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Investigating EFL Teachers' Acceptance of AI Academic Tools: a Technology Acceptance Model Case Study at the Department of English-Guelma University

A Dissertation Submitted to the Department of Letters and English Language in Partial Fulfillment of the Requirements for the Degree of Master in Language and Culture

Board of Examiners

Chair: Dr. Amina ELAGGOUNE	(M.C.A)	University 08 Mai 1945 Guelma
Supervisor: Mr. Layachi ZEMMOURI	(MA.A)	University 08 Mai 1945 Guelma
Examiner: Mrs. Hosna HENAINIA	(MA.A)	University 08 Mai 1945 Guelma

Submitted by:
Nedjeh BELHADDAD

Supervised by:
Mr. Layachi ZEMMOURI

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Dedication

For seventeen years, every step I took was driven by one heartfelt desire: to see the pride and glory shining in my parents' eyes — the fruit of their boundless support and love. Every accomplishment in my life remains eternally dedicated to my beloved mother and father.

To the one who was my Everything in life…without her, life lost its taste, every joy feels incomplete and whose absence left a quiet ache that time refuses to heal...

To my beloved Mother ***Hayat***

Since your absence, my heart has been bleeding with longing for you,

Especially in this moment when I yearn for your warm embrace, your proud smile.

My nights are drowned in silent tears that never seem to dry.

Yet, despite the tears, your words remain within me — your wish for me to complete my studies, to enjoy life, have given me the strength to continue this journey

You may have left this world, but you remain alive in every detail of my life, in my heart

Your soul lives within me… eternal and unerasable.

I will always be the daughter of the kindest and most sweetheart this world has ever known.

To my father, My Hero ***Moussa*** *The man whose wisdom shaped my mind, whose patience whose quiet strength stood behind my every step.*

The man who has always been my biggest supporter, my courage, my confidant, my role model

In your unconditional love, I found my path…In your presence, I found comfort

Through every sacrifice and every silent hardship, you shaped a life for me full of warmth and love — a life where I was always your little princess, safe under the shelter of your heart

*To my sisters by blood... my daughters by heart "**Rahma** and **Farah**" You grew under my eyes, wrapped in my care. My arms will always open, my heart will always hold you.*
No storm can break you while I stand … No fear can touch you while I breathe.
forever your mother, your home, your comfort zone

*To my beloved brothers, **Anis** and **Zinou**,*
Anis, when I look at you, I see a man who fills my heart with pride and strength...I am Proud to have in my life Bro.
Zinou, you will forever remain my little brother, near or far, you are a piece of my heart that no one can ever takte away.

*To the noble king whose care was deeper than words **Dr. Aggoune Haithem***
you were always there for me—mind, hand and heart…this work holds your touch
For all you gave, Thank you—Byound the reach of words

*To **F.Ayoub**,your presence & support were a blessings, Forever carried in my heart*

*To the purest hearts, my dearest friends **Oumaima**, **Asmahan** and **Sara***

*To the princess who turned her name into reality — **Myself**.*
*Even my name was destined to be special: **Nedjah** — Success, **Amira** — Princess*
I deeply appreciate my parents for the elegance of their taste in choosing a name that became my reality — by treating me as their princess, and by guiding me to embrace success at every step.

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Abstract

The integration of AI academic tools in EFL teaching presents a significant advancement, creating new opportunities alongside certain challenges. While these tools offer potential benefits for enhancing teaching practices, their acceptance and actual usage by EFL teachers remain uncertain. The present study aims to explore the acceptance of AI academic tools among EFL teachers at the University of Guelma-English Department through the Technology Acceptance Model (TAM) framework. This research addresses a significant gap in the literature regarding the application of TAM in the context of AI-enhanced language teaching, offering valuable implications for educational institutions. Thus, the study adopts a quantitative descriptive research design, employing a structured questionnaire based on TAM constructs to collect data. It was administered to a sample of 24 EFL teachers. The findings confirm the research hypothesis that perceived ease of use influences perceived usefulness. However, the hypotheses that perceived ease of use influences behavioral intention, and that perceived usefulness influences behavioral intention, were partially supported. Despite the limitations encountered in this study, several recommendations are provided to support the effective integration of AI tools in EFL teaching to offer guidance for future research in this field.

List of Abbreviations and Acronyms

AGI: Artificial General Intelligence

AI: Artificial Intelligence

ANI: Artificial Narrow Intelligence

ATT: Attitude Toward Use

BI: Behavioral Intention to Use

CALL: Computer-Assisted Language Learning

EFL: English as a Foreign Language

EFL: English as a Foreign Language

EHRs: Electronic Health Records

ESL: English as a Second Language

MIT: Massachusetts Institute of Technology

PEOU: Perceived Ease of Use List of Tables

PU: Perceived Usefulness

TAM: Technology Acceptance Model

TPB: Theory of Planned Behavior

TRA: Theory of Reasoned Action

UTAUT: Unified Theory of Acceptance and Use of Technology

List of Tables

List of Figures

Table of Contents

Chapter One

Artificial Intelligence Applications in EFL Education: Tools and Implementations

Chapter Three

Field Investigation: Data Analysis and Pedagogical Implementation

General Introduction

The contemporary educational landscape is undergoing a significant transformation, largely propelled by rapid advancements in technology. Among these, Artificial Intelligence (AI) has emerged as a particularly potent force, offering innovative tools and methodologies that promise to reshape teaching and learning practices across various disciplines. Within higher education, the field of English as a Foreign Language (EFL) instruction is increasingly exploring the potential of AI to enhance pedagogical effectiveness, personalize learning experiences, and address longstanding challenges in language acquisition. As AI-driven academic tools become more sophisticated and accessible, their integration into EFL classrooms presents both exciting opportunities and complex considerations for educators and institutions alike.

1. Statement of the Problem

The integration of AI academic tools in EFL teaching presents both opportunities and challenges. While these tools offer potential benefits for enhancing teaching practices, their acceptance and actual usage by EFL teachers remain uncertain. Understanding the factors that influence teachers' decisions to adopt or reject these new technologies is critical for ensuring their successful and beneficial implementation in educational settings. This is particularly relevant in specific contexts like the University of Guelma, where insights into local teachers' perspectives can inform targeted strategies for technology integration.

2. Aims of the Study

The current study aims to investigate the factors influencing EFL teachers' acceptance and adoption of AI academic tools through the Technology Acceptance Model (TAM). Additionally, it seeks to analyze the underlying mechanisms of technology adoption and offer

insights for successful AI tool implementation. Finally, it aims to contribute to both theoretical understanding and practical strategies in educational technology integration.

3. Research Questions

The current research addresses the following questions:

- To what extent do perceived usefulness and perceived ease of use influence EFL teachers' acceptance of AI academic tools?
- What is the relationship between behavioral intention and actual use of AI academic tools among EFL teachers?
- How do external variables (such as teaching experience, technological literacy) moderate the acceptance of AI academic tools?

