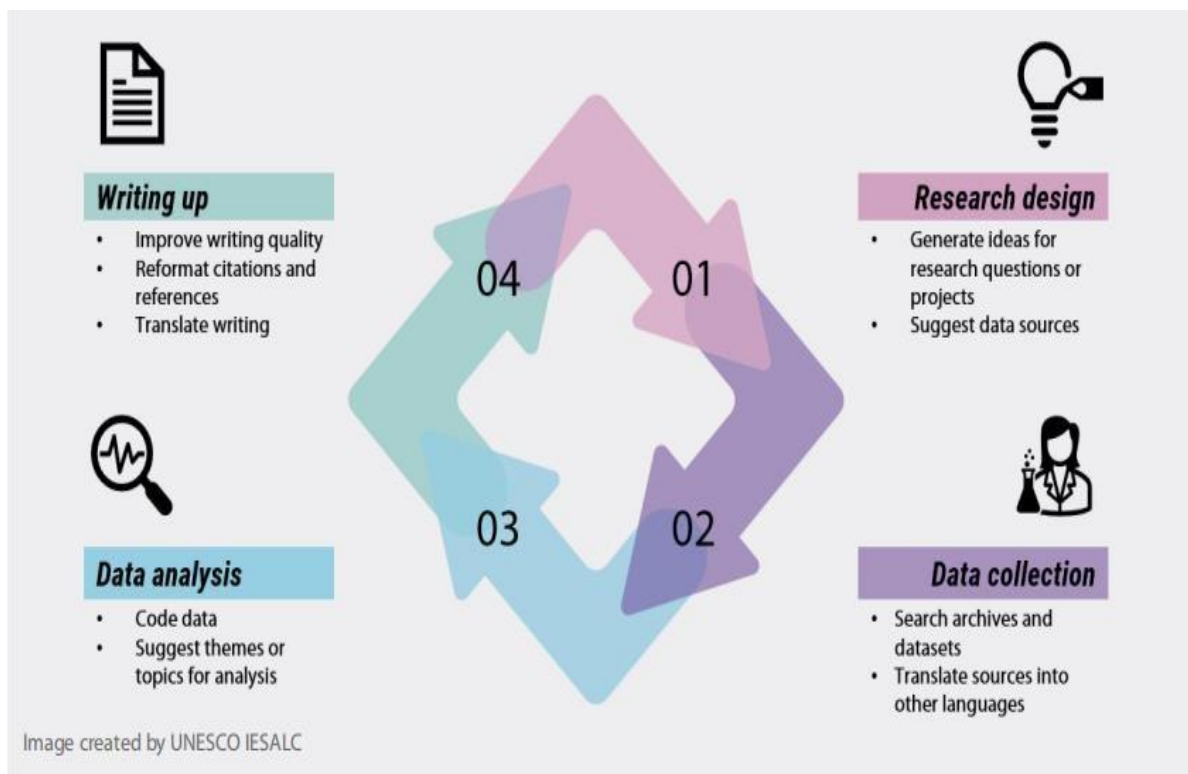
Numerous research has shown that ChatGPT is a useful tool which could help with the writing technique. Studies have shown that ChatGPT is a useful tool that could assist with writing. These studies spotlight the potential advantages of ChatGPT for increasing productivity, enhancing language satisfactory, and turning in precise facts. They underline how ChatGPT may help authors by generating grammatically accurate content material quickly. These research effects mean using the usage of

ChatGPT's functions, writers can improve their writing processes and create content of a higher nice (Alkaissi& McFarlane, 2023; Dergaa et al., 2023; Frye, 2022; Macdonald et al., 2023; Salvagno et al., 2023; Tatzel&Mael, 2023; Tomlinson et al., 2023; Yan, 2023).

Figure 1.2.2.:

Possible uses of ChatGPT in the research process

Source: UNESCO (2021) *AI and education: Guidance for policy-makers* (p2)



1.2.5.Challenges and Ethical Implication

The impact of ChatGPT on higher schooling has been immediately and divisive. Although its programs in higher education are tremendous, many universities have already banned it over fears of student plagiarism, and numerous countries have blocked ChatGPT.¹⁰ This phase distils the principle challenges and ethical implications of ChatGPT in higher schooling (Rasul et al., 2023).

1.2.5.1. Academic Integrity

The foremost issue that has been expressed about ChatGPT in higher training pertains to educational integrity. HEIs and educators have sounded alarm bells about the increased danger of plagiarism and cheating if students use ChatGPT to put together or write essays and assessments. This may additionally have deeper implications for subjects that rely extra on written inputs or statistics recollect, areas that ChatGPT can better support. There also are worries that present gear to come across plagiarism won't be effective within the face of writing achieved by using ChatGPT. This has already led to the improvement of other packages that may hit upon whether or not AI has been utilized in writing. In the period in-between, a couple of HEIs around the arena have banned ChatGPT because of issues around instructional integrity and others have updated or modified the manner they do exams, basing them rather on in-magnificence or non-written assignments (Rasul et al., 2023).

1.2.5.2. Cognitive Bias

It is essential to notice that ChatGPT is not ruled by means of ethical principles and can't distinguish between proper and wrong, genuine and fake. This device most effective collects statistics from the databases and texts it approaches on the net, so it additionally learns any cognitive bias determined in that information. It is therefore essential to seriously examine the effects it affords and examine them with different sources of information (Leng, 2024).

1.2.5.3. Gender and Diversity

It is essential to notice that ChatGPT isn't ruled by means of ethical principles and can't distinguish between proper and wrong, genuine and fake. This device most effectively collects statistics from the databases and texts it approaches on the net, so it additionally learns any cognitive bias determined in that information (Kostka & Toncelli, 2023). It is therefore essential to seriously examine the effects it affords and examine them with different sources of information

1.2.5.4. Accessibility

There are foremost worries around the accessibility of ChatGPT. The first is the shortage of availability of the device in a few international locations due to government rules, censorship, or other restrictions on the net. The 2d difficulty relates to broader troubles of get admission to and equity in terms of the uneven distribution of net availability, value and pace. In connection, teaching and studies/improvement on AI has additionally not been calmly spread round the world, with a few areas a long way much less possibly to had been capable of develop know-how or assets on this subject matter (Y. Wu, 2023).

1.2.5.5. Commercialization

ChatGPT was created via a private organization, OpenAI. Whilst the organization has pledged to hold a loose model of ChatGPT, it has released a subscription choice (currently US\$20/month) that offers extra reliability and quicker get right of entry to to new versions of the tool. The involvement of private entities in higher education is not new and calls for care and regulation if selecting AI and other gear which can be run through corporations dependent on making profit, won't be open supply (and

consequently more equitable and available), and which can be extracting records for commercial purposes (Elbanna & Armstrong, 2024).

1.2.5.6. Lack of regulation

ChatGPT isn't currently regulated, a subject addressed with the aid of the UNESCO Recommendation at the Ethics of AI (see next phase). The extremely fast development of ChatGPT has triggered apprehension for lots, main a set of over 1,000 teachers and private region leaders to submit an open letter calling for a pause on the improvement of training effective AI systems.¹² This cessation could allow time for capability risks to be investigated and higher understood and for shared protocols to be evolved (Rasul et al., 2023).

1.2.5.7. Privacy concerns

In April 2023, Italy became the first country to block ChatGPT because of privateness related concerns.¹³ The Usa's data safety authority said that there was no criminal basis for the collection and storage of personal facts used to educate ChatGPT. The authority also raised moral concerns across the tool's lack of ability to determine a person's age, that means minors can be uncovered to age-inappropriate responses. This instance highlights wider problems regarding what records is being collected, via whom, and how it is carried out in AI.

1.2.5.8. Plagiarism

The standpoint that considers using ChatGPT without proper citation and attribution might be a shape of plagiarism is indeed based on the notion that the generated content material is not authentic paintings and need to be acknowledged as a derived supply. While we can't provide particular references to support this perspective, we will offer some insights based totally on shared information in the

educational community (Mansilla et al., 2022). Plagiarism is commonly described as offering someone else's paintings, ideas, or phrases as one's personal without appropriate acknowledgement. When the usage of ChatGPT or another AI language model, the generated content consequences from pre-current data and algorithms instead of being produced by way of the writer without delay. Thus, failing to characteristic the generated content to its supply can be seen as claiming it as one's original paintings (Wardat et al., 2023).

Academic integrity and moral writing practices emphasize the importance of right citation and attribution. When ChatGPT is utilized in academic writing, it is critical to renowned it as a tool or supply of help and to cite it thus while incorporating generated content (Gavilán et al., 2022). Although many academic establishments be given this view, reviewing organization's or academic groups' specific regulations on the use of AI language models and quotation conventions is critical. It is important to follow the regulations and requirements established by the instructional network, as institutional policies may additionally range (Baidoo-Anu & Ansah, 2023).

1.2.6. Adapting ChatGPT as Writing Assistant

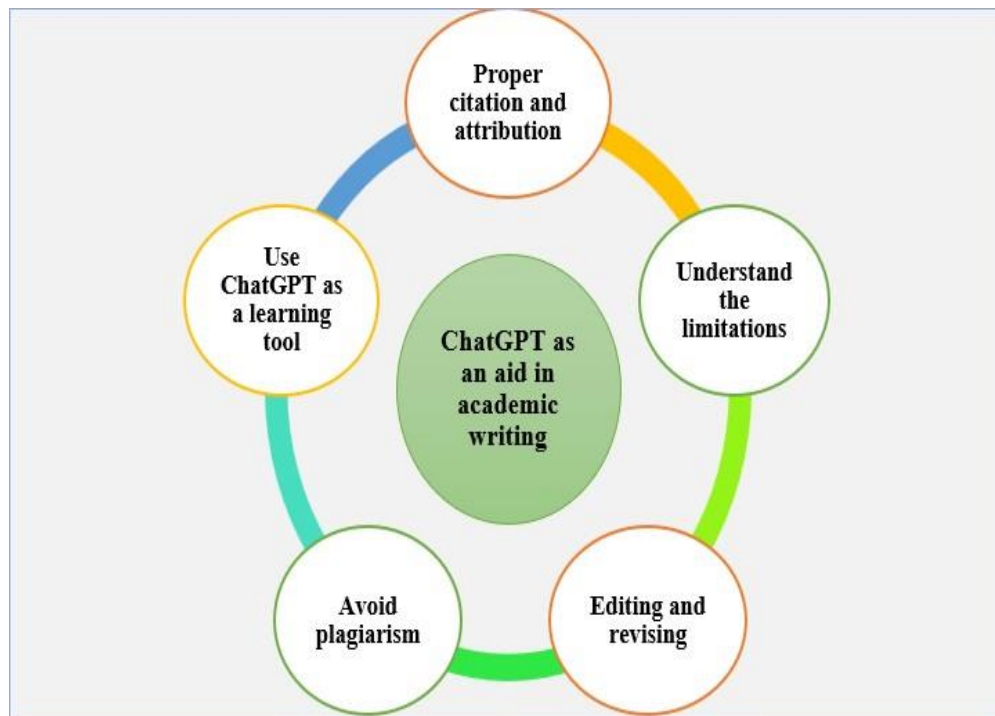
ChatGPT is hired as assistance in the global of academia. It can improve writing competencies considering that it's far educated to supply remarks on, coherence, and grammar (Aljanabi et al., 2023), extract key factors, and offer citations (Aydin and Karaarslan,2022). This may want to boom the performance of researchers, permitting them to concentrate on extra essential sports (e.G., analysis and interpretation). This has been supported by means of research displaying that ChatGPT ought to generate abstracts (Gao et al., 2023; Ma et al.,2023), awesome research papers (Kung et al., 2023), dissertations, and essays (Aljanabi et al., 2023). Previous studies showed that ChatGPT ought to create nice essays on special subjects (Hoang, 2023; Hoang et al., 2023; Nguyen and La; 2023; Nguyenand Le, 2023a, Nguyen and Le, 2023b, Susnjak, 2023). Forinstance, this program, along with DaVinci-003,

generated extraordinary short-shape essays on Physics, which might be offered First Class, the best grade inside the UK better schooling device (Yeadon et al., 2023).

Figure 1.2.3:

Guidelines for using ChatGPT with academic honesty

Source: *Published in 2023 by Emma Sabzalieva and Arianna Valentini .Online Journal Communication and Media Technologies, 13(p4)*



It also led to questions about the ethics of using ChatGPT in extraordinary forms of instructional writing, the AI authorship (Bishop, 2023; Grimaldi and Ehrler, 2023; Kung et al., 2023; Pourhoseingholi et al., 2023; Xiao, 2023), and raised trouble of evaluating educational responsibilities like students' essays (Stokel-Walker, 2022; Whitford, 2022). Unavoidable content material plagiarism troubles have

been mentioned, and answers for adapting essay settings and suggestions had been revised (Cotton et al., 2023; Hoang, 2023; Lo,2023; Sallam, 2023; Stokel-Walker, 2022; Yeadon et al., 2023).

A recent Strengths, Weaknesses, Opportunities and Threats analysis which is called a SWOT of ChatGPT effect on education comprehensively analyzed all of the cited troubles. Strengths included advanced natural language era, self-improvement, and personalized comments, with capability benefits in records accessibility, personalized learning, and reduced coaching paintings-load. Weaknesses encompassed confined know-how of the subject matter, inability to critically evaluate information, reaction fine evaluation demanding situations, bias risks, and a lack of higher-order wondering. Threats blanketed contextual boundaries, instructional integrity risks, discrimination perpetuation, elevated plagiarism, etc. (Farrokhnia et al., 2023).

ChatGPT can assist individuals in enhancing their writing competencies and exploring different writing styles, it have to be integrated as a device within an established and supervised learning environment. Human understanding, essential wondering, and mentorship are essential in maximizing the advantages of ChatGPT and guiding its suitable use. Learners can supplement their writing abilities with AI pointers even as keeping off over-reliance (Imran & Almusharraf, 2023). Supervision enables freshmen understand AI limitations, develop analytical abilities, and use AI responsibly, fostering originality and self-belief. Educators are important in imparting comments, selling ethics, and encouraging inexperienced persons to exercising their creativity along AI assistance (Elbanna & Armstrong, 2023).

However, ChatGPT and other AI language models provide giant potential for educational writing, however their utilization must be approached responsibly. The following tips might also help authors and educators harness the benefits of AI at the same time as upholding the ideas of scholarly writing,

educational integrity, and moral use of technology in schooling. Guidelines for users of ChatGPT in academic writing (Bašić, Banovac, Kružić, & Jerković, 2023).

- Proofreading and editing: Even although ChatGPT can help in generating content material, it's far critical to proofread and edit the AI-generated textual content thoroughly. While the language model can provide a foundation, it is able to no longer continually produce errors-loose or contextually correct content material. Authors need to take responsibility for the final high-quality and coherence in their work (Su, Lin, & Lai, 2023).

- Transparent use of AI help: When filing academic paintings involving ChatGPT, authors should transparently disclose the extent of AI assistance within the writing procedure. This disclosure can help readers and reviewers understand the AI tool's contribution and the author's original enter (Fitria, 2023).

- Verifying statistics: While ChatGPT can generate content material based totally at the input provided, verifying the accuracy and credibility of the records received from AI-generated sources is important. Authors ought to pass-take a look at AI-generated records and information with reliable academic sources before which includes them.

- Combining multiple AI inputs: Avoid depending solely on a unmarried AI tool for content material technology. Instead, consider the usage of multiple AI models or assets to validate and diversify the generated content material. This approach can beautify the first-class and reliability of the output.

- Understanding AI obstacles: Be aware of the restrictions of ChatGPT and different AI language fashions. Recognize that AI isn't an alternative to human understanding, important thinking, or area-

particular knowledge(Atlas, 2023). Authors should make contributions their insights and evaluation to augment the AI-generated content material

- Secure data coping with: If AI-generated content involves sensitive data, authors should handle it cautiously and ensure information privacy and security features are in area. Compliance with relevant facts protection regulations is crucial.
- Ethical considerations in education information: When creating custom AI models or quality-tuning ChatGPT, be conscious of the statistics used for education. Ensure that the statistics is ethically sourced, does now not perpetuate biases, and adheres to the principles of responsible AI improvement.
- Responsible AI version sharing: If authors train and percentage custom AI models primarily based on ChatGPT, they ought to make certain that others use these models ethically and responsibly. Encourage users to be privy to the guidelines and obstacles of the AI fashions they access.
- Continuous mastering and edition: As AI era evolves, keep knowledgeable about the present day improvements and satisfactory practices in AI use in educational writing. Stay adaptable and open to incorporating new tips to make sure AI tools' accountable and powerful use.

1.2.7. ChatGPT Impact on Student Writing

Academic discussions globally show that ChatGPT can play a completely considerable role in writing assistance in engaging in writing obligations in a versatile manner (Sallam, 2023). The take a look at of literature published on ChatGPT's position in writing duties may be summarized as ChatGPT is a

complete package from thoughts technology to final proofreading and enhancing of writing cloth. For more ChatGPT's writing features(Chen, 2023).

The following five factors are summarized from the selected published magazine articles, blogs, and internet essays. These points could help in expertise its use in writing as an assistant and AI tool

- (1) Increased efficiency: ChatGPT's invention can lessen the effort and time required to generate written content. With its capability to generate coherent and nicely-structured text on any subject matter, students and educators can store time and recognition on different aspects of their paintings (Lund et al., 2023; Yan, 2023).
 - (2) Idea generation: ChatGPT can assist students generate new thoughts for their writing assignments by suggesting subjects, issues, and views that they won't have considered in any other case (Kasneci et al., 2023; Taecharungroj, 2023).
 - (3) Language translation: ChatGPT can translate textual content from one language to some other, which may be useful for students who're writing papers in a language that is not their local tongue. This can assist students ensure that their writing is accurate and grammatically correct (Lametti, 2022; Lund & Wang, 2023;Stock, 2023).
- b) 4. More correct and constant content material: With the ChatGPT invention, there is a higher likelihood of producing correct and consistent content material. ChatGPT has get right of entry to to significant statistics, making identifying and doing away with errors less complicated (Stacey, 2022).
- (1) Improved collaboration: ChatGPT also can facilitate collaboration among college students and educators. Using AI to generate content material allows multiple people to paintings on a task concurrently, bearing in mind greater green collaboration. ChatGPT

can proofread and edit pupil writing through suggesting corrections for grammar, syntax, and spelling errors. This can assist college students enhance the satisfactory in their writing and decrease mistakes (Geher, 2023; Holmes et al., 2022; McMurtrie, 2022).

(2)

By cautiously thinking about the implications, imposing suitable policies, and fostering mentorship and collaboration, establishments can empower college students whilst safeguarding in opposition to academic dishonesty. Equity and accessibility troubles need to additionally be addressed to make certain that AI equipment are available to all, regardless of geographical location or profits degree. By promoting inclusivity and same opportunities, AI's ability benefits may be harnessed fairly and equitably. Looking in advance, the future implications of AI language models in instructional settings are both promising and difficult. As AI generation keeps to improve,

AI language fashions like ChatGPT have the potential to revolutionize how research is conducted and scholarly communicate is facilitated. On the tremendous aspect, AI language fashions can notably beautify the efficiency of instructional writing and research. Researchers can use AI to explore thoughts, generate drafts, and gather facts fast. This expedites writing and permits researchers to attention on higher-order questioning tasks (Herbold et al., 2023).

Additionally, AI language fashions might also democratize educational writing with the aid of making writing tools available to researchers with various linguistic backgrounds and ability degrees. AI-generated translations and language guide can damage down language boundaries, allowing international ~~collab~~ in research and selling inclusivity in academia.

However, these advancements also come with demanding situations and capacity risks. Using AI language models can also boost issues about intellectual belongings and copyright troubles. Researchers should be careful about the use of AI-generated content material without right attribution and bear in mind the consequences of AI-to-AI plagiarism.

Furthermore, the impact of AI on educational authorship is a subject of ongoing discussion. As AI equipment make a contribution to content material creation, questions might also arise approximately the position of human authors and a way to outline authorship in AI-augmented research. Addressing these problems calls for a collective effort from the academic community to establish guidelines and fine practices for acknowledging AI contributions.

1.2.8. ChatGPT Implication

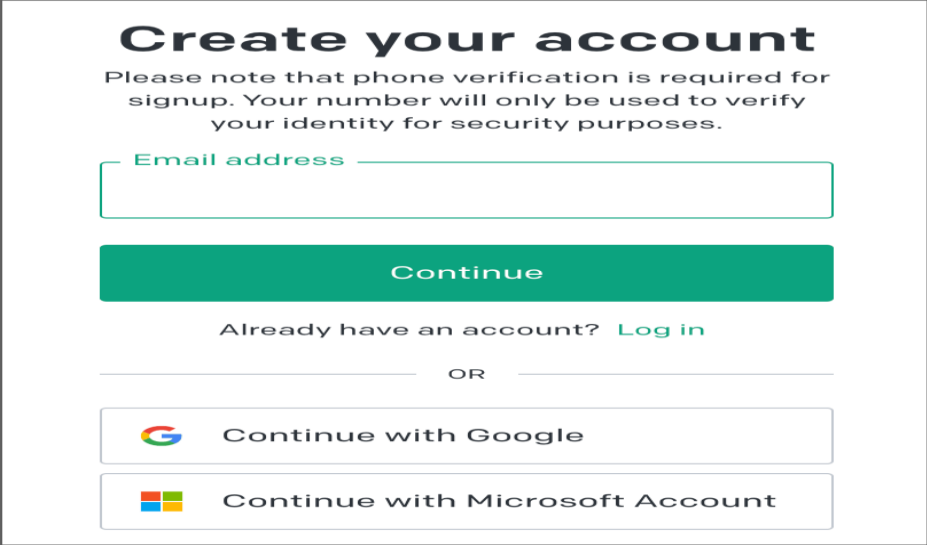
Get started with ChatGPT this step-by-step guide is also available as a video tutorial and a seminar in IESALC Campus.

1.2.8.1. Create an Account

1. In any internet browser, go to: <https://chat.openai.com/>
2. Create an account:
 - a. Enter your email address or connect a Google or Microsoft account.
 - b. Create a password (at least 8 characters).
 - c. Check the email address for an email from OpenAI and click to verify your email address.
 - d. Enter your first and last name and date of birth.
 - e. Enter your phone number.
 - f. Enter the verification code that you receive by text message. Note that ChatGPT is not currently available in all countries.

Figure 1.2.4: *how to create an account in ChatGPT*

SOURCE: [https://notroop.com/create-chat-gpt-account/\(p1\)](https://notroop.com/create-chat-gpt-account/(p1))



Create your account


Please note that phone verification is required for signup. Your number will only be used to verify your identity for security purposes.


Email address

Continue

Already have an account? [Log in](#)

OR

 Continue with Google

 Continue with Microsoft Account

1.2.8.2.Using ChatGPT

3. Once you have created an account or logged in, enter your question or prompt into the field ‘Send a message’.

4. The response will be generated immediately, with the words appearing quickly across your screen. Consider marking whether the response is acceptable or not by selecting the thumb up or thumb down icon. If you select an icon, a pop-up box will ask you provide additional comments (not required) before you submit your feedback.

5. Click ‘Regenerate response’ to have ChatGPT answer the same prompt again.

a. Consider marking whether you found the revised response better, the same or worse.

b. If you generate multiple responses, you can scroll between them.

6. The chat is saved in the left-hand menu. You can rename or delete the chat.

7. To start a new query, click on ‘New chat’ or type into ‘Send a message’ underneath any existing query.

1.2.8.3.Important Considerations When Using ChatGPT

To produce a more relevant result, provide ChatGPT with prompts about how you want it to respond.⁴ For example:

Tell me how [add query] works in 50 words.

Behave as/Act as a higher education manager. [Add query]

Write a four-paragraph essay about [add query]

If your query does not produce the intended result, try changing the prompt(s) and run the query again.

Due to high demand, the free version of ChatGPT may be unavailable or run very slowly.

Data used to train ChatGPT's responses goes up to 2021. This means ChatGPT has no knowledge about anything that has happened or been created since 2021. However, some browsers that integrate ChatGPT do enable it to connect to more recent information.

There is no way that ChatGPT can verify the information it provides or to assess its reliability.

1.2.9. Conclusion

Along this chapter, it has been attempted to review the previous literature that is in tight connection with the affective domain of teaching and learning. This chapter intended to provide a clear image about the two main concepts of ChatGPT and open AI and how it can affect the teaching and learning process particularly in such digital world. Ultimately, the effectiveness and usefulness of ChatGPT depends on the intended use and user expectations. It is a powerful tool, but it must be used with awareness of its strengths and limitations. Users should critically evaluate the information provided and be aware that the model does not always provide accurate and unbiased answers, the next chapter will deal with AI and GPT in the Algerian context.

II Chapter two: Artificial intelligence and ChatGPT in Algerian context	66
SECTION ONE: Writing in Algerian context	67
2.1.1. Introduction	67
2.1.2. Teaching Writing in Algerian EFL Context.....	67
2.1.3. Artificial Intelligence in Algeria	69
2.1.4. ChatGPT availability in Algeria.....	72
2.1.5. Data Description	75
2.1.6. Population and Context	76
2.1.7. Description of Data Collection Tools.....	77
2.1.7.1. Interview Description.....	78
2.1.7.2. Questionnaire Description.....	78
2.1.7.3. Test Description	79
2.1.8. Conclusion.....	79

2.2.1. Introduction

Over the past decade, Algeria has embarked on a transformative journey to integrate artificial intelligence (AI). This section of chapter two focuses on AI in the Algerian context, first by delving into the concept of teaching writing in EFL context and providing different approaches used within teaching English as a foreign language including AI in Algeria and its implementation in different fields and sectors, in addition to an introduction of ChatGPT in Algeria and its availability, finally a description of data collection tools used in this research.

2.2.2. Teaching Writing in Algerian EFL Context

In order to produce the best learning results, many writing instruction methods have changed over time. This skill was viewed differently in each approach. Either the finished product or the writing process may be the main emphasis when teaching writing. One becomes limited in their perspective of the work and its result when they only focus on the product. Writing progresses through stages, as acknowledged by proponents of a process-based approach to writing. Aim and audience are taken into account by alternatives. Hence, when we focus on the task at hand and the final result, we are solely concerned with those two things. On the other hand, proponents of a process approach to writing take note of the different phases of every piece of writing experiences. Additional strategies focus on components like audience and purpose (Baghzou, 2021).

2.1.2.2. The product Approach

The product approach dominated the teaching of writing in ELT until the 1980's-it involves using "a model- text" which the students copy. Normally each model text contains lot of examples of a specific type of language the teacher wants the students to focus on such as the simple past. The students read the model text, and do exercises that focus on the language in the model text. Finally, the students might be

asked to transform a text, which is in the present simple into the past simple. The model text will help them to do this. Hedge 2000 as cited in (Baghzou, 2021, p.2805) Furthermore it is evident that grammatical accuracy is the primary concern, and the goal of product writing is to produce a text that is coherent and free of errors. This makes sense considering the time's emphasis on ELT methodology—model texts give students confidence and stability that they can use as a foundation for their own writing, especially for beginners or lower-level learners—and the popularity of the Audio Lingual Method. This results in incredibly targeted and focused writing practice, which is a great way to support students in focusing on a specific grammar point in their own work (Baghzou, 2021).

2.1.2.2. Shortcomings of the product approach

The product approach is criticized for the lack of creativity and personalisation (the students have little to say in what they write and how to write it). Besides repetitiveness, being unrealistic (students are obviously not writing for a purpose, but writing to practice a grammar point), for being boring and demotivating. It is also too prescriptive (the model-based approach can be seen as transmitting the message to the student that there is only one way to write correctly. Hedge 2000:308 as cited in (Baghzou, 2021, p.2805)

2.1.2.3. The process approach

Baghzou (2021) asserted that the introduction of the process approach to ESL composition seems to have been motivated by dissatisfaction with controlled composition and the current- traditional approach. Many felt that neither approach adequately fostered thought or its expression- that controlled composition was largely irrelevant to this goal and the linearity and prescriptivism of current- traditional rhetoric discouraged creative thinking and writing. Furthermore guidance through and intervention in the process were seen as preferable to control- that is, the early and perhaps premature imposition of

organizational patterns or syntactic or lexical constraints. Content, ideas, and the need to communicate would determine form. Silva 1990: 15 as cited in (Baghzou, 2021, p.2806) the influence of the process approaches, especially of cognitive views upon modern ESL classrooms cannot be exaggerated. In most classrooms, ESL teachers prepare students to write through invention and other prewriting activities, encourage several drafts, require paper revision, generally through group work, and delay the student fixation with correction of sentence-level errors until the final editing stage.(Baghzou, 2021, p.2807)

Therefore, the goal of a teacher, in this view, is to produce good writers who not only have a large repertoire of powerful strategies, but they have sufficient self- awareness of their own process to draw on these alternative techniques as they need them. In other words, “they guide their own creative process”. Flower 1985:370 as cited in (Baghzou, 2021, p.2808).Writing is seen as a thinking and discovery process from the process approach perspective. It is the outcome of utilizing a variety of composing process navigation techniques. Setting objectives, coming up with ideas, arranging data, and selecting suitable language and format are just a few of the tasks involved in this (Baghzou, 2021).