4. Research Hypotheses

In this study, it is assumed that EFL teachers' acceptance of AI academic tools is determined by the interplay between perceived usefulness and perceived ease of use, whereby perceived ease of use influences both behavioral intention to use and perceived usefulness of the AI academic tools. Thus, it is hypothesized that:

- Perceived usefulness positively influences EFL teachers' behavioral intention to use AI academic tools.
- Perceived ease of use positively influences EFL teachers' behavioral intention to use AI academic tools.
- Perceived ease of use positively influences perceived usefulness of AI academic tools.

5. Research Methodology and Design

5.1 Research Method and Data Gathering Tools

In order to investigate EFL teachers' acceptance of AI academic tools, this research follows a quantitative exploratory approach to test hypotheses derived from TAM. This study also adopts a descriptive research design to systematically portray the characteristics, frequencies, and trends related to these variables. This design is chosen for its capacity to generalize findings and statistically validate variable relationships. Structured questionnaires, based on TAM constructs, were used to collect data from EFL teachers. The questionnaire was segmented into four sections: Demographic Information; Perceptions of Artificial Intelligence in EFL Education; Core Technology Acceptance Model Constructs for AI Tools (Perceived Usefulness, Perceived Ease of Use, Behavioral Intention); and Teacher Acceptance and Integration of AI Tools in EFL.

5.2 Population and Sample of the Study

The population of this study includes EFL teachers from the Department of Letters and English Language at 08 Mai 1945 University, Guelma, during the academic year 2024/2025. A teachers’ questionnaire was distributed to a sample of 47 teachers from this population; out of these, 24 teachers contributed by answering the questionnaire. The selection of this sample is based on their direct engagement in pedagogical practices, offering valuable insights into their perceptions regarding AI academic tools.

6. Structure of the Dissertation

This dissertation is divided into three main chapters.

Chapter One, titled "Artificial Intelligence Applications in EFL Education: Tools and Implementations," delves into the multifaceted applications of AI in EFL education, exploring its

potential and the complexities of its implementation. It establishes a foundational understanding of AI, examines the opportunities and challenges AI presents for higher education, introduces a taxonomy of AI-driven tools used in language instruction (such as productivity enhancers, tutoring systems, analytical tools, and generative AI), and addresses critical ethical dimensions.

Chapter Two details the Technology Acceptance Model (TAM), which forms the theoretical basis for this study, explaining its core constructs—Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioral Intention (BI)—and their hypothesized relationships in the context of AI tool adoption by EFL teachers.

Chapter Three, "Field Investigation: Data Analysis and Pedagogical Implementation," presents the practical part of the research. It outlines the research methodology and design, describes the questionnaire used for data collection, details its administration, and provides a comprehensive analysis and interpretation of the quantitative data obtained from the EFL teachers. This chapter also includes a summary of the results and findings, discusses pedagogical implications and recommendations stemming from the research, and outlines the study's perspectives and limitations.

Chapter One:

Artificial Intelligence Applications in EFL Education: Tools and Implementations

Introduction

Artificial intelligence (AI) is rapidly transforming various sectors, and higher education is no exception. Within this landscape, the field of English as a Foreign Language (EFL) instruction stands to benefit significantly from AI advancements. This chapter delves into the multifaceted applications of AI in EFL education, exploring both its potential and the complexities surrounding its implementation.

The discussion begins by establishing a foundational understanding of AI, defining its core concepts and contemporary relevance. Building on this, the chapter examines the broader opportunities AI presents for higher education, such as personalized learning pathways and administrative efficiencies, alongside inherent challenges like academic integrity concerns and algorithmic bias.

The core of the chapter focuses specifically on the EFL context. It introduces a taxonomy of AI-driven tools currently employed in language instruction, including productivity enhancers like Grammarly and Hemingway Editor, tutoring systems such as Duolingo, analytical tools like Turnitin for assessment, and generative AI like ChatGPT for writing assistance. Each category is examined for its features, effectiveness based on research findings, and practical applications in EFL classrooms.

Finally, the chapter addresses the critical ethical dimensions of integrating AI into educational settings. It discusses concerns related to data privacy, equity of access, the importance of human oversight, and the need for ethical literacy, drawing upon frameworks like UNESCO's recommendations. This comprehensive exploration aims to provide educators and

researchers with insights into effectively and responsibly leveraging AI to enhance EFL teaching and learning.

1.1 Foundations of Artificial Intelligence: Definition and Core Concepts

Artificial intelligence (AI) stands as a transformative discipline within computer science and modern technology, fundamentally concerned with the creation of systems capable of performing tasks that typically require human intelligence (Zhang et al., 2021). As defined by IBM, artificial intelligence (AI) refers to the development of computer systems capable of performing tasks that traditionally require human intelligence, such as reasoning, learning, problem-solving, perception, and decision-making (IBM, n.d.). These systems leverage algorithms and data to simulate cognitive functions, enabling them to adapt, improve, and operate autonomously in dynamic environments. The field draws upon a rich tapestry of disciplines, including computer science, mathematics, logic, philosophy, neuroscience, and linguistics. The term "artificial intelligence" was first introduced by John McCarthy in 1955 in a proposal for the Dartmouth Summer Research Project on Artificial Intelligence, which took place in 1956, a widely recognized event marking the formal beginning of AI as a field (History of Information, n.d.; Dartmouth, n.d.). Since that foundational moment, AI has evolved to encompass various applications such as natural language processing, robotics, and expert systems.

Contemporary artificial intelligence (AI) is frequently delineated along two primary dimensions: its fidelity to human performance versus its adherence to rationality and its focus on internal thought processes versus observable behavior. This yields a fourfold categorization of AI approaches: systems engineered to think like humans (cognitive modeling), systems designed to act like humans (aiming to pass the Turing Test), systems built to think rationally (employing