2.1.2.4. Shortcomings of the process approach

Although the process approach has been generally well and widely received in ESL composition, it is not without its critics. These critics have perceived theoretical and practical problems and omissions of the approach and have suggested that the focus of ESL composition be shifted from the writer to the reader- that is, the academic discourse community (Baghzou, 2021).

2.1.3. Artificial Intelligence in Algeria

According to Digwatch observatory, Algeria has adopted a national strategy on research and innovation in artificial intelligence (AI), dedicated to improving Algerians’ skills in AI through

education, training, and research, and exploiting the potential of AI as a development tool in key socio-economic sectors (e.g. education, health, transport, energy). According to AbdelbakiBenziane, the previous minister of higher education and scientific research, the strategy aims to build a solid base in terms of AI research, to apply the latest AI techniques in various fields, and to better exploit the human and material resources available. In education several Algerian universities are recognized for their AI programs. ALFanar Media revealed that at the start of the year, Baddari the current minister of higher education and scientific research stressed “the need to offer new university courses to teach and get ready for artificial intelligence and its use in higher education and scientific research.” He announced the establishment of a council of experts, researchers, and specialised professors to introduce artificial intelligence in the higher education and research sectors, Months after Algeria declared 2023 the year of artificial intelligence, Algerian students have won first prizes in two categories of the Chinese technology company Huawei’s global competition for information and communication technologies (ICT).

According to EduRank the University of Annaba, the University of Constantine 1, and the University of Science and Technology of Oran, all ranked within the top 50 in Africa for AI studies; from a similar stand point ENSIA The National School of Artificial Intelligence which is an institution of excellence for education whose vocation is to educate engineers specializing in the theory of artificial intelligence and data sciences. They will also have the capacity to develop and deploy practical and innovative solutions to the problems of the various socio-economic sectors (health, energy, agriculture, transport, etc.), thus contributing to the scientific and economic development of Algeria. (<https://www.ensia.edu.dz/>)from a similar stand point Algeria has introduced a new e-platform that will utilize artificial intelligence (AI) to help high school graduates select their educational paths after graduation, based on their academic performance Professor KamelBaddari, the Minister of Higher

Education and Scientific Research, announced this initiative in an interview with Radio Setif in Algeria on April 15, the day before National Science Day.

According to Baddari, starting with the June 2024 graduates, high school students will have access to a digital platform that uses AI and data analysis to recommend fields of study and specializations that align with their abilities and grades. This personalized approach aims to lower dropout rates, reduce the need for students to change courses, and increase student satisfaction. Additionally, it is expected to help students contribute to economic growth by creating wealth and job opportunities, thus benefiting the national economy. (University world news Africa edition, 2024).

Concerning healthcare Algeria Healthcare systems are increasingly adopting and integrating artificial intelligence (AI) and machine learning (ML) algorithms to precisely forecast diseases in their early stages based on past health records. Some of the key factors propelling the market expansion are the expanding datasets of digital patient health information, the rising desire for individualized treatment, and the rising demand for lowering healthcare costs. The increase in demand for early disease diagnosis and better understanding has been attributed to the growing Algeria geriatric population, changing lifestyles, and rising prevalence of chronic diseases. One of the factors propelling the growth of the artificial intelligence (AI) market in the healthcare industry is the application of AI/ML technologies in improving patient care, lowering equipment downtime, and minimizing care costs. The usage of AI-based technologies increased significantly, and they are expected to develop rapidly in the future. AI/ML technology integration in healthcare processes like diagnosis, patient management, prescription management, claims management, workflow management, machine integration, and cyber security has increased significantly (Insights10. (n.d.)).

Moving to transport, According to Autobip Artificial intelligence (AI) is one of the cutting-edge technologies being integrated into the “Smart Bus” initiative by ETUSA (Entreprise de Transport Urbain et Suburbain D’alger) in Algeria, which aims to modernize the city’s public transportation system. Numerous useful features are included in it, including AI-driven routes, real-time tracking, passenger comfort, safety, and environmental sustainability (Autobip, 2017).

Finally energy, KHADIR and BOUZIANE (2020) the region of Adrar is located in the southwest of Algeria, at more than 1400 km from the capital Algiers and falls between the meridians: 2 ° E and 6 ° W, and the parallels 20 ° and 32 ° North. Its total area is 427,968 Km² and Population 431 270 inhabitants, about 18% of the total area of Algeria and almost a fifth of the entire National territory. Due to the geographical situation, permitting ideal wind and solar conditions (Artificial Neural Networks modeling of electrical renewable energy both photovoltaic and wind for the region of Adrar Algeria Furthermore the Kabertene (Adrar province) wind farm for electricity production is a successful model for harnessing clean and renewable energy, situated on the territory of the commune of Tissabit(80 km north of Adrar), This is the first project of its kind in the country and the result of a collaboration between France and Algeria. The plant serves as an experimental facility and successful example of using wind energy to generate electricity. This plant, which has twelve wind turbines installed based on technical and field studies and considering the wind currents typical of the area, guarantees the clean and renewable alternative production of ten megawatts of electricity. It is integrated into the local electricity network to bolster the wilaya of Adrar's energy supply capacities (KHADIR and BOUZIANE, 2020).

2.1.4 ChatGPT Availability in Algeria

Initially, Open AI released ChatGPT in November 2022, and seeing that then countries that haven’t but received get entry to were looking for other methods to utilize the advanced language

models this is known for its conversational human-like tone. Without reliable get entry to, the manner around turned into to use a VPN, and then down load a mobile utility that generates foreign telephone numbers. Now users can sign on the use of ChatGPT freely (Scoopempire, 2023)

Opened in the 2021-22 academic year, the National School of Artificial Intelligence (ENSIA) is one of Algeria's newest universities. ENSIA was established in order to educate engineers specialising in the theory and practice of artificial intelligence and data sciences. It is located in the new technology centre of Sidi Abdellah, in the western suburbs of Algiers.

The campus is easily accessible via a number of modes of public transport. Courses are taught in English and French, and subjects on offer include intensive English, mathematics, computer science (programming, databases, software engineering, computer security, etc); artificial intelligence and its application, entrepreneurship and project management.

For the 2021-22 academic year, students were not admitted unless they had achieved a minimum of 16 out of 20 in their Baccalaureate. There were also minimum grade requirements for mathematics, depending on which courses students were planning to study.

As yet, ENSIA does not offer PhD study, but there are plans to introduce doctoral schools within the next few years (time higher education 2024).

The continuous and fast development of artificial intelligence has inspired almost all domain names of human life. Education is one good example. Obviously, the twenty first century has witnessed an boom inside the implementation of AI technologies and applications in instructional settings with the purpose of facilitating the studying and teaching procedures (MGwo-Jen, Haoran, Benjamin, & Dragan, 2020).

Generally speaking, AI educational packages help to offer private steering and aid to rookies. Educationalists and scholars received AI with large enthusiasm because of its countless competencies (Pikhart, 2020). Numerous packages and programs sought the danger to be incorporated in schooling, mainly in overseas language mastering. Each program is designed to have precise characteristics such as tackling newcomers' writing, studying, talking, listening or even their abilities. In today's pandemic, it is pretty vital for both instructors and novices to study the proper use of it and have digital resources that stimulate lively collaboration and decorate students' learning level in (Ribeiro, 2020).

ENSIA hopes that its graduates will go on to have careers as artificial-intelligence engineers, data analysts, computer scientists or software developers in fields including health, energy, agriculture and transport.

After exploring the capacity effects of chatbots in Algeria, it's miles clean that this technology can revolutionize the way we eat and interact with media content material. Chatbots are an effective pressure that is substantially converting the media panorama. Additionally, this form of bot may be used to enhance access to information, broaden on line communities, and boom reader engagement. With its growing influence, ChatGPT gives the Algerian media unexpected possibilities to enhance their operations and offerings in terms of access to record.

Internet users in Algeria can now use the prototype conversational agent, ChatGPT, without using a VPN. Indeed, that allows you to get right of entry to streaming offerings or skip blocks from time to time operated by way of the authorities, a few Internet customers use a VPN. A device allowing you to simulate an IP cope with to relocate it from the united states where the Internet connection is hooked up.

However, that is no longer the case for the text generator, ChatGPT, which can now be utilized in Algeria in VPN.

The predominant assignment of this conversational AI is to generate textual content to respond to user requests. However, this technology isn't to be had in all territories. It is, in fact, censored in numerous nations where interested people are obliged to apply the VPN to get right of entry to it. But this is no longer the case for Algeria.

Indeed, Algerians can now perform ChatGPT. And this, without having to use the device redirecting their traffic, VPN in this situation. Indeed, checks have been performed with the aid of multiple and the outcomes are fantastic. This is what the specialised media Algeria Expat reports in its edition this Monday.

Thus, Algerians can now use ChatGPT to put in writing a protracted textual content on a specific challenge or maybe summarize a protracted document. Carry out a more in-depth analysis of requests; Offer instant, relevant and precise responses; Personalize the user experience, and Allow users to perform a quick and accurate search dzairdaily(2023).

2.1.5. Data Description

The process of data description involves summarizing and elucidating the primary attributes of a dataset. This crucial step in data analysis aids researchers and analysts in understanding the fundamental framework and properties of the data, therefor in this section we will provide an overview of each data collection tool, method.

2.1.5.1. Research Methodology

This section of chapter two outlines the fieldwork conducted in the study, detailing the methodology, sample, and setting. It also includes in-depth information on the research instruments used and the analysis methods employed.

2.1.5.2. Mixed-Method Approach

A mixed methods research design is a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative research and methods in a single study to understand a research problem. Creswell & Plato Clark (2007). This method is used to provide in-depth insights into participants' perspectives, and motivations moreover to cross-verify findings. We utilized a questionnaire for quantitative data in addition to a test and a semi-structured interview for qualitative data.

2.1.6. Population and Context

2.1.6.1. Teachers profile

We have chosen nine EFL teachers from Ibn Khaldoun University of Tiaret department of English to take part in our research. These teachers have between three to twenty Years of teaching experience they were randomly selected and are eight males and one female. These teachers are all familiar the new technology of AI specifically CHATGPT .They successfully participated in completing our interview and handback valuable responses.

2.1.6.2. Students profile

We have selected a sample of 57 students of master two Didactics and Master Two Linguistics from Ibn Khaldoun University of Tiaret department of English the participant's range between the age twenty to thirty Years old. They were randomly selected and are ten males and seventy-four females. These students contributed in filling the online questionnaire and facilitated our research journey. We selected

master two students because writing is a very important skill to them since they will have to write a dissertation and more likely to use ChatGPT or any AI tool to facilitate the writing process.

2.1.6.3. Research context

Ibn Khaldoun University of Tiaret is where this study was carried out. Master two students of Didactics and Linguistics, in addition to teachers were chosen as a sample.

Ibn Khaldoun University of Tiaret is a higher education and scientific research institution, established in September 2001. The institution was first founded in 1980 as a University Center. In 1984, as part of the restructuring of the university map, the university center was transformed into two National Institutes of Higher Education. In 1992, the institution regained its status as a University Center. The university has 8 colleges, an institute, and three annexes, one of them is the faculty of languages and letters.

The faculty of languages and letters contains 3 different departments: the department of English, department of French and finally the department of *Arabic* language and literature. The department of English was first introduced in 2013 it consist on bachelors and masters levels It contains 37 permanent teachers the rest are part time teachers.

2.1.7. The Description of Data Collection Tools

In scholarly research, a data collection tool is an instrument or mechanism used to gather, measure, and analyze information for a study. These tools are essential in collecting reliable and valid data that can be analyzed to draw meaningful conclusions. The study gathered information from two instruments: a questionnaire administered via Google Forms for students aged twenty to thirty years old, and an online interview addressed to EFL teachers. Additionally, a pre-test and post-test were conducted to assess the writing skill of the participants.

2.1.7.1. Interview Description

The interview is defined as the method of asking questions to gain both qualitative and quantitative data (Taherdoost, 2021). Interviews are primarily done in qualitative research and occur when researchers ask one or more participants general, open-ended questions and record their answers. Often audiotapes are utilized to allow for more consistent transcription (Creswell, 2012). Our interview was addressed for nine EFL teachers, it consist on 12 questions concerning the main aim of this research. The first question demanded professional information (experience), the following question is concerned with their attitudes towards use of ChatGPT and its effect on teacher's role, and the following question is meant to determine if its effective to improve students writing abilities ,moving to question number 4 which highlights ChatGPT benefits and drawbacks.

A yes and no question was asked to inquire about teacher's awareness about ChatGPT paid version in order to detect which feature would be beneficial for students development ,the following question address the method of ChatGPT integration inside EFL classrooms, the rest of questions aimed to address teachers attitudes towards over reliance and plagiarism. The final question interrogate the key factors which will determine the fail/success of ChatGPT implementation in classrooms.

2.1.7.2. Questionnaire Description

For centuries, questionnaires have been used to conduct research and quality tests within a broad spectrum of sectors, both for scientific and non-scientific purposes. In recent years it has become the most prominent tool to measure, among others, user experience and usability of various products and services. Surveys are nowadays foremost being introduced in online settings due to being cost and time-efficient (Boynton&Greenhalgh, (2004)(Schrepp et al., 2014) as cited in (Bergmann, 2021, p.4.)

According to Goode and Hatt (1952) questionnaire refers to a device for securing answers to questions by using a form which the respondent fills in himself”, moreover a questionnaire is a systematic compilation of questions that are submitted to a sampling of population from which information is desired. It can be used for survey research, gathering data or testing a hypothesis. It consists of a number of questions printed or typed in a definite order.

Our online questionnaire is designed by Google forms and targeted 57 students from master two Didactics and Linguistics from Ibn Khaldoun University of Tiaret department of English. It includes two sections , the first section contains 3 questions mainly personal information about participants .The second section consist on nine questions mainly about the concept of ChatGPT and its use. The questioner aim to explore student’s awareness of ChatGPT usage and its effect on their writing skill.