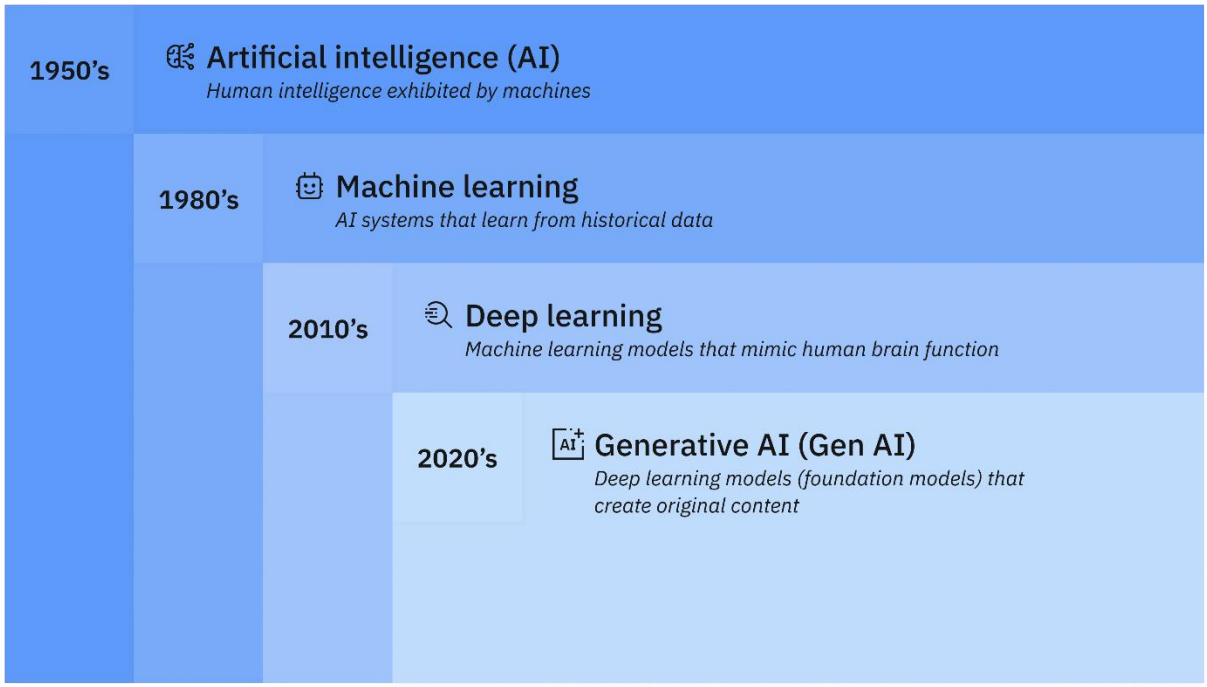
logic-based methods), and systems developed to act rationally (functioning as rational agents striving for optimal outcomes). A critical practical distinction, widely recognized in the field, is drawn between Artificial Narrow Intelligence (ANI), also referred to as Weak AI, which demonstrates expertise in specific, predefined tasks such as language translation, image recognition, or playing chess, and Artificial General Intelligence (AGI), or Strong AI, a hypothetical construct representing AI possessing human-level cognitive capabilities and versatile adaptability across a broad spectrum of tasks (Russell & Norvig, 2010). While the realization of AGI remains largely theoretical, ANI has become pervasive, driving significant innovation across numerous sectors, including healthcare, finance, transportation, and, notably, education.

The current era in artificial intelligence is marked by significant progress, largely driven by advancements in machine learning (ML), particularly deep learning and neural networks. ML enables systems to learn patterns and improve performance from data without explicit programming. Neural networks, often inspired by the structure of the human brain, allow for the processing of complex, high-dimensional data through interconnected layers. Concurrently, Natural Language Processing (NLP) focuses on enabling computers to understand, interpret, and generate human language, facilitating interaction and analysis of textual and spoken data. These core technologies underpin the diverse AI applications observed today, setting the stage for AI's growing role in specialized domains like education (Russell & Norvig, 2010).

In order to simplify the definition and components of AI, IBM (2024) referred to it as a series of derriviative concepts that have developed over 70 years, the following figure demonstrates how artificial intelligence, machine learning, deep learning and generative AI are related.

Figure 1

Derivative Concepts of AI According to IBM



1.2 AI in Higher Education: Opportunities and Importance

The higher education landscape is currently undergoing a period of profound transformation, driven significantly by technological innovation and the dynamic demands of a global society. Among the most influential emerging forces is artificial intelligence (AI), which extends beyond merely serving as a novel tool. AI represents a substantive paradigm shift, offering unprecedented opportunities to fundamentally reshape pedagogical approaches, enhance the efficacy of administrative processes, deepen capacities for academic research, and cultivate a more inclusive and individually tailored learning environment. Effectively navigating this period of transition necessitates a comprehensive understanding of the potential advantages that the strategic integration of AI can confer upon institutions, faculty, and the student body alike.

One of the most compelling opportunities AI offers lies in its capacity to facilitate hyper-personalized learning experiences**.** Traditional educational models often struggle to cater

effectively to the diverse learning paces, styles, and prior knowledge levels of individual students. AI-powered adaptive learning platforms can analyze student performance in real-time, identify knowledge gaps through sophisticated assessment algorithms, and dynamically adjust the content, pace, and difficulty of material presented (Luo & Hsiao-Chin, 2023). This not only helps struggling students receive necessary support but also allows advanced learners to progress more rapidly, fostering a truly student-centric approach that maximizes engagement and learning outcomes. Furthermore, AI can provide instantaneous, granular feedback on assignments and exercises, enabling students to understand their misconceptions and correct their understanding much faster than is typically achievable through manual processes. Brown et al. (2022), for instance, highlighted the efficacy of such automated feedback systems in supporting formative learning and skill acquisition.

Beyond the direct instructional process, AI stands to revolutionize administrative functions and student support services within higher education institutions. Tasks such as managing admissions inquiries, optimising course scheduling, addressing routine student questions via intelligent agents, and streamlining application processing can be significantly enhanced through AI-powered chatbots and automated systems. According to Garcia (2024), this operational efficiency liberates valuable human resources—encompassing both administrative personnel and academic faculty—to concentrate on more complex, high-value interactions and strategic planning initiatives. Moreover, predictive analytics, driven by AI, possess the capability to identify students who may be at an elevated risk of attrition or academic underperformance based on a multiplicity of data points, thereby enabling institutions to implement proactive interventions with targeted support services (Bird, 2023).

The realm of academic research is also poised to benefit substantially from AI's advanced capabilities. AI tools can accelerate complex data analysis, process vast and intricate datasets that would be prohibitive for human researchers, discern subtle patterns and correlations, and even assist in the generation and refinement of research hypotheses. Natural Language Processing (NLP) applications, as discussed by Chen and Wang (2024), can rapidly scan, analyze, and summarize extensive bodies of scholarly literature, rendering the process of conducting comprehensive literature reviews significantly more efficient. This proficiency allows researchers to allocate more time to critical inquiry, experimental design, and the interpretation of findings, potentially expediting the pace of discovery and innovation across the disciplinary spectrum. AI, in this context, functions as a powerful augmentative force, enhancing human intellectual capacity in the pursuit of advancing knowledge.

Finally, AI presents considerable opportunities for enhancing accessibility and promoting inclusivity within higher education environments. Automated transcription services can furnish real-time captions for lectures and multimedia content, thereby rendering educational materials more accessible to students with hearing impairments. AI-driven translation technologies can effectively bridge linguistic barriers for international student cohorts or facilitate seamless collaboration on a global scale. Furthermore, AI can assist in the development of intuitively designed and inherently accessible digital learning materials and interfaces, ensuring that students with diverse disabilities can fully engage with educational activities (UNESCO, 2022). As guidance from UNESCO underscores, by diminishing systemic barriers to access and participation, AI contributes significantly to the institutional objective of providing equitable educational opportunities for all learners.

While acknowledging the inherent challenges pertaining to ethical deployment, equitable access, and data privacy, the opportunities that artificial intelligence proffers for higher education are undeniably profound and transformative. Ranging from the provision of hyper-personalized learning experiences and the augmentation of pedagogical functions to the streamlining of administrative operations, the acceleration of scientific inquiry, and the enhancement of accessibility, AI offers a suite of tools capable of fostering a more efficient, efficacious, and inclusive educational future. Realizing this considerable potential necessitates meticulous strategic planning, substantial investment in technological infrastructure and professional development, and a collaborative approach engaging educators, technologists, and institutional leaders. By embracing AI judiciously and deliberately, higher education institutions can significantly bolster their capacity to navigate the complexities of the 21st century and more effectively fulfill their vital mission of cultivating future generations and expanding the frontiers of human knowledge.

1.3 Challenges and Ethical Implications of AI

The proliferation of artificial intelligence technologies, particularly advanced generative models, has introduced a complex array of challenges and profound ethical implications that demand careful consideration from various sectors, including academia, industry, and governance.

1.3.1 Academic Integrity

The integration of sophisticated AI tools capable of generating human-like text presents significant challenges to traditional notions of academic integrity. A primary concern revolves around the increased risk of plagiarism, as students may be tempted to submit AI-authored content as their original work, making it difficult for educators to ascertain authorship (White,

2023). Current AI detection tools remain in their nascent stages of development and often struggle to reliably distinguish between human- and machine-generated prose, leading to potential false positives and negatives. Consequently, educational institutions are exploring and adopting alternative assessment methodologies, such as greater reliance on oral examinations, in-class assignments, and project-based evaluations, to mitigate these risks and ensure authentic learning outcomes (Di Stasio et al., 2019).

1.3.2 Data Privacy and Security

AI systems, especially large language models trained on vast datasets, raise substantial data privacy and security concerns. The process of gathering and processing immense volumes of data, often scraped from the public internet, frequently occurs without explicit consent from individuals, leading to potential breaches of privacy rights. Regulatory frameworks worldwide are struggling to keep pace with these advancements. For example, early regulatory interventions in jurisdictions such as Italy highlighted critical issues regarding the legal basis for data collection by AI models and deficiencies in age verification mechanisms, underscoring a clear gap in existing data protection laws when applied to novel AI applications (European Data Protection Board Report, 2024). Furthermore, the concentration of sensitive data within AI models poses security risks, making them potential targets for cyberattacks.

1.3.3 Bias and Discrimination

A critical ethical challenge associated with AI is its propensity to perpetuate and amplify existing societal biases. This is largely attributable to the fact that the data used to train AI models often reflects historical and systemic inequities prevalent in society. As researchers like Lee and Chen (2023) have demonstrated, this algorithmic bias can manifest in discriminatory outcomes across various domains. For instance, hiring algorithms have been shown to

inadvertently disadvantage female applicants or individuals from certain minority groups, while risk assessment tools used in the criminal justice system can exhibit racial disparities (Chugh, 2021). Facial recognition systems, another prominent example, consistently show significantly higher error rates for individuals with darker skin tones and women compared to white men, raising serious concerns about their equitable deployment in law enforcement and public surveillance (Buolamwini & Gebru, 2018). This issue is further exacerbated by the lack of diversity within the AI development community itself, where the underrepresentation of women and minority groups can limit the identification and mitigation of bias during the design and evaluation phases (World Economic Forum Report, 2023).

1.3.4 Accessibility and Equity

Ensuring equitable access to the benefits of AI technologies remains a significant global challenge. The persistent digital divide, characterized by unequal access to reliable internet infrastructure, affordable computing devices, and digital literacy training, means that a substantial portion of the world's population in numerous countries and regions cannot readily access or effectively utilize advanced AI tools like generative models (United Nations Development Programme, 2023). Moreover, the increasing commercialization of cutting-edge AI capabilities through subscription models, such as premium versions offering enhanced features or faster access, risks creating a tiered system of access. This approach prioritizes profit over equitable distribution, potentially widening the gap between those who can afford access to the most powerful tools and those who cannot, thereby exacerbating existing socioeconomic disparities (OECD Policy Brief, 2024).

1.3.5 Lack of Regulation

The rapid pace of AI development has largely outstripped the establishment of comprehensive legal and regulatory frameworks. This regulatory vacuum creates uncertainty and poses risks regarding the responsible deployment of AI systems. There is a growing consensus among experts and policymakers on the urgent need for robust ethical guidelines and regulations to govern AI. Initiatives like the UNESCO Recommendation on the Ethics of AI (2021) provide foundational principles, urging member states to develop policies that ensure transparency in AI decision-making processes, establish clear lines of accountability for AI systems' actions and impacts, and promote fairness and equity in their design and application (UNESCO, 2021). Key tenets of effective AI governance include fostering interdisciplinary collaboration in policymaking and mandating ethical compliance through measures such as pilot testing and impact assessments prior to widespread deployment (Agarwal, 2023). However, translating these principles into enforceable, globally consistent regulations remains a formidable task.

1.4 AI-Driven Tools in EFL Instruction

The field of English as a Foreign Language (EFL) instruction in higher education is continuously evolving, with technology playing an increasingly significant role in shaping pedagogical practices. The emergence of sophisticated artificial intelligence (AI) tools presents new opportunities to enhance the learning experience for EFL students through personalized and adaptive educational resources. The challenges commonly faced by EFL learners, such as the need for individualized feedback, difficulties in recognizing and rectifying linguistic errors, and maintaining motivation, make the application of AI tools particularly pertinent. These technologies offer the potential to provide tailored support and immediate feedback, contributing to a more effective and engaging learning environment.

In the context of English as a Foreign Language (EFL) education, Artificial Intelligence (AI) refers to computer systems designed with the capacity to perform tasks typically requiring human intelligence, such as understanding natural language or providing nuanced feedback (Russell & Norvig, 2010). These systems are capable of analyzing and processing linguistic input, offering constructive feedback on aspects like writing mechanics, grammar, and even pronunciation, and adapting instructional strategies based on an individual learner's progress and needs. As researchers in the field explain, AI tools for language learning frequently leverage machine learning algorithms trained on extensive linguistic datasets to analyze, comprehend, and generate language (Chapelle, 2018). This technological foundation supports a wide array of applications tailored for EFL learners and teachers, encompassing everything from fundamental grammar and spell checkers to more sophisticated writing assistants that suggest stylistic improvements, automated pronunciation feedback systems that analyze and correct spoken English, and vocabulary enhancement tools designed to expand learners' lexical resources effectively (Zhang & Cui, 2020).

1.4.1 AI productivity tools

The definition of productivity tools in EFL writing goes beyond simply accelerating the writing speed. It encompasses a significant enhancement in the linguistic quality of the written output, improved organizational skills, and an increased ability for learners to manage intricate academic writing tasks with greater independence. These tools empower EFL learners to overcome specific linguistic challenges that arise from writing in a non-native language and to produce academic texts that are well-structured, linguistically accurate, and clear in their expression.