The questionnaire is a combination of both open ended questions and close ended questions it contains two different sections, the overall number of questions is 9 in order to facilitate the responding process for students and to prevent over lengthiness, the first section contains 3 questions about participants (age, gender and specialty), the second sections begins with a close ended question to inspect students familiarity of ChatGPT, the following question is also a close ended question to inspect students usage of ChatGPT however it escalate to an open ended question to inquire the rationale behind its usage. in order to probe students usage of ChatGPT in their dissertation writing question number three was asked, the following question aimed to delve into its effectiveness to improve students writing skill.

The next question is a rating scale about student’s agreement and disagreement about how much they depend on ChatGPT, question number 6 was chosen to look into student’s awareness of keeping a balance between their original ideas and usage of ChatGPT rationally, the following question is a close

ended question in order to integrate if students will recommend ChatGPT for their colleagues. Moving to question number 8 which aimed to survey students' knowledge about the paid version of ChatGPT and the difference between the paid and free version. The final question interrogate their experience towards the use of ChatGPT.

2.1.7.3. Test Description

The prefix quasi means “resembling.” Thus quasi-experimental research is research that resembles experimental research but is not true experimental research. Although the independent variable is manipulated, participants are not randomly assigned to conditions or orders of conditions (Cook & Campbell, 1979). Our test consist on two different phases with the use of different materials. It was designed for two different students, both are females and master two students however their specialty differ (Linguistic and Didactic) both samples were chosen randomly, they successfully wrote a piece of writing to analyze for the sake of our research problem.

The test was taken twice with clear instructions it consist on one question which is writing an introduction, the first task required students to write introduction about AI using the provided text, the second task was taken a week after the first task was given however it required the use of ChatGPT as a writing assistant and to scaffold their ideas to compare between both pieces of writings for the sake of our hypothesis and research problem.

2.1.8. Conclusion

Algeria has undertaken a significant endeavor in the last ten years to incorporate artificial intelligence (AI) into various aspects of its society. This particular section of chapter two focuses on the application of AI in the Algerian context. It begins by exploring the idea of teaching writing in an English as a foreign language (EFL) setting and presents diverse approaches employed in this field, including the

utilization of AI in Algeria. Furthermore, it discusses the integration of AI in different fields and sectors within the country. Additionally, it introduces the presence of ChatGPT in Algeria and its accessibility. Lastly, it provides an overview of the data collection tools employed in this research. The next section will discuss the data analyzed and provide recommendations.

Section Two: Data Analysis and Recommendations.....	82
2.2.1. Introduction	83
2.2.2. Data Analysis	83
2.2.3. General Discussion of Findings.....	110
2.2.4. Recommendations.....	111
2.2.5. Conclusion	113

2.2.1. Introduction

This chapter's second section, which offers data that is both quantitative and qualitative, analyzes the data collection instruments. Beginning with the results of the questionnaire, followed by an analysis of the interview questions obtained from the teachers and tests given to students, and the explanation of the experiment's findings. It presents the final conclusions and the interpretations in tables and graphs.

2.2.2. Data Analysis

This phase tends to provide a detailed data analysis of the students' questionnaire. It's clear from the data gathered that master 2 students are prepared to use ChatGPT as their writing assistant for developing their writing skill.

2.2.2.1 Questionnaire Analysis

The questionnaire addressed to master two students in Ibn Khaldoun University in Tiaret, tackles the aim of our research project entitled, "investigating EFL teachers' attitudes towards the use of ChatGPT to assist students' writing production".

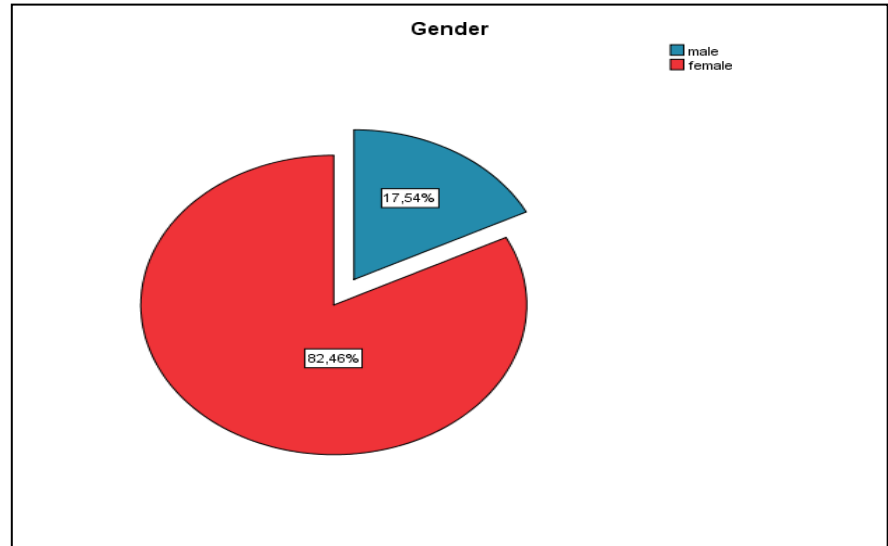
1- Gender

Table 2.2.1.

Students gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	10	17	17	17
	female	47	82	82	100
	Total	57	100	100	

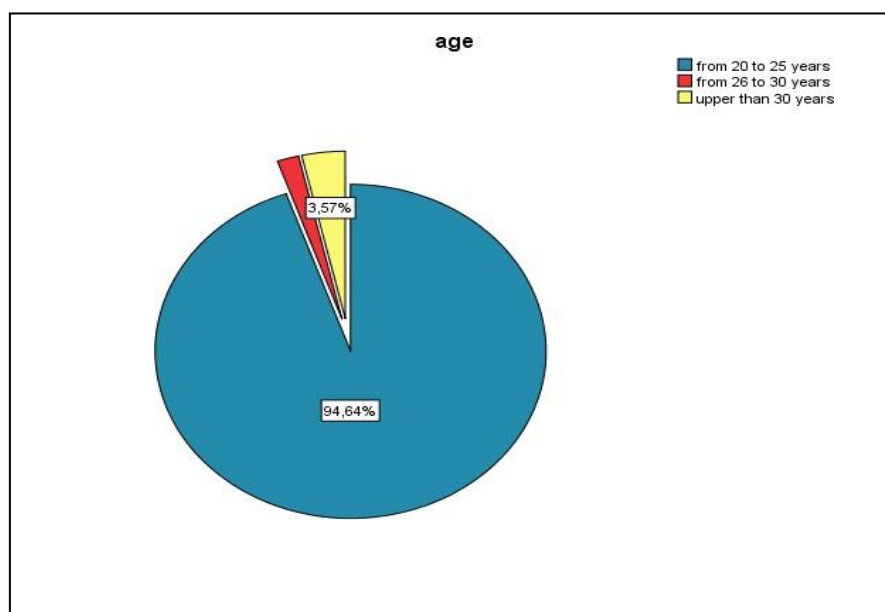
Results show that the majority of the students are **female**; they represent 82.5% of the sample; while **males** are 17.7%.

Figure 2.2.1.*Students gender***Table 2.2.2.***Students age*

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	from 20 to 25 years	53	93	95	95
	from 26 to 30 years	1	2	2	96
	upperthan 30 years	2	3	4	100
	Total	56	98	100	
Missing	System	1	2		
Total		57	100		

Results show that the majority of students are in the age group **20-25**; they represent a percentage of 94.6%, while 3.6% of students are **over** the age of **thirty** years and 1.8% of them range from **26 to 30** years old.

These results can be graphically represented as follows:

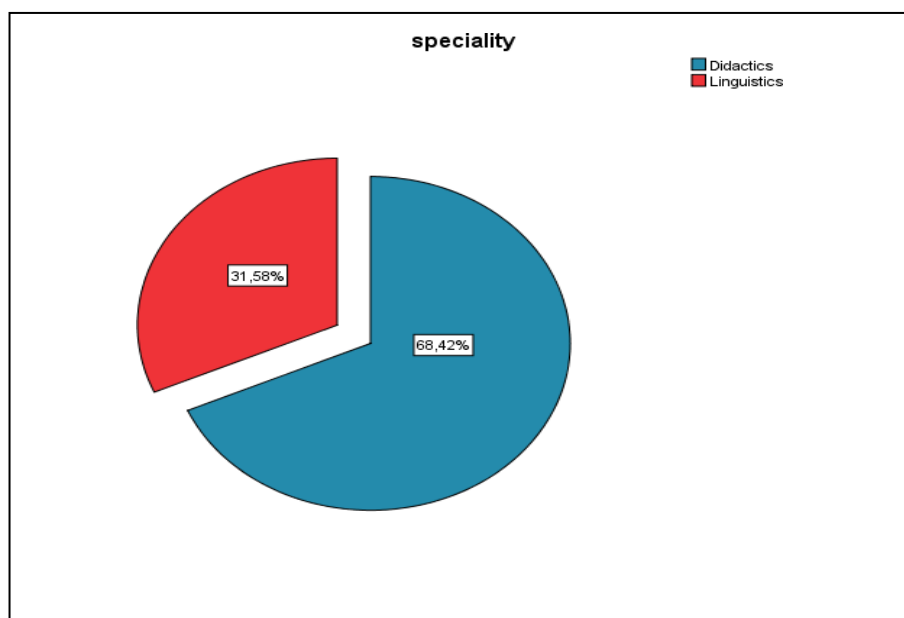
Figure 2.2.2.*Students age***Table 2.2.3.:***Students specialty*

		Specialty			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Didactics	39	68	68	68
	Linguistics	18	32	31	100
	Total	57	100	100	

Results show that the majority of individuals are in **Didactics specialty**; they represent a percentage of 68.4%, while 31.6% of them are in **Linguistics specialty**

We asked students about their specialty results shows that:

Figure 2.2.3.*Students specialty*



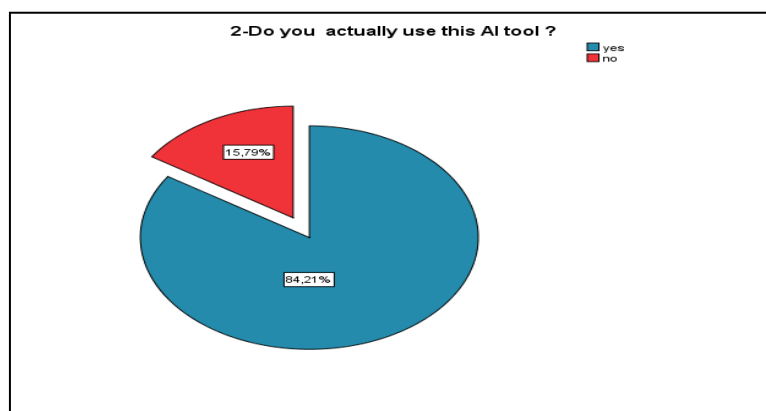
Q2: Do you actually use this AI tool ?

Table 2.2.4:

The use of ChatGPT tool

2-Do you actually use this AI tool?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	84	84	84
	No	9	16	16	100
	Total	57	100	100	

Results show that a majority of 84.2% actually **use** this AI tools while 15.8% of them **does not**. The findings indicate that most of them do in fact utilize these AI technologies .while small percentage of them do not use AI technologies, the majority do, a strong preference to include AI technologies into different areas of everyday duties, such as professional employment, personal projects, and academic writing, is evident from the high number of 84.2%. Users find that using AI technologies to generate ideas, increase productivity, and improve output quality is advantageous.

Figure 2.2.4.:*Use of ChatGPT as a tool***Q2:**If yes, why ?

Students who use ChatGPT see that this tool of AI is very beneficial for them; their answers contain very terms that prove their positive attitudes towards it.

This table show the repetition of the most commonly used root of words:

Table 2.2.5:*Use of ChatGPT*

Word	help	Easy/ier	facilitate	time	Fast	answer	Information	Correct
frequency	18	13	3	9	2	7	8	1

Data shows that the main reasons for this positive attitude are:

- ChatGPT is very helpful,
- It facilitates work and studies and make the homeworks easier,
- It gives solutions faster,
- It answers all questions and tests,

- It gives more information,
- It corrects mistakes,

Q3 Do you find ChatGPT beneficial in writing dissertation process?

Table 2.2.6.

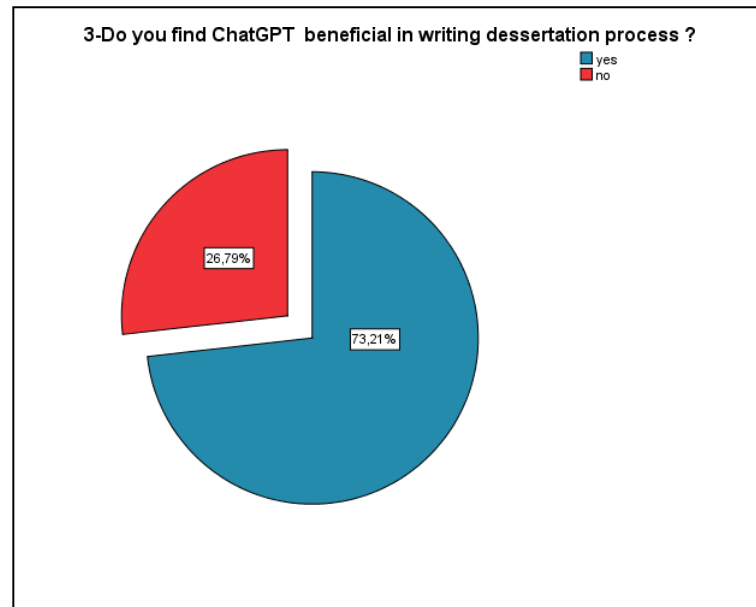
Benefits of ChatGPT

3-Do you find ChatGPT beneficial in writing dissertation process?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	41	72	73	73
	No	15	26	27	100
	Total	56	98	100	
Missing	System	1	2		
Total		57	100		

Results show that a majority of 73.2% find ChatGPT beneficial in writing dissertation process while 26.8% of them **does not**. So basically student see that ChatGPT to be helpful when writing a dissertation Participants that find ChatGPT useful frequently list a number of benefits. For example, they value its capacity to spark ideas, offer writing exercises, and provide direction on how best to organize their work. By recommending pertinent books and research resources, ChatGPT may also help students polish their thesis statements, make sure their writing is coherent, and enhance the overall caliber of their dissertations.