1.4.1.1 Grammarly

Grammarly, accessible at https://www.grammarly.com/, is an AI-powered writing assistant that offers a comprehensive suite of features beneficial for EFL learners. It reviews spelling, grammar, and the tone of writing while also identifying potential instances of plagiarism. The tool provides personalized suggestions tailored to the specific writing context and the intended audience, ensuring that EFL learners receive feedback relevant to their unique needs as non-native speakers. Grammarly also detects the tone of the writing, a crucial aspect for EFL learners to ensure their message is conveyed appropriately in different communicative situations (Lee & Thompson, 2021).

In addition to its core grammar and style checks, Grammarly includes features crucial for fostering academic integrity, such as a robust plagiarism checker and an AI writing detector, which are increasingly essential tools for students navigating the challenges of original work submission (Chen & Wang, 2023). Researchers like Huang, Li and Taylor (2020) highlight that the tool also offers valuable vocabulary enhancement suggestions, actively assisting EFL learners in expanding their lexical resources and refining word choices for greater precision and impact. According to a Grammarly Features Overview (2024), specifically designed features for academic users include citation assistance, streamlining the process of properly referencing sources, and an AI authorship disclosure prompt, promoting transparency in the use of artificial intelligence in academic writing.

The researchers further note that for users with paid subscriptions, Grammarly provides additional benefits particularly useful for non-primary English speakers. These encompass translation features allowing text translation directly within the interface, fluency suggestions aimed at correcting common errors made by non-native speakers, and full paragraph rewrites that

can significantly improve the clarity and natural flow of complex sentences and ideas. Furthermore, as Zhang and Wang (2024) explain, Grammarly serves as an educational resource by providing detailed grammar explanations and comprehensive writing guides, helping EFL learners to not only correct errors but also understand the underlying rules and principles of English grammar and effective writing over time.

1.4.1.2 The Hemingway App

The Hemingway App, accessible at https://hemingwayapp.com/, and its enhanced version, Hemingway Editor Plus (https://hemingwayapp.com/hemingway-editor-plus), are designed to assist writers in making their writing more concise and clear by identifying and highlighting lengthy, complex sentences and common stylistic issues (Ashrafganjoe, 2025). For EFL learners, certain key features are particularly beneficial, including its ability to identify sentences marked as hard to read or very hard to read, which can be a significant aid for those who may struggle with complex English sentence structures. The tool also highlights adverbs, instances of passive voice, and complex words for which simpler alternatives might exist, prompting the writer to revise for clarity and directness (Purdue Writing Lab, 2022).

Furthermore, as noted by researchers evaluating writing assistance tools, it provides a readability score, typically based on metrics such as the Automated Readability Index (ARI), which offers writers an objective measure of the educational level required to comprehend their text, helping them gauge its accessibility for their intended audience (Borna & Mohammadi, 2024).

In the extensive landscape of AI productivity tools available to support writing, Grammarly and Hemingway Editor stand out as two well-known examples, but it is important to note that these are merely samples from a much larger and growing number of tools. Utilizing a

combination of tools like Grammarly and Hemingway can thus provide a focused approach to enhancing EFL writing, effectively addressing both grammatical correctness and clarity of expression, though learners should be aware of the broader ecosystem of tools available (Eager, 2024).

1.4.2 AI Tutoring Systems for Enhanced EFL Language Learning

AI-driven platforms known as EFL tutoring systems furnish tailored instruction and feedback for individuals learning English as a foreign language. These systems endeavor to simulate the benefits of a human tutor by adapting to each student's specific learning requirements, evaluating their existing knowledge and abilities, and modifying teaching approaches as needed. Frequently, these platforms feature interactive settings that encourage active participation with the learning content and deliver customized support to facilitate students' language acquisition goals (Ghosh, 2024).

The key characteristic of EFL tutoring systems is their capacity to personalize the learning experience. They provide tailored instruction and feedback that dynamically adapt to the individual learner's progress, strengths, and areas for improvement. This adaptive nature ensures that students receive the right level of challenge and support, facilitating more effective language acquisition.

1.4.2.1 Duolingo

Duolingo (https://www.duolingo.com/) stands out as a popular language learning platform providing courses in a multitude of languages, including English for speakers of diverse linguistic backgrounds. A key element of Duolingo's strategy is its gamified learning system, which integrates points, rewards, and engaging lessons to incentivize users and foster an enjoyable learning experience. The lessons are intentionally brief and manageable, promoting

regular daily engagement. The platform utilizes pedagogical methods grounded in research, aiming to effectively cultivate learners' reading, writing, listening, and speaking proficiencies. Furthermore, Duolingo delivers a personalized learning journey, adjusting to the individual learner's current skill level and pace of acquisition. It includes specific activities focused on enhancing speaking and listening capabilities. To enable learners to monitor their advancement, Duolingo features a Duolingo Score, offering an estimation of their language proficiency. For languages employing distinct writing systems, Duolingo provides a reading tab to facilitate learners' familiarization with new scripts (Duolingo, n.d.). The platform also integrates features such as DuoRadio for listening practice and AI-powered chatbots for conversational practice, accessible to Duolingo Max subscribers (Duolingo, n.d.). Moreover, Duolingo offers tools specifically tailored for educators to oversee their students' language learning activities and monitor their progress.

Research articles have discussed the use of Duolingo in EFL higher education, with studies indicating its positive contribution to vocabulary learning and its ability to provide a fun and engaging learning experience (e.g., The Effect of Using Duolingo on Developing EFL Students' Vocabulary and their Attitudes toward it, n.d.; Using the Duolingo Application as a Vocabulary Learning Tool in Higher Education, n.d.). As these studies suggest, Duolingo, just one example of many available language learning platforms, has been shown to increase learners' mastery of foreign language vocabulary, and students generally have positive attitudes towards using it for this purpose. The platform can also aid in developing various language skills and encourages learning through interactive methods (THE INTEGRATION OF DUOLINGO INTO EFL LEARNING, 2023). Furthermore, it has been found to be particularly effective for

improving vocabulary mastery, especially for learners at basic and intermediate proficiency levels (Using Duolingo in Teaching and Learning Vocabulary: A Systematic Review, 2024).

1.4.3 AI Analytical Tools for EFL Assessment and Feedback Mechanisms

Analytical tools in the context of EFL assessment and feedback refer to AI-powered resources that are employed to evaluate student work and provide insights into their language proficiency, often focusing on specific aspects of their language use. These tools can assist educators in establishing clear and objective criteria for evaluating various dimensions of student writing, such as detail, depth, scope, and balance. Learning analytics, which involves the collection and analysis of data related to learner engagement and progress, is a specific application of analytical tools that can provide valuable insights into students' learning patterns.

1.4.3.1 Turnitin

Turnitin (https://www.turnitin.com/) is a prominent AI analytical tool widely used in higher education, primarily known for its capabilities in detecting plagiarism by comparing student work against an extensive database of online content, academic publications, and previously submitted student papers. Beyond plagiarism detection, Turnitin also offers Feedback Studio, a feature that allows instructors to provide comprehensive feedback and grades on student assignments. It includes functionalities for checking the originality of student work as well as detecting potential instances of AI writing, addressing emerging trends in academic misconduct (Turnitin, n.d.).

1.4.3.2 Lingvist

Lingvist (https://lingvist.com/) is an AI-powered language learning application with a strong focus on vocabulary acquisition, but it also offers features that can be beneficial for EFL

learners in terms of vocabulary analytics and progress tracking. The platform utilizes spaced repetition algorithms, which are based on cognitive science principles, to optimize vocabulary learning and retention. Lingvist prioritizes teaching the most frequently used words in a language, based on statistical analysis of large corpora of text, ensuring that learners focus on vocabulary that is most relevant for everyday communication (Lingvist, n.d.).

According to Smith (2023), the strategic integration of digital tools such as Turnitin and Lingvist within the domain of EFL higher education offers a robust methodology for both evaluating student output and systematically monitoring their linguistic development. Regarding written output, Daoud et al. (2019) highlight that Turnitin proves particularly effective in appraising the originality and qualitative aspects of students' submissions, concurrently providing constructive feedback that aids in refining writing proficiency and reinforces the critical importance of academic integrity. Complementarily, Lingvist serves as a dynamic resource, accessible to both learners and instructors, facilitating the consistent tracking of English vocabulary acquisition and enabling the observation of longitudinal progress in this foundational dimension of language competence. The synergistic deployment of these platforms thus yields a more comprehensive perspective on student advancement, encompassing not merely adherence to academic conventions and the quality of written production but also the continuous expansion of language proficiency through enriched lexical knowledge (Miller et al., 2023). Accordingly, educators can leverage Turnitin as an integral component of formal writing assessment protocols while advocating for or integrating Lingvist to foster autonomous vocabulary enhancement and self-evaluation of lexical mastery. This integrated methodology constitutes a nuanced, multi-pronged strategy for assessment within EFL settings, wherein Turnitin upholds academic

standards and furnishes targeted feedback on writing, and Lingvist supports and monitors the cultivation of essential linguistic building blocks.

1.4.4 AI Generative Tools for EFL Writing Assistance and Content Creation

Generative AI tools in the context of EFL writing assistance are advanced digital resources that possess the capability to produce text resembling human-written language. These tools can aid EFL learners in various stages of the writing process, including assisting with drafting, offering suggestions for improvement, and even generating examples of written content. They leverage natural language processing (NLP) techniques to understand and generate text based on prompts or input provided by the user. These tools can be particularly helpful in areas such as correcting grammatical errors, suggesting more appropriate word choices, and assisting with the overall organization of written content.

1.4.4.1 ChatGPT

Recent advancements in artificial intelligence, notably the development of sophisticated generative models such as ChatGPT, developed by OpenAI (https://openai.com/blog/chatgpt), present significant implications for Computer-Assisted Language Learning (CALL) in higher education contexts (Godwin-Jones, 2024). Research indicates that the capacity of these models to comprehend complex queries and generate detailed, contextually relevant, human-like text offers unprecedented opportunities for supporting EFL learners. Specifically, Brown (2023) highlights that ChatGPT can serve as a readily available resource for obtaining targeted explanations of intricate grammatical structures, nuanced vocabulary usage, and complex cultural references, thereby addressing individual learner difficulties efficiently. Furthermore, the interactive and conversational nature of the tool facilitates dynamic practice environments, allowing learners to engage in dialogue, receive immediate feedback, and request clarification on linguistic

uncertainties, a function particularly valued by Davis (2023) in enhancing learner autonomy and communicative competence. This ability to provide tailored explanations and interactive practice based on user input positions generative AI as a potentially transformative element in supporting diverse learning needs within EFL pedagogy (Li & Chen, 2024), warranting further empirical investigation into its optimal integration and long-term impact.

1.4.4.2 QuillBot

QuillBot (https://quillbot.com/) is another AI-powered tool that offers significant benefits for EFL learners, primarily through its paraphrasing capabilities and grammar-checking features. QuillBot provides a range of AI-powered paraphrasing tools with various modes that allow users to refine, enhance, or simply reword their written work to achieve different tones and styles. As researcher Fitria (2021) have noted, this paraphrasing function is particularly useful for learners aiming to improve sentence variety and express ideas in multiple ways. It also includes a robust grammar checker to help polish writing by addressing punctuation, spelling, and word misuse, ensuring greater accuracy in written output. Additionally, as noted by reviewers, it offers a summarizer tool designed to condense information from various sources, which can assist students with reading comprehension and note-taking from academic texts (Rodriguez, 2022).

The pedagogical implications of utilizing ChatGPT and QuillBot in EFL higher education are significant, offering opportunities to enhance writing, comprehension, and overall language learning. ChatGPT can assist students with various aspects of essay writing, from brainstorming and drafting to generating examples and answering English language-related questions, potentially leading to improved writing skills and a deeper understanding of the language. QuillBot can be particularly beneficial for EFL learners by aiding in the comprehension and rephrasing of English texts, which can improve understanding and help them express ideas in

their own words. Its grammar-checking feature can further support language learning by identifying and correcting errors.

However, educators must carefully consider the ethical implications associated with the use of these generative tools, especially concerning academic integrity and the potential for students to become overly reliant on them. It is crucial to provide instruction on effective prompting techniques and to encourage students to critically evaluate the content generated by AI, ensuring they develop their own analytical and writing skills rather than simply relying on AI-generated text.

1.5 Ethical Dimensions of AI in Education

Integrating artificial intelligence (AI) into education offers many exciting possibilities, but it also brings important ethical questions we need to consider carefully. To make sure AI benefits everyone and respects basic rights, we must balance new technologies with principles of fairness and responsibility. There are several key ethical areas to focus on:

First, protecting student data and being clear about how AI works is crucial. AI systems in schools often collect detailed information about what students learn and how they behave. This means we need strong rules to prevent this data from being misused, watched without permission, or used for commercial purposes. Experts agree that privacy should be built into these systems from the start, and people should understand and agree to how their data is used (Slade & Prinsloo, 2013). It's also important that the AI's decisions are understandable—if an AI grades something, people should know how it arrived at that grade. There should also be ways to challenge decisions if needed, helping to identify and fix unfairness (O'Neil, 2016).

Another major ethical point is making sure AI in education is fair and accessible to everyone. There's a risk that AI could make existing differences wider, especially for students

from disadvantaged backgrounds, rural areas, or countries with fewer resources. These students might not have access to the technology or the digital skills needed to use AI tools effectively. We need policies and efforts to close these gaps and make sure AI tools are designed for everyone, avoiding biases against certain groups (Zawacki-Richter et al., 2019). Teaching digital skills, particularly to groups who haven't had the same opportunities, is key to making sure everyone can benefit from AI in education.