Figure 2.2.5.

Benefits of ChatGPT



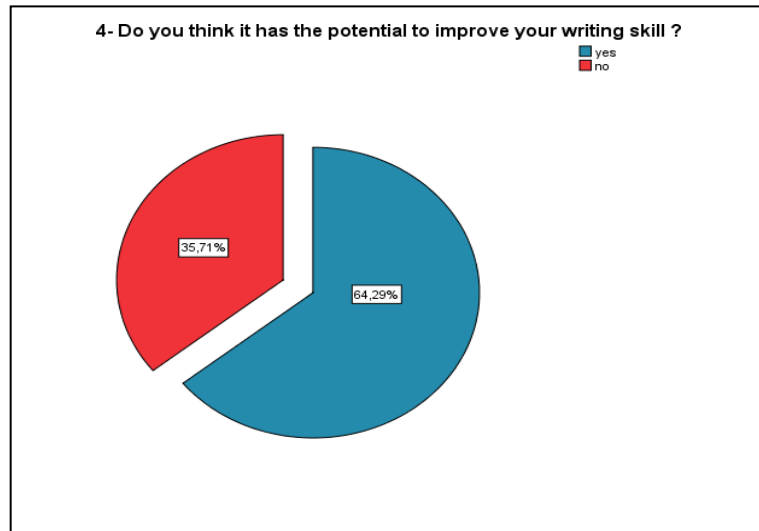
Q4:Do you think it has the potential to improve your writing skill ?

Table 2.2.7.:

Improve *writing skill*

4- Do you think it has the potential to improve your writing skill ?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	36	63	64	64
	No	20	35	35	100
	Total	56	98	100	
Missing	System	1	2		
Total		57	100		

Results show that a majority of 64.3% think it has the potential to improve their writing skill while 26.8% of them **does not**. This implies that a significant proportion of users consider ChatGPT to be an effective tool for improving their writing skills. People who think it's helpful frequently give multiple explanations for their favorable opinions. First of all, they value ChatGPT's instantaneous response, which can point out grammatical mistakes and offer sentence structure suggestions. Users can improve their writing style over time by learning from their mistakes and utilizing this real-time assistance.

Figure 2.2.6.:*Improve writing skill***Q2:Explain**

➤ The majority of Students think that ChatGPT impacts positively and improve their writing skill,

This table show the repetition of the most commonly used root of words for this category:

Table 2.2.8.:*Improve writing skill*

Word	help	improve	Provide	correct	New vocabulary	organise
Frequency	8	6	5	4	4	2

Data shows that the main positive points of ChatGPT are:

- It helps students as assistant in offering suggestions....
- It improves their writing skills,.
- It provides new ideas, information, new vocabulary and guidance to make writing better
- It point their written mistakes and spelling errors and paraphrasing...and correct them,..

- It organizes thoughts and ideas...
- Three other students show a negative attitude towards ChatGPT because of :
 - It leads them to laziness and rely on it.
 - There is nothing better than books to improve your writing skills
 - Improving writing skills comes by practice not by reliance on AI tools.
- The last two students see that ChatGPT is double-edged sword, they say that
 - It just give you ideas, however it limit your creativity,
 - It involves only dependent writing for example learners just write the instruction and let it do the task.

Q5: Express your attitude towards the following statements

In order to estimate the degree of attitude towards each statements; we have used the likert scale of five points. This table show how global attitude was obtained:

Table 2.2.9 :

Attitudes towards ChatGPT

Range of means	global attitude
From 1 to 2	Strongly disagree
From 1 to 2	Disagree
From 2 to 3	Neutral
From 3 to 4	Agree
From 4 to 5	Strongly agree

Table 2.2.10:

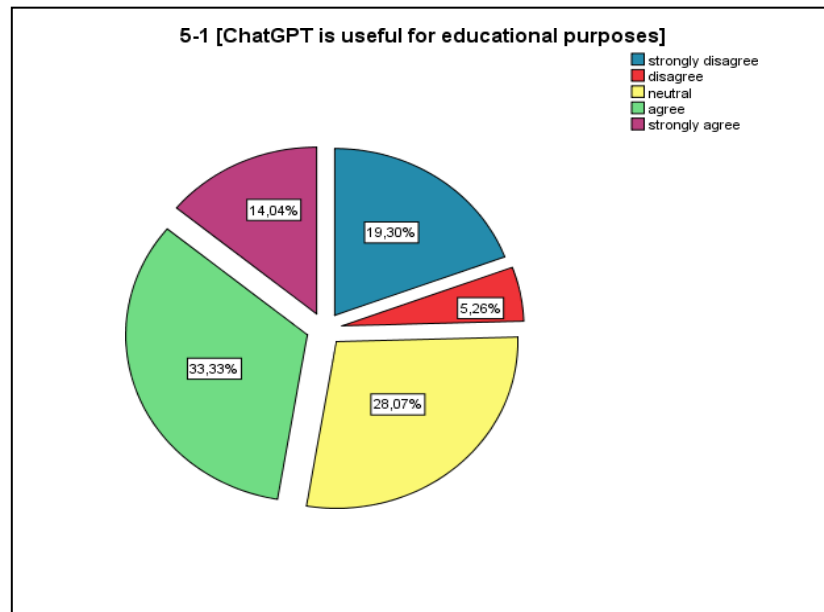
Attitudes towards ChatGPT

Descriptive Statistics				
Statements	N	Mean	Std. Deviation	Global attitude
5-1 [ChatGPT is useful for educational purposes]	57	3	1	Neutral
5-2 [I find it easy to manage academic tasks using ChatGPT .]	56	3	1	Neutral
5- 3 [there no limitations in using ChatGPT for writing assistance]	55	2	1	Disagree
5-4 [I intend to use ChatGPT in writing tasks for research paper assignement]	56	2	1	Disagree
5-5 [I always use ChatGPT to generate (introduction , arguments and conclusion) .]	55	2	1	Disagree
5-6 [ChatGPT helped me in improving my writing in terms of vocabulary and grammar .]	56	3	1	Neutral
5- 7 [i trust myself as a person who can find good words and ideas without using ChatGPT .]	56	3	1	Neutral

The global attitude of the statement [ChatGPT is useful for educational purposes] is Neutral with a mean of 3.18 and a standard deviation of 1.31. With a mean score of 3.18, it can be inferred that respondents generally do not strongly agree or disagree that ChatGPT is a beneficial tool for education. This suggests that participants have a balanced viewpoint, with some seeing its possible advantages and others possibly having doubts or misgivings.

Figure 2.2.7

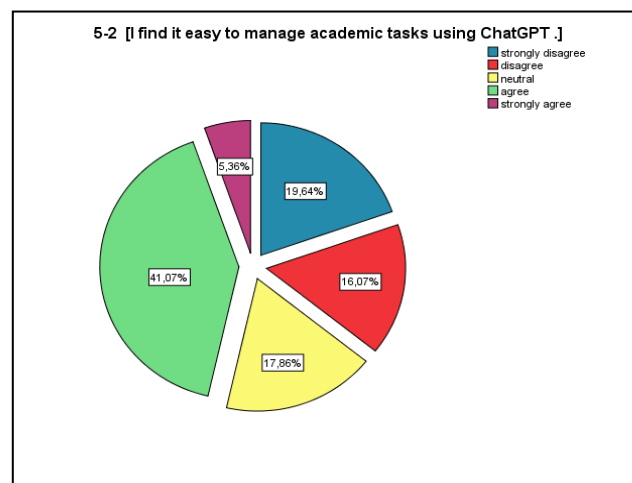
ChatGPT usefulness for educational purposes



The global attitude of the statement [I find it easy to manage academic tasks using ChatGPT.] is Neutral with a mean of 2.96 and a standard deviation of 1.26. The neutral mean score overall shows that users have a balanced opinion on how simple it is to utilize ChatGPT for academic work management. While many recognize the potential advantages, some encounter obstacles that keep them from utilizing the technology to its full potential. By taking into account these different experiences, developers can enhance ChatGPT's features and user interface, increasing its usefulness as an academic support tool

Figure 2.2.8 :

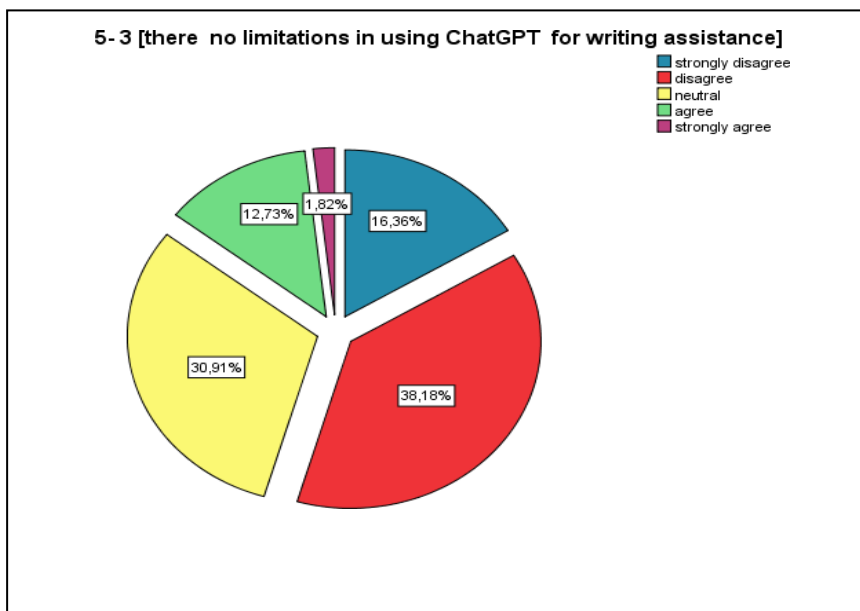
Manage academic tasks using ChatGPT



The global attitude of the statement [there no limitations in using ChatGPT for writing assistance] is disagree with a mean of 2.45 and a standard deviation of 0.98. With a mean score of 2.45, it appears that respondents generally don't agree with the claim that using ChatGPT for writing help has no restrictions. This score falls below the survey's midpoint, suggesting that many people think there are drawbacks to using ChatGPT for writing assignments.

Figure 2.2.9:

Limitations of using ChatGPT

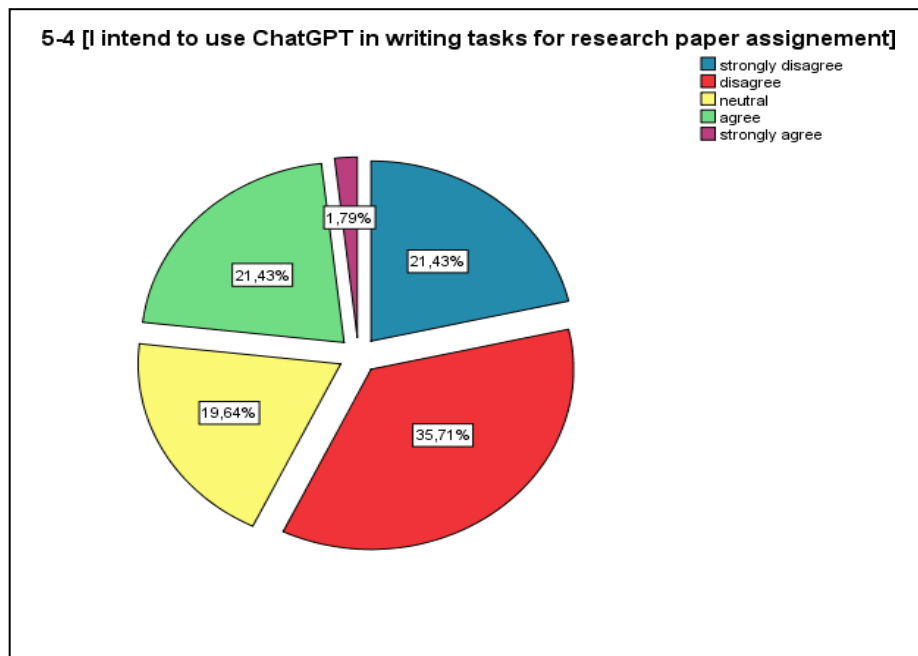


The global attitude of the statement [[I intend to use ChatGPT in writing tasks for research paper assignment disagree with a mean of 2.46 and a standard deviation of 1.1. Response variability is moderate, as indicated by the standard deviation of 1.1. This distribution implies that although a large number of respondents err on the side of disagreement, there are differing viewpoints regarding the

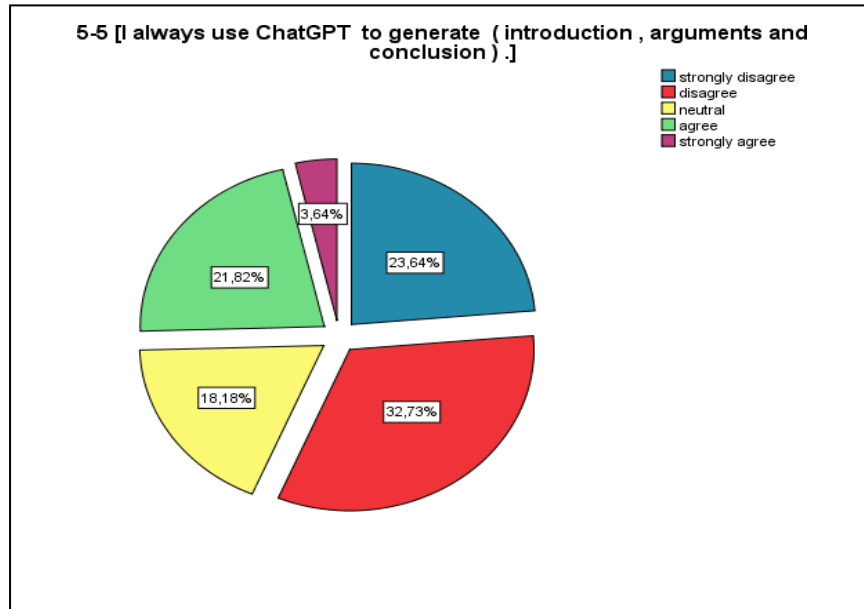
subject, with some people maybe finding ChatGPT to be more helpful for writing research papers than others.