Keeping humans involved in education alongside AI is also ethically important. While AI can make things more efficient, relying too much on it could weaken the valuable connection between teachers and students, which is essential for social and emotional learning and developing critical thinking. Experts suggest that AI should help teachers, not replace them, so that human interaction remains central to learning (Popenici & Kerr, 2017). Having teachers and other staff oversee how AI is used is necessary to ensure it's done ethically and doesn't become overly controlling or harmful to students' independence.

Finally, teaching about the ethics of AI is becoming increasingly important. Education should include learning about the ethical questions AI raises, combining technical knowledge with ideas from subjects like philosophy and social studies. This helps students and those who create AI understand its impact on society and make responsible choices (Floridi et al., 2018). Preparing people with this understanding is vital for navigating a future where AI plays a bigger role in education and life.

Conclusion

This chapter explored the significant impact of artificial intelligence (AI) on English as a foreign language (EFL) education. After defining AI and its core concepts, we examined the opportunities it brings to higher education, including personalized learning, administrative

efficiency, enhanced research, and greater inclusivity through tools like language assistants. Specific AI applications in EFL, such as productivity, tutoring, analytical, and generative tools, illustrate technology's practical role in reshaping language pedagogy. However, AI integration presents considerable challenges. Critical ethical considerations include academic integrity risks, data privacy concerns, potential algorithmic bias, equitable access issues, and the need for clear regulatory frameworks. The discussion emphasized that harnessing AI's transformative potential in EFL requires navigating these ethical dimensions responsibly.

Chapter Two

Understanding Teacher Acceptance: The Technology Acceptance Model (TAM) in Educational Contexts

Introduction

The integration of technology into educational settings has become a defining feature of 21st-century learning. As digital tools and platforms proliferate, understanding the factors that influence their adoption and use by educators and learners is paramount. To understand these factors, particularly in the context of educators adopting new technologies, this study utilizes the Technology Acceptance Model (TAM), a well-established theoretical framework that offers valuable insights into this complex process.

This chapter provides a comprehensive overview of the Technology Acceptance Model (TAM), exploring its origins, theoretical underpinnings, core constructs, and applications within educational contexts. A particular focus will be placed on TAM's relevance to language learning, thereby establishing the theoretical foundation for the subsequent empirical investigation of technology acceptance in this domain.

The imperative to understand TAM is particularly acute in the study of technology use in language learning environments. Language acquisition is a multifaceted process, and the effective integration of technological aids can significantly enhance pedagogical approaches, provide access to authentic resources, and foster interactive learning environments. TAM provides a crucial lens through which to examine how language educators and learners perceive and adopt these technologies, ultimately influencing the success of technology-enhanced language instruction. As noted by Park (2009), understanding TAM helps in identifying key

factors that encourage the actual use of technology in educational settings, which is crucial for maximizing the potential benefits of these tools.

The chapter holds particular relevance for the current research, which investigates the acceptance of Artificial Intelligence (AI) academic tools by English language teachers at the University of Guelma. AI tools represent a rapidly evolving frontier in educational technology, offering novel possibilities for personalized learning, automated assessment, and intelligent tutoring systems. By applying the TAM framework, this research aims to identify the key determinants influencing teachers' willingness to embrace and integrate these AI-powered resources into their pedagogical practices. Understanding these factors, such as perceived usefulness and perceived ease of use, is essential for developing effective strategies to support teachers in harnessing the potential of AI in the English language classroom (Al-Emran, Mezhuyev, & Kamaludin, 2018). The focus of this chapter will be to delineate the theoretical landscape of TAM, critically examine its components, and explore its application and limitations within educational settings, thereby laying the groundwork for its application in the specific context of AI tool adoption by university-level English language instructors.

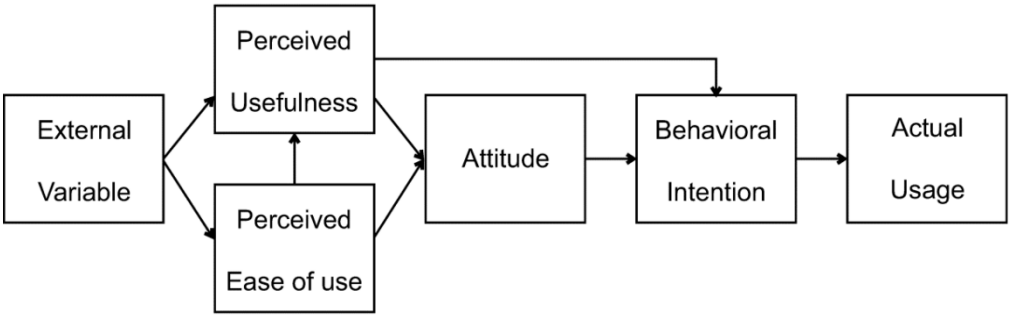
2.1 Definition and Origin of the Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a foundational and widely applied theoretical framework in the field of information systems, designed to explain and predict user acceptance and adoption of new technologies. It posits that two primary beliefs are central to an individual's decision to use a technology: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (King & He, 2006; Venkatesh & Bala, 2008). Perceived Usefulness reflects the degree to which a person believes that using a specific system will enhance their performance or productivity. Perceived Ease of Use, conversely, captures the extent to which an individual

believes that using the technology will be free from effort and easy to understand (Davis, 1989). These perceptions are theorized to influence a user's attitude toward the technology, which in turn shapes their behavioral intention to use it, ultimately leading to actual system usage (Davis et al., 1989). The core structure of the Technology Acceptance Model is illustrated ('Figure 2'):

Figure 2

Technology Acceptance Model (TAM) by Davis (1989).



The Technology Acceptance Model originated from the doctoral research of Fred Davis at the Massachusetts Institute of Technology (MIT) in 1986 (Davis, 1986). As an adaptation of the Theory of Reasoned Action (TRA), TAM was specifically developed to provide a more focused and robust model for understanding user acceptance within the context of information systems compared to more general behavioral theories (Legris et al., 2003; Schorr, 2023).

The central purpose of TAM is to provide a clear and theoretically grounded explanation for why individuals choose to accept or reject information technology. By focusing on the core constructs of perceived usefulness and perceived ease of use, the model offers a valuable lens for predicting user behavior and informing strategies aimed at successful technology implementation and diffusion (King & He, 2006; Venkatesh & Bala, 2008).

Initially, TAM was predominantly applied within the business sector to understand the adoption of various information systems by employees. This included studies on the acceptance

of software applications, email systems, and other technologies aimed at improving organizational efficiency and effectiveness (Legris et al., 2003). The model provided a structured approach to identifying the factors that could facilitate or hinder the successful integration of technology in the workplace.

Over the past decades, the application of the Technology Acceptance Model (TAM) has expanded significantly across numerous domains, moving well beyond its original business context. Its adaptability and robust explanatory power have consistently made it a popular framework for investigating technology acceptance across various societal sectors.

In education, TAM has been widely used to study the factors influencing the adoption of e-learning platforms, online learning tools, and educational technology by both students and instructors (Al-Adwan et al., 2021).