Figure 2.2.10:

Using ChatGPT in writing tasks

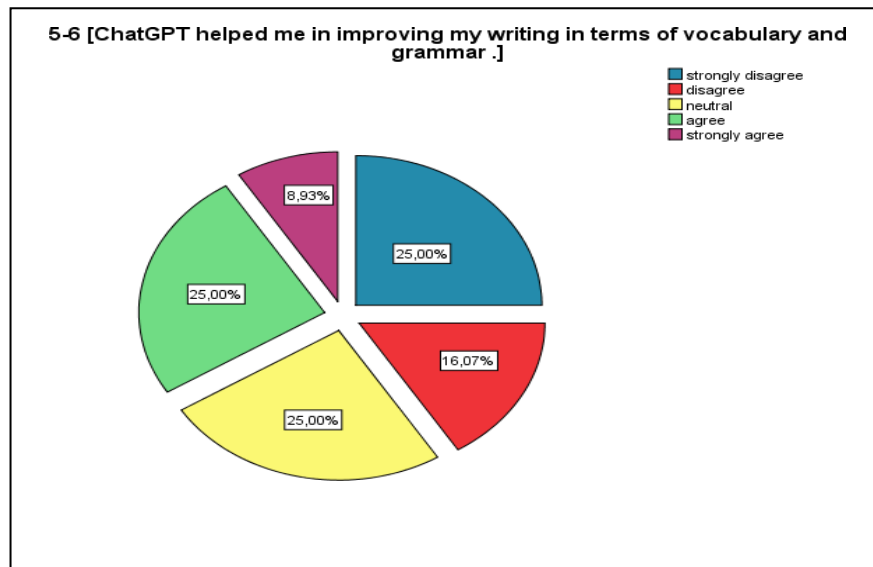


The global attitude of the statement [I always use ChatGPT to generate (introduction , arguments and conclusion) .]is disagree with a mean of 2.49 and a standard deviation of 1.18 With a mean score of 2.49, it appears that respondents generally don't agree that they always use ChatGPT to come up with ideas for important writing elements like introductions, arguments, and conclusions. This score, which is marginally below the survey's midpoint, suggests that participants generally are hesitant or reluctant to regularly rely on ChatGPT for these important portions of their writing.

Figure 2.2.11:*The uses of ChatGPT*

The global attitude of the statement [I always use ChatGPT to generate (introduction , arguments and conclusion) .] is Neutral with a mean of 2.77 and a standard deviation of 1.32. There is a significant amount of variety in the responses, as indicated by the 1.32 standard deviation. This distribution suggests that although a small percentage of respondents may have benefited greatly from using ChatGPT to enhance their grammar and vocabulary, other respondents may not have seen the same degree of progress or may have had indifferent or unfavorable experiences.

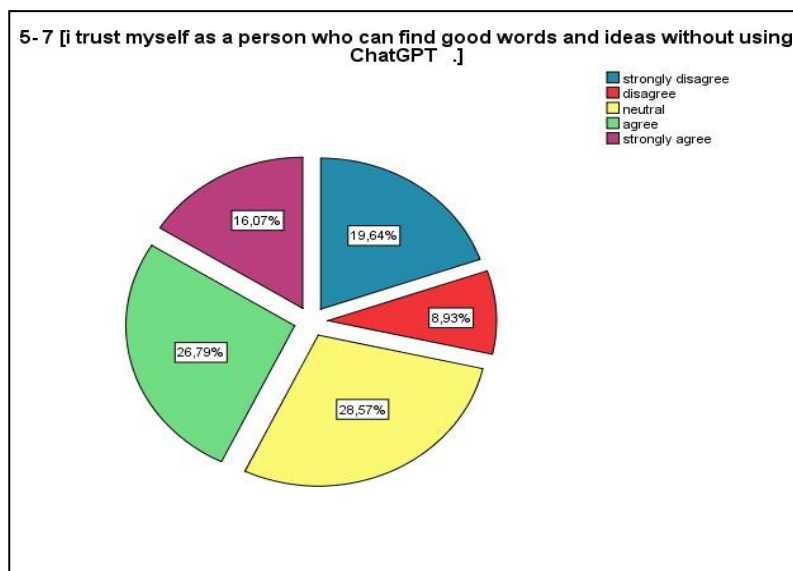
Figure 2.2.12:*ChatGPT helpful tool*



The global attitude of the statement [i trust myself as a person who can find good words and ideas without using ChatGPT] is Neutral with a mean of 3.11 and a standard deviation of 1.34. With a mean score of 3.11, the majority of respondents do not strongly agree or disagree with the statement. This shows that users' faith in their own abilities to come up with clever words and ideas without the help of ChatGPT is not entirely consistent. A small degree of self-confidence among respondents is indicated by the mean score's slight inclination toward agreement, which is slightly over the midpoint.

Figure 2.2.13:

Without ChatGPT



Q7:Would you recommend ChatGPT to other students in your field for dissertation writing assistance?

Table 2.2.11.:

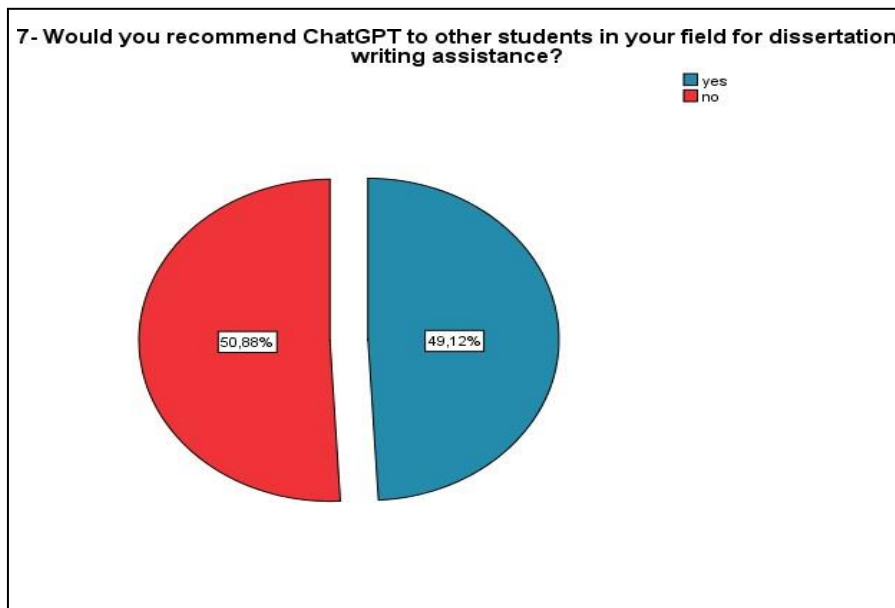
Recommend ChatGPT for writing dissertation

7- Would you recommend ChatGPT to other students in your field for dissertation writing assistance?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	49,1	49,1	49,1
	No	29	50,9	50,9	100,0
	Total	57	100,0	100,0	

Results show that the distribution is almost similar in the sample, in fact; 49.1% of respondents would recommend ChatGPT to other students in their field for dissertation writing assistance, while 50.9% of them **would not**.

Figure 2.2.14:

Recommend ChatGPT for writing dissertation



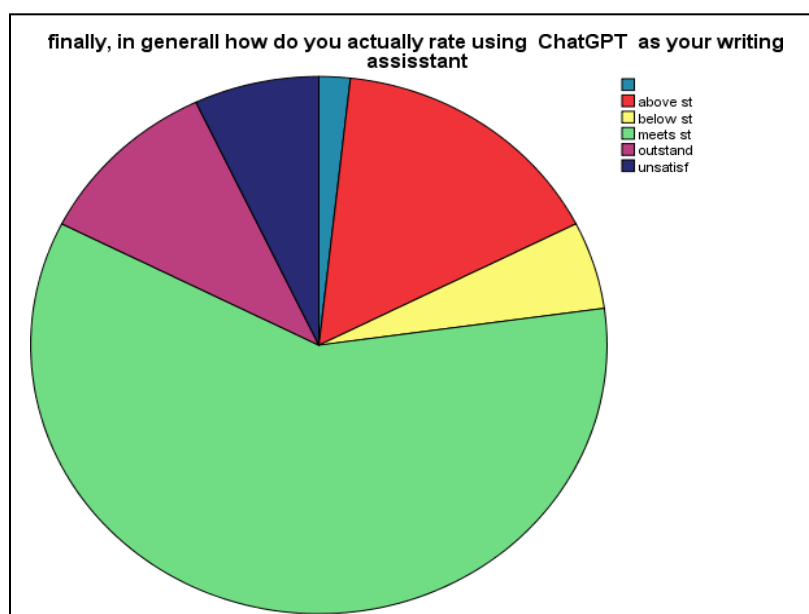
2- If yes: why

Certainly, with the right use, most of Students agreed to recommend ChatGPT to other students in their field for dissertation writing assistance for the following reasons if it is:

- It helps them for more information, academic writing and choosing professional words.
- It preserves time , energy and efforts,
- it corrects writing mistakes ,
- it provide them with the references, the Articles, sources tools and whatever they need

Figure 2.2.15:

Rating ChatGPT as writing assistant



2.2.2.1. Teacher Interview Analysis

Question 01: How long have you been teaching at university?

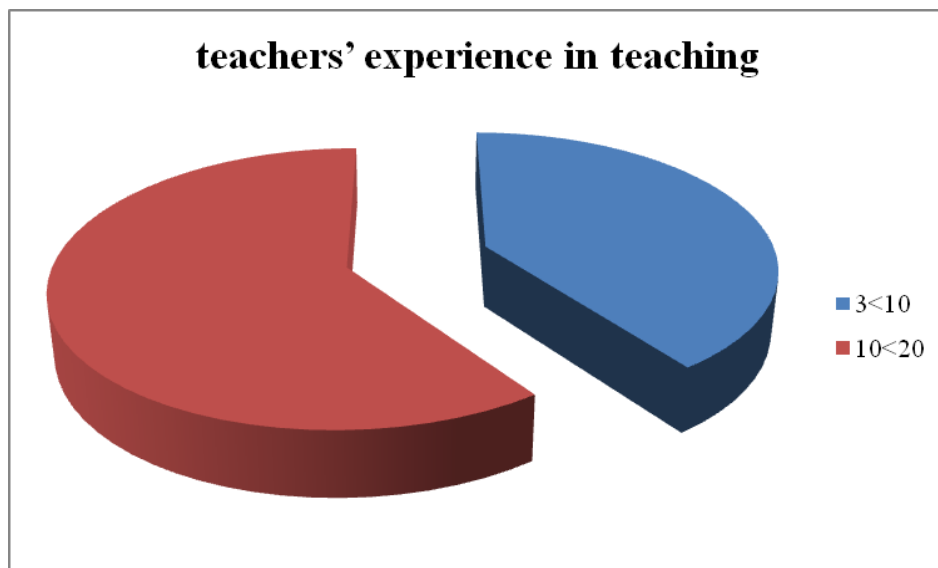
Table 2.2.12:

Teachers' Experience in Teaching.

Suggestion	3<10	10<20	Total
Number(N)	4	6	10
%	40%	60%	100%

Figure 2.2.16:

Teacher experience in teaching



Results shows that the majority **60%** of respondents average experience in teaching English, while wese **40%** of them in each side of brief and long experience.

Question 02:How do you perceive the potential impact of AI on the traditional role of teachers in the classroom?

Table 2.2.13:

Impact of AI on the role of traditional teachers in the classroom

Positive impact	Negative impact
<p>-AI tools enhance and streamline the teaching and learning processes.</p> <p>-AI may influence the quality of the productions done by students</p> <p>-it would revolutionise teacher roles, being a co-teacher helping him</p>	<p>-it may make the role more passive</p> <p>-Artificial Intelligence is mainly a significant evil</p> <p>- it destroys teachers' roles in the classroom</p>

Results shows that all respondents see that AI has a significant impact in the traditional role of teachers in the classroom, however they

Have differences in their vision of this impact:

2.2.2.1.1. Positively, five of the respondents sees that the use of AI in the classroom is crucial for everyteacher to enhance and streamline the teaching and learning processes.

2.2.2.1.2. logically; the three other respondents see that the role of teacher has not changed and the AI may

be positive if it is well used; AI may be a co-teacher that helps him as assistant with materials, resources assessment and testing tools and designs that influence the quality of the productions done by students.

2.2.2.1.3. The last two respondents have negative vision; they see that Artificial Intelligence is mainly asignificant evil used to destroy teachers' roles in the classroom and it may make the role more passive.

Question 03: Do you think ChatGPT might be used effectively to scaffold EFL students' writing skills?

Table 2.2.14

ChatGPT scaffold EFL students' writing skills

Suggestion	Yes	No	Total
Number(N)	6	4	10
%	60%	40%	100%

The answers show that respondents are divided into three categories:

2.2.2.1.4. **40%** of teachers think that Chat GPT contributes nothing to scaffold EFL students' writing skills, so it may in fact lead to increase student dependence, resulting in reduced motivation and potential

Laziness; it is also will be used to make good productions and use them as theirs which is illegal; so; it is clearly adopted to weaken EFL students' abilities rather than to scaffold their writing skills.

2.2.2.1.5. However, **60%** of respondent thinks that ChatGPT might be used effectively to scaffold EFL students' writing skills, but to some extent.

Question 06 :Are you familiar with GPT versions (free and paid/premium)?

Table 2.2.15:

Awareness about ChatGPT paid version

Suggestion	Yes	No	Total
Number(N)	7	3	10
%	70%	30%	100%

The answers show that **70%** respondents are familiar with GPT versions (free and paid/premium); while **30%** are not.

Question 08 :How would you integrate ChatGPT into your EFL classroom to support writing activities without overshadowing students' creativity?

The majority of respondents accept to integrate ChatGPT into their EFL classroom to support writing activities without overshadowing students' creativity by:

- Integrating ChatGPT effectively while still allowing students to express themselves uniquely by setting clear goals, encouraging revision and peer input, and recognizing student originality.
- Using ChatGPT as a teaching teck-based tool to brainstorm ideas, vocabulary, and writing samples and to assist in writing not replace it.
- Using ChatGPT as a learning resource in their modelling, practice, testing and error correction.

Question 09:Can you address potential concerns about over-reliance on ChatGPT among students in your EFL classroom?

Table 2.2.16:over-reliance on ChatGPT

Suggestio n	over-reliance on ChatGPT	reduces their Writing Skills, and loses their Autonomy and Creativity.	total
Number(N)	4	6	10
% -4	40%	60%	100%

40% respondents believe that it causes over-reliance on ChatGPT among students in their EFL while **60%** think that it reduces their Writing Skills, and loses their Creativity

2.2.2.3 Test Analysis

The students were asked to write an introduction of a given topic (artificial intelligence (AI)) using their own skills and knowledge than doing the same task but using ChatGPT as a writing assistance in order to compare between the two works.

Student 1:

Table 2.2.17:

Comparison of text n°1 and n°2

Text n°1 (without the use of ChatGPT)	Text n°1 (with the use of ChatGPT)
<p>Artificial intelligence is not something t it is a reality that we are living since years,these two last years. It invaded the whole ll his dimensions, when machines have the ty or more to act like humans, not only in iences but also in the daily life treatments otions and thoughts. Al presents the point he world from ordinary world to digital one.</p>	<p>Artificial Intelligence (AI) epitomizes the fusion of human ingenuity and technological advancement, aiming to replicate human cognition in machines. From recognizing patterns to making decisions, AI encompasses a broad spectrum of capabilities, ranging from reactive systems to self-aware entities. Its ultimate goal is to enable machines to perform tasks traditionally requiring human intelligence, revolutionizing our interaction with technology and the world.</p>

Comparison of text n°1 and n°2

To compare the two introductions on artificial intelligence (AI) in terms of language, syntax, grammar, organization, layout, cohesion, punctuation, and vocabulary, structure, organization, clarity, and effectiveness let's analyze each element

Table 2.2.18:

Students writing comparison

Sample n°01	Text n°01 without use of ChatGPT	Text n°02 with the use of ChatGPT
Language and vocabulary	<ul style="list-style-type: none"> • Basic vocabulary and many errors (e.g., "with all his dimensions" instead of "in all its dimensions"). • Informal language and tone. • No specialized vocabulary 	<ul style="list-style-type: none"> • Uses more technical and specialized vocabulary (e.g., "field of computer sciences," "machine learning," "speech and images recognition"). • Formal tone and language.
Syntax and grammar	<ul style="list-style-type: none"> • Several grammatical errors (e.g., "is not something temporal but it is a reality" should be "is not temporary but a reality"). • Misuses of articles and prepositions (e.g., "invaded the whole world with all his dimensions" should be "invaded the world in all its dimensions"). 	<ul style="list-style-type: none"> • Generally correct syntax and grammar. • Proper use of articles and prepositions.
	<ul style="list-style-type: none"> • Ideas are not clearly separated. • Introduction does not contain a captivating (not engaging and 	<ul style="list-style-type: none"> • Structured and clear division of ideas. • Begins with a

Organization and Layout	<p>awkwardly phrased. It doesn't capture the reader's attention effectively.)</p> <ul style="list-style-type: none"> • Thesis Statement: The main point is not clear it lacks a strong thesis statement that summarizes the main argument. 	<p>definition of AI and delves into its applications and impact.</p>
Cohesion	<ul style="list-style-type: none"> • No clear transition • The flow of ideas is not smooth 	<ul style="list-style-type: none"> • Ideas flow smoothly from one to the next, enhancing understanding of topic. • Clear transitions.
Punctuation	<p>Missuses of commas and periods ex (daily life treatments including emotions and thoughts. AI presents the point" should be "daily life, including emotions and thoughts. AI presents the point").</p>	<ul style="list-style-type: none"> • Generally correct punctuation.

For the test if we compare between the two students work we will find that The second text used by ChatGPT is superior in terms of language, syntax, grammar, organization, layout, coherence, punctuation, and vocabulary. It employs more precise and technical language appropriate for the topic of AI, has a more formal tone, and is better organized, with clear transitions between ideas. While conveying the general idea, the first text is less clear and precise, with more grammatical errors and

awkward phrasing. We can say that the use of ChatGPT as writing assistant made noticeable improvements in the writing process.

Table 2.2.19.

Student n°02 comparison of text n°01 and n°02

Text n°1 (without the use of ChatGPT)	Text n°1 (with the use of ChatGPT)
<p>Man always searches for what is easy, and technology has provided him with that over time, but the most important human invention that man has ever encountered is artificial intelligence. AI contains a huge information base equipped with the most important details and data about the user, and it can also be loaded with his personal information. All of this is in the interest of the human being because it will make it easier for him to do many tasks and even make decisions. The latter is divided into several types, and each type has a certain propriety</p>	<p>Artificial Intelligence (AI) epitomizes the fusion of human ingenuity and technological advancement, aiming to replicate human cognition in machines. From recognizing patterns to making decisions, AI encompasses a broad spectrum of capabilities, ranging from reactive systems to self-aware entities. Its ultimate goal is to enable machines to perform tasks traditionally requiring human intelligence, revolutionizing our interaction with technology and the world</p>

Table 2.2.20:*Students writing comparison*

Sample n°01	Text n°01 without use of ChatGPT	Text n°02 with the use of ChatGPT
Language and vocabulary	<ul style="list-style-type: none"> • Uses simple and somewhat repetitive language ("important human invention," "most important details"). • Vocabulary is basic, with some incorrect words (e.g., "properity" instead of "property"). 	<ul style="list-style-type: none"> • Uses more technical and specialized vocabulary (e.g., "field of computer sciences," "machine learning," "speech and images recognition"). • Formal tone and language.
	<ul style="list-style-type: none"> • The syntax is straightforward but occasionally awkward. There are grammatical errors, such as "properity" instead of "property" and inconsistent pronoun usage ("his personal 	<ul style="list-style-type: none"> • The syntax is complex and varied, with correct grammar throughout. Sentences are well-structured and easy to follow

Syntax and Grammar	information").	
Organization and Layout	<ul style="list-style-type: none"> The organization is clear and logical. It starts with a general statement about AI, elaborates on its capabilities, and concludes with its goals, providing a well-rounded view in a concise manner. 	<p>The organization is clear and logical. It starts with a general statement about AI, elaborates on its capabilities, and concludes with its goals, providing a well-rounded view in a concise manner.</p>
Cohesion	<ul style="list-style-type: none"> No clear transition The flow of ideas is not smooth 	<ul style="list-style-type: none"> Ideas flow smoothly from one to the next, enhancing understanding of topic. Clear transitions.
Punctuation	<ul style="list-style-type: none"> Punctuation is mostly correct but inconsistent. The sentence structures could benefit from more varied punctuation to enhance readability. 	<ul style="list-style-type: none"> Punctuation is consistently correct and aids in the clarity and flow of the text.

2.2.3. General Discussion of Findings

The present study seeks to investigate EFL teachers attitudes towards the use of ChatGPT to assist students writing production. After analyzing the data collecting tools , for both participants the teachers interviews and the students questionnaires and test .The results shows that many students have a positive opinion toward the use of ChatGPT which have significant improvement on the learners' writing skill.

Moreover, most of them believed that ChatGPT can assist in tasks such as literature review, data analysis, and even writing entire sections of academic papers, and that it can help save time and energy by generating ideas, providing summaries, and offering suggestions for further research.

Additionally, majority of teachers see that ChatGPT has emerged as a capability device for helping writers in the studies and writing system and that it has emerged as a potential tool for assisting writers in the research and writing process .However, they are concerns about ChatGPT regarding its reliability and potential risks related to its use. They even recommend it to their students and encourage them to use ChatGPT as their writing assistant on condition of an overall guidance while using this new technology in order to prevent negative effect.

However, some teachers see that there are worries concerning its reliability and capability risks related to its use. They even highlights the importance of maintaining human judgment inside the writing system and the usage of ChatGPT as a complementary tool as opposed to a replacement for human attempt.

- In fact, other respondents see that the position of teacher has now not modified and the AI may be fine if it is well used; AI can be a co-trainer that allows him as assistant with substances, resources evaluation and checking out equipment and designs that affect the quality of the productions completed by means of students. While two respondents have negative vision; they see that Artificial Intelligence is mainly a significant evil used to destroy teachers' roles in the classroom and it may make the role more passive.

Basically, 40% of teachers think that Chat GPT contributes nothing to scaffold EFL students' writing competencies, so it could in truth purpose growth student dependence, resulting in decreased motivation and ability laziness; but, 60% of respondent thinks that ChatGPT is probably used successfully to scaffold EFL college students' writing skills, but to some extent.

In addition, Results show that 73.2% of EFL master two students have a positive attitude towards the use ChatGPT as writing assistant also they find ChatGPT beneficial in writing dissertation process while 26.8% of them **does not**.

For the test if we compare between the two students work we will find that The second text used by ChatGPT is superior in terms of language, syntax, grammar, organization, layout, coherence, punctuation, and vocabulary. It employs more precise and technical language appropriate for the topic of AI, has a more formal tone, and is better organized, with clear transitions between ideas. While conveying the general idea, the first text is less clear and precise, with more grammatical errors and awkward phrasing. We can say that the use of CHATGPT as writing assistant made noticeable improvements in the writing process.

2.2.4. Recommendations

Depending on the findings of this study numerous recommendations and ideas for additional research have been suggested the eighth question that were asked (10) participants to recommend How would integrate ChatGPT into your EFL classroom to support writing activities without overshadowing students' creativity.

- ❖ Integrating ChatGPT effectively while still allowing students to express themselves uniquely by setting clear goals, encouraging revision and peer input, and recognizing student originality.
- ❖ Using ChatGPT as a teaching teck-based tool to brainstorm ideas, vocabulary, and writing samples and to assist in writing not replace it.
- ❖ Using ChatGPT as a learning resource in their modelling, practice, testing and error correction.

However, ChatGPT can be effectively used in classes if:

- ❖ Giving students a glimpse of vocabulary uses in ChatGPT as a good warm up, the nask them to write an essay using same vocabulary .
- ❖ Give the students a piece of written essay or paragraph as a style model andask then to paraphrase it with your own word .
- ❖ Give the students permission to use ChatGPT to get them into the habit of disclosing AI usage, you might want to require students to note whether they used it for proofreading, outlining, or brainstorming. To encourage metacognitive skill.
- ❖ Set aside dedicated times to use ChatGPT as a supplementary resource, rather than relying on it as the main toll when writing.
- ❖ Promote critical thinking by posing queries and evaluating answers.
- ❖ Concentrate on acquiring fundamental abilities such as improving your writing skill on your own by practice and ChatGPT to supplement learning, not to replace it.
- ❖ Solve problems or write essays independently than consult ChatGPTto compare and refine your work

- ❖ Combine ChatGPT's assistance with other learning tools and techniques and do not hesitate to seek help from your teachers/supervisor to improve your writing abilities and facilitate your dissertation writing.
- ❖ Without using ChatGPT's initial input, come up with a thesis statement and an outline for your key points. Discuss your ideas with mentors or peers to refine them.
- ❖ Use ChatGPT for targeted inquiries or to elucidate difficult ideas; do not use it for extensive research or content production.
- ❖ Make sure the primary content is entirely your own, even if you use ChatGPT's grammar and style suggestions.
- ❖ Double check and properly credit all of your sources. Never claim ownership of content created by AI.
- ❖ It is our hope that the Algerian government would Provide ChatGPT the paid version for master student so they would be able to use as writing assistant and have an access to more services.

2.2.5. Conclusion

The purpose of this study is to investigate EFL teacher's attitude towards the use of ChatGPT to assist students writing production especially in Ibn Khaldoun

The current chapter include a description for the sample population for both participants; teachers profile and students profile by using two data collecting methods and detailed description for both methods. Hence, the subsequent section delved into the analysis and interpretation of the findings derived from

A questionnaire conduct with (57) students of master two of the English department and test for (2) master two students an interview which address to (10) teachers of English at the university of Ibn Khaldoun

In addition to that, this chapter obtains a general discussion of the findings and then it mentioned some limitations that faced the researcher followed finally by some recommendations for future research.

General Conclusion

The present research has investigated EFL teachers attitude towards the use of ChatGPT to assist students writing production, at Ibn Khaldoun University. Specially according to the research hypothesis: first, EFL teachers believe that ChatGPT are an effective and a useful as an educational and learning tool.. Second, students and teachers are aware of ChatGPT as new trend will improve their writing skill ,and it will raise their confidence providing a wide range of vocabulary and grammatical structures. . third, The use of academic tool will affect students writing skill and produce lazy thinkers. In order to reach this aim of the study, three data collection tools were conducted with both research participants; teachers interviews and students test and questionnaires.

Moreover, the research at its core attempted to find answers to the research questions that ask about: What are teacher the attitudes toward using ChatGPT?. It also sought to know about How aware are students and teachers of ChatGPT as new trend ?and to investigate about What would be potential challenges resulting from it s use?

The findings of the research answers the research questions and confirmed the hypotheses which shows that:

First, the students like using ChatGPT in general, they find it very useful, and they prefer to use as their writing assistant.

Second, The development received from ChatGPT use is vast, since it assist students in their writing skill Third, ChatGPT is very smooth use packages and very beneficial and effective for inexperienced persons' manufacturing and getting to know system in terms of vocabulary grammar And so forth.

Third, Students who use ChatGPT see that this tool of AI is very beneficial for them in writing dissertation process.

The present study can be very beneficial, if teachers provide a special care for students writing skill. Teachers should select the most appropriate time to use ChatGPT encourage and help them in order to develop their vocabulary and grammar.

Similar to any academic research, the findings of the current study have to be seen in light of some limitations and challenges which are concerned with:

- The lack of previous studies on some aspects of the study. Is a vital step in any scientific take a look at as it enables researchers determine the scope of contemporary work within the selected discipline. It is a chief basis for any researcher who ought to use them to gain a hard and fast of particular dreams or targets; however; there is not enough sources like art.
- Findings may not be applicable to other contexts without further research.
- Time constraints so it took too much time finding previous studies and collecting data.

Bibliography

- Adeshola, I., & Adepoju, A. P. (2023). The opportunities and challenges of ChatGPT in education. *Interactive Learning Environments*, 1-14.
- AI for Banking*. (n.d.). SAS. https://www.sas.com/de_ch/solutions/ai/banking.html
- Andrijana. (2022, February 26). Algeria adopts AI strategy | Digital Watch Observatory.
- Arrieta, A. B., Díaz-Rodríguez, N., Del Ser, J., Bennetot, A., Tabik, S., Barbado, A., Asokan, A. Advantages of Artificial Intelligence in Education and Healthcare Sectors. *Effects, Applications and Future Scope of Recent Advances in Healthcare and Education Sectors*, 153.
- Atlas, S. (2023). ChatGPT for higher education and professional development: A guide to conversational AI.
- Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*, 7(1), 52-62.
- Benjamins, R. (2020). Explainable Artificial Intelligence (XAI): Concepts, taxonomies, opportunities and challenges toward responsible AI. *Information fusion*, 58, 82-115.
- Bašić, Ž., Banovac, A., Kružić, I., & Jerković, I. (2023). Better by You, better than Me? ChatGPT-3 as writing assistance in students' essays.
- Brynjolfsson, E., & McAfee, A. (2014). "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies." W. W. Norton & Company.
- Chen, T.-J. (2023). ChatGPT and other artificial intelligence applications speed up scientific writing. *Journal of the Chinese Medical Association*, 86(4), 351-353.

Elbanna, S., & Armstrong, L. (2023). Exploring the integration of ChatGPT in education: adapting for the future. *Management & Sustainability: An Arab Review*.

Elbanna, S., & Armstrong, L. (2024). Exploring the integration of ChatGPT in education: adapting for the future. *Management & Sustainability: An Arab Review*, 3(1), 16-29.

Eaton Business School. (2023, December 15). Exploring the 7 Types of AI: A

Comprehensive guide. *Eaton Business School*.

Fitria, T. N. (2023). *Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essay*. Paper presented at the ELT Forum: Journal of English Language Teaching.

Herbold, S., Hautli-Janisz, A., Heuer, U., Kikteva, Z., & Trautsch, A. (2023). A large-scale comparison of human-written versus ChatGPT-generated essays. *Scientific Reports*, 13(1), 18617.

Haleem, A., Javaid, M., & Khan, I. H. (2019b). Current status and applications of Artificial Intelligence (AI) in medical field: An overview. *Current Medicine Research and Practice*, 9(6), 231–237. <https://doi.org/10.1016/j.cmrp.2019.11.005>

Hastie, T., Tibshirani, R., & Friedman, J. (2009). "The Elements of Statistical learning data mining, Inference, and Prediction." Springer.

Imran, M., & Almusharraf, N. (2023). Analyzing the role of ChatGPT as a writing assistant at higher education level: A systematic review of the literature. *Contemporary Educational Technology*, 15(4), ep464.

Intriguing properties of neural networks. arXiv preprint arXiv:1312.619.

- Jahic, I., Ebner, M., & Schön, S. (2023). Harnessing the power of artificial intelligence and ChatGPT in education—a first rapid literature review. *Proceedings of EdMedia+ Innovate Learning, 2023*, 1462-1470.
- Kostka, I., & Toncelli, R. (2023). Exploring applications of ChatGPT to English language teaching: Opportunities, challenges, and recommendations. *TESL-EJ, 27*(3).
- Khadir, Mohamed & Bouziane, SeifEddine. (2020). Artificial Neural Networks modeling of electrical renewable energy both photovoltaic and wind for the region of Adrar Algeria.
- Leng, L. (2024). Challenge, integration, and change: ChatGPT and future anatomical education. *Medical Education Online, 29*(1), 2304973.
- Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences, 13*(4), 410.
- Mosaiyebzadeh, F., Pouriye, S., Parizi, R., Dehbozorgi, N., Dorodchi, M., & Macêdo Batista, D. (2023). *Exploring the Role of ChatGPT in Education: Applications and Challenges*. Paper presented at the Proceedings of the 24th Annual Conference on Information Technology Education.
- Madhvani, N. (n.d.). *Generative AI tools*. Rapidops.
- Marcus, G. (2018). "Rebooting AI: Building Artificial Intelligence We Can Trust." Pantheon.
- Marzuki, Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education, 10*(2). <https://doi.org/10.1080/2331186x.2023.223646>.

- Oranga, J. (2023). BENEFITS OF ARTIFICIAL INTELLIGENCE (CHATGPT) IN EDUCATION AND LEARNING: IS CHAT GPT HELPFUL? *International Review of Practical Innovation, Technology and Green Energy (IRPITAGE)*, 3(3), 46-50.
- Rahman, M. M., & Watanobe, Y. (2023). ChatGPT for education and research: Opportunities, threats, and strategies. *Applied Sciences*, 13(9), 5783.
- Rasul, T., Nair, S., Kalendra, D., Robin, M., de Oliveira Santini, F., Ladeira, W. J., . . . Heathcote, L. (2023). The role of ChatGPT in higher education: Benefits, challenges, and future research directions. *Journal of Applied Learning and Teaching*, 6(1).
- Rawas, S. (2023). ChatGPT: Empowering lifelong learning in the digital age of higher education. *Education and Information Technologies*, 1-14.
- Rajagopalan, R. (2023, September 28). *10 Examples of artificial intelligence in business* university of san diago <https://onlinedegrees.sandiego.edu/artificial-intelligence-business/>
- Russell, S., & Norvig, P. (2010). "Artificial Intelligence: A Modern Approach" (3rd Ed.).
- Sallam, M., Salim, N., Barakat, M., & Al-Tammemi, A. (2023). ChatGPT applications in medical, dental, pharmacy, and public health education: A descriptive study highlighting the advantages and limitations. *Narra J*, 3(1), e103-e103.
- Su, Y., Lin, Y., & Lai, C. (2023). Collaborating with ChatGPT in argumentative writing classrooms. *Assessing Writing*, 57, 100752.
- T. H., & Harris, J. (2007). *Competing on Analytics*. Harvard Business
- Tahiru, Fati. (2021). AI in Education: A Systematic Literature Review. *Journal of Cases on Information Technology*. 23. 1-20. 10.4018/JCIT.2021010101.

Wu, Y. (2023). Integrating Generative AI in Education: How ChatGPT Brings Challenges for Future Learning and Teaching. *Journal of Advanced Research in Education*, 2(4), 6-10.

Appendices

Appendix 01

Student's questionnaire

Student's questionnaire

Students Questionnaire

Dear participants,

You are kindly invited to fill out this questionnaire which is part of a research study at Ibn Khaldoun university Tiaret .This investigation tool aims to investigate EFLteachers attitude towarde

the use of chat gpt to assist student writing production. Please tick ✓ the appropriate box(es).or write statements when required.

.we thank you in advance for your participation and contribution.

SECTION 01:**general Information about participants**

E-MAIL ID* *

Votre réponse

1-Gender: male female**3-speciality** 1- Didactics 2- Linguistics**SECTION 02:****Using (ChatGPT) in Academic Settings**

1- Have you heard of ChatGPT before ?

 yes no

2- Do you actually use this AI tool ?

 YES NO

-If yes , Why?

Votre réponse _____

3-Do you find ChatGPT beneficial in writing dissertation process ?

Yes

No

4- Do you think it has the potential to improve your writing skill ?

YES

No

-Explain

Votre réponse _____

5- Express your attitude towards the following statements :

	Strongly Disagree	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
ChatGPT is useful for educational purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it easy to manage academic tasks using ChatGPT .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
there no limitations in using ChatGPT for writing assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to use ChatGPT in writing tasks for research paper assignement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always use ChatGPT to generate (introduction , arguments and conclusion) .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ChatGPT helped me in improving my writing in terms of vocabulary and grammar .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i trust myself as a person who can find good words and ideas without using ChatGPT .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6- How do you balance using ChatGPT as a writing aid with maintaining your own voice and originality in your academic writing?

Votre réponse _____

7- Would you recommend ChatGPT to other students in your field for dissertation writing assistance?

- YES
- NO

- If yes , Why?

Votre réponse _____

8- Are you aware that free/ paid version exist ?

- YES
- NO

-If yes , what do you think the main difference between them ?

Votre réponse _____

finally, in general how do you actually rate using ChatGPT as your writing assistant

- outstanding
- above standars
- meets standars
- below standars
- unsatisfactory

Appendix 02

Test used as an experiment

Test n°01

We would like to express our gratitude for your willingness to participate in our research and your contribution which is greatly appreciated and immensely impactful. By taking the time to share your perspectives and experiences, you are actively contributing to the growth of knowledge in our field. Your invaluable insights are crucial in advancing our understanding of “Investigating EFL Teachers' Attitudes towards the Use of ChatGPT to assist Students' Writing Productions. Master two Case Study”

Instructions:

- Read the passage below carefully.
- Use your own knowledge and skills to write an introduction of a chapter concerning the topic below.
- Do not exceed 5 lines

Note: The test will be taken twice but differently to evaluate your writing performance using two different methods, the second method will be announced after your completion of the first task.

AI is the simulation of human intelligence in machines that are programmed to think and learn like humans. The primary goal of AI is to create systems capable of performing tasks that would typically require human intelligence, such as visual perception, speech recognition, decision-making, data analytics, and language translation. Artificial Intelligence is incredibly diverse, encompassing a range of systems from primary reactive machines to highly advanced, self-aware entities. Here, we delve deeper into the four main types of AI, exploring their capabilities, applications, and the future potential they hold.

Reactive Machines: These are the most basic types of AI systems that can react to specific situations and inputs. They don't have memory-based functionality, so they cannot use past experiences to inform current decisions. A classic example is IBM's Deep Blue, which defeated chess champion Garry Kasparov in 1997.

Limited Memory AI: these AI systems can use past experiences to make current decisions. Most present-day AI applications, including self-driving cars and chatbots like OpenAI's GPT series, fall under this category.

Theory of Mind AI: This is a more advanced type of AI that researchers are currently developing. Understanding and remembering emotions, beliefs, and needs that affect human behavior is expected. This level of AI will be more interactive and personal.

Self-aware AI: This represents the future of AI, where machines will have their consciousness and self-awareness. This type of AI is still theoretical and a subject of science fiction.

Test n°02

We would like to express our gratitude for your willingness to participate in our research and your contribution which is greatly appreciated and immensely impactful. By taking the time to share your perspectives and experiences, you are actively contributing to the growth of knowledge in our field. Your invaluable insights are crucial in advancing our understanding of “Investigating EFL Teachers' Attitudes towards the Use of ChatGPT to assist Students' Writing Productions. Master two Case Study”

Instructions:

- Read the passage below carefully.
- Write an introduction concerning the topic below.
- Use ChatGPT as your writing assistance to guide you through out the task.
- Do not exceed 5 lines

AI is the simulation of human intelligence in machines that are programmed to think and learn like humans. The primary goal of AI is to create systems capable of performing tasks that would typically require human intelligence, such as visual perception, speech recognition, decision-making, data analytics, and language translation. Artificial Intelligence is incredibly diverse, encompassing a range of systems from primary reactive machines to highly advanced, self-aware entities. Here, we delve deeper into the four main types of AI, exploring their capabilities, applications, and the future potential they hold.

Reactive Machines: These are the most basic types of AI systems that can react to specific situations and inputs. They don't have memory-based functionality, so they cannot use past experiences to inform current decisions. A classic example is IBM's Deep Blue, which defeated chess champion Garry Kasparov in 1997.

Limited Memory AI: these AI systems can use past experiences to make current decisions. Most present-day AI applications, including self-driving cars and chatbots like OpenAI's GPT series, fall under this category.

Theory of Mind AI: This is a more advanced type of AI that researchers are currently developing. Understanding and remembering emotions, beliefs, and needs that affect human behavior is expected. This level of AI will be more interactive and personal.

Self-aware AI: This represents the future of AI, where machines will have their consciousness and self-awareness. This type of AI is still theoretical and a subject of science fiction.

Appendix 03

Interview Questions

Dear respondents,

This interview is meant to elicit your views about our dissertation's topic "the use of ChatGPT as a writing assistant". Please write the answers that reflect your opinions freely in the blanks spaces below.

Interview questions :

1- How long have you been teaching English?

Answer:

2- How do you perceive the potential impact of AI on the traditional role of teachers in the classroom?

Answer :

3- Do you think ChatGPT might be used effectively to scaffold EFL students' writing skills?

Answer:

4- How do you perceive the potential benefits and drawbacks of using AI technology like ChatGPT in EFL writing instruction?

Answer:

5- How do you see the teacher's role evolving in an EFL classroom where ChatGPT is used as a writing assistance tool?

Answer:

6- Are you familiar with GPT versions (free and paid/premium)?

Answer:

7- If yes, what specific features of ChatGPT Premium do you think would be most beneficial for enhancing EFL writing instruction in your classroom?

Answer:

- 8- How would you integrate ChatGPT into your EFL classroom to support writing activities without overshadowing students' creativity?

Answer:

- 9- Can you address potential concerns about over-reliance on ChatGPT among students in your EFL classroom?

Answer:

- 10- How will you address concerns about academic integrity and plagiarism in the context of students using AI tools for their assignments or dissertations?

Answer:

- 11- What measures will you take to ensure that ChatGPT is used ethically and responsibly by students in the EFL classroom?

Answer:

- 12- What do you believe are the key factors that will determine the success or failure of implementing ChatGPT as a writing assistance tool in your EFL classroom?

Answer:

Once again, thank you for your participation, time and effort we are genuinely grateful for your support and contribution to reach our research objective.

ملخص

تحاول الدراسة الحالية الكشف عن مواقف معلمي اللغة الإنجليزية كلغة أجنبية تجاه الأداة الجديدة المولدة بواسطة الذكاء الاصطناعي وخدماتها التي يعتمد عليها طلاب اللغة الإنجليزية كلغة أجنبية لمساعدتهم في مهامهم الكتابية. في هذه الحالة، تم استخدام نهج متعدد الأساليب بما في ذلك استبيان للطلاب، ومقابلة للمعلمين، و اختبار لتأكيد النتائج. لقد تم الكشف بعد التحليلات أن المعلمين، رغم مواقفهم الإيجابية تجاه ميزات وخدمات هذه الأداة، لا يزالون مترددين بشأن بعض النقاط الأخلاقية المتعلقة بها

Resumé

La présente étude tente de révéler les attitudes des enseignants d'Anglais concernant le nouvel outil généré par AI: ChatGPT et ses services sur lesquels les étudiants d'EFL comptent sur pour les aider dans leurs devoirs écrits. Pour ce cas, une approche mixte a été utilisée, comprenant un questionnaire pour les étudiants, un entretien pour les enseignants et une activité de test pour valider les résultants. Il a été révélé après les analyses que les enseignants malgré leurs attitudes positives à l'égard des fonctionnalités et des services de ChatGPT, sont hésitent encore sur certains points éthiques.

Summary

The present study attempts to reveal EFL teachers' attitudes regarding the new AI generated tool : ChatGPT and its services which EFL Students' rely on to assist them in their written assignments. For this case, a mixed method approach was utilized including a questionnaire for the students, an interview for the teachers and a testing activity to validate the findings. It has been revealed after the analyses that teachers despite their positive attitudes towards ChatGPT features and services, they still hesitate about some ethical points in its regard.