Similarly, within the healthcare sector, TAM has been extensively applied to understand the acceptance of electronic health records (EHRs), telemedicine, mobile health (mHealth) applications, and other digital health innovations by both healthcare professionals and patients (Holden & Karsh, 2010). This broad and continued application highlights TAM's enduring relevance as a fundamental model for understanding user behavior towards new technology.

2.2 Theoretical Foundations of TAM

The Technology Acceptance Model is grounded in well-established social psychology theories, primarily the Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), and to some extent, the Theory of Planned Behavior (TPB), an extension of TRA proposed by Ajzen (1991). TRA posits that an individual's behavior is determined by their behavioral intention, which, in turn, is influenced by their attitude toward the behavior and subjective norms (the perceived social pressure to perform or not perform the behavior).

TAM adapts and simplifies these foundational theories specifically for the context of technology adoption and use. Davis (1989) sought a more parsimonious model by omitting the subjective norm component of TRA in the original TAM formulation, arguing that its influence on intention was not consistently supported in the context of individual technology acceptance decisions in the workplace (Venkatesh & Davis, 2000). Instead, TAM focuses on two key beliefs – perceived usefulness and perceived ease of use – as primary determinants of an individual's attitude toward using a technology, which subsequently influences their behavioral intention and, ultimately, actual usage. "TAM is substantially a more powerful and more parsimonious model than TRA for predicting IT acceptance" (Lee, Kozar, & Larsen, 2003, p. 753).

The importance of behavioral intention as a direct antecedent of actual use is a core tenet inherited from TRA and TPB. Behavioral intention represents an individual's conscious plan or willingness to exert effort to perform a specific behavior. In the context of TAM, it signifies the likelihood that an individual will adopt and utilize a particular technology. Actual use, the ultimate dependent variable in many TAM studies, refers to the observable frequency, duration, or intensity of an individual's interaction with the technology. While TAM initially focused heavily on intention as a proxy for use, later extensions and research have emphasized the importance of measuring actual usage to validate the model's predictive power (Landers, Behrend, & Brusso, 2013).

2.3 Determinants of Technology Adoption in TAM

The Technology Acceptance Model (TAM) serves as a pivotal framework for analyzing the complex process by which individuals decide to adopt and utilize new technologies. Introduced by Fred Davis, TAM is a widely cited model in information systems research for understanding user acceptance (Davis, 1989).

Within this model, the determinants of technology adoption are conceptualized as key cognitive beliefs that predict user acceptance. TAM primarily focuses on two core determinants: Perceived Usefulness (PU), defined as the degree to which a person believes that using a particular system would enhance their job performance; and Perceived Ease of Use (PEOU), which is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). Each of these core determinants will be discussed next.

Understanding these fundamental factors is essential for predicting the success of technology implementations across various contexts, as they shape users' attitudes, intentions, and ultimately, their actual technology usage.

First, Perceived Usefulness (PU) is defined as the extent to which an individual believes that employing a particular system would enhance their job performance. Perceived Ease of Use (PEOU), on the other hand, refers to the degree to which an individual believes that interacting with a specific system would be free from effort. Behavioral Intention to Use (BI) represents an individual's conscious plan or decision to make an effort to use a system in the future. According to the Technology Acceptance Model (TAM), both PU and PEOU directly influence an individual's Behavioral Intention to Use (BI) technology (Davis, 1989).

Within the context of education, the belief in Perceived Usefulness pertains to the degree to which EFL teachers anticipate that AI tools will improve their instructional efficacy, streamline their tasks, or ultimately benefit their students' learning. For EFL teachers, Perceived Ease of Use implies their perception of the simplicity and lack of difficulty in learning and applying AI tools in their pedagogical practices. In this study, Behavioral Intention to Use reflects the willingness of EFL teachers to integrate AI tools into their teaching methodologies.

Furthermore, PEOU exerts a direct positive influence on PU, indicating that if a technology is perceived as easier to use, it is more likely to be seen as useful. Behavioral Intention to Use (BI) is also a strong predictor of the actual implementation of the system. External factors, such as the design of the system, the provision of training, and social influences, can indirectly impact BI by shaping users' perceptions of PU and PEOU. These relationships are central to the Technology Acceptance Model (Davis, 1989). The causal pathway from PEOU to PU to BI suggests that ensuring AI tools are user-friendly for EFL teachers could indirectly foster their intention to use these tools by first enhancing their belief in the tools' usefulness. Addressing the ease of use might therefore be a critical initial step in promoting acceptance.

TAM has achieved widespread recognition and has been extensively validated as a prominent model within information systems research. Its application spans a multitude of technological domains and organizational contexts, notably including the field of education. It is recognized as a robust and efficacious model for elucidating users' behavior towards technology adoption. The model's parsimonious design and its focus on fundamental beliefs render it a practical framework for comprehending technology adoption within educational settings. The extensive utilization of TAM in educational technology research underscores its established relevance for understanding how educators embrace new technologies such as AI tools. Applying TAM to the specific context of EFL teachers in Algeria allows for comparisons with existing research and the identification of factors unique to this particular educational environment.

2.3.1 Perceived Usefulness (PU)

Perceived Usefulness (PU) stands as a cornerstone in the Technology Acceptance Model, defined by Davis (1989) as "the degree to which a person believes that using a particular system would enhance his or her job performance." In an educational setting, particularly for English as

a Foreign Language (EFL) teachers, this concept refers to their conviction that Artificial Intelligence (AI) tools can bolster their teaching effectiveness, improve efficiency, or positively impact student learning outcomes. As articulated by Davis (1989), PU reflects an individual's subjective assessment of the likelihood that technology will aid in accomplishing their tasks. For EFL educators, the perceived usefulness of AI might be observed in several practical applications. These include, for instance, the automation of grading written work via AI-driven feedback systems, the delivery of personalized learning pathways through adaptive AI language platforms, or the augmentation of lesson planning with AI tools capable of suggesting pertinent resources or generating exercises. For these teachers to develop a strong sense of PU, it is vital that they recognize how these specific benefits align with and support their daily professional responsibilities.

The importance of PU is underscored by its role as a primary driver influencing an individual's decision to adopt and utilize new technologies (Davis, 1989). A substantial body of empirical research consistently reveals a significant positive relationship between PU and the behavioral intention to use technology (Cudjoe et al., 2015; Taylor & Todd, 1995). It is noteworthy, as Davis (1989) originally suggested and subsequent studies have often confirmed, that PU frequently exerts a more substantial influence on usage behavior than Perceived Ease of Use. This powerful impact implies that if EFL teachers do not view AI tools as genuinely beneficial to their teaching methodologies, their adoption of these tools is improbable, regardless of how user-friendly they might be perceived. Consequently, effectively illustrating the concrete advantages of AI tools is crucial for their acceptance within the teaching community. As Smith and Johnson (2022) emphasized, teachers' beliefs about how technology can improve their teaching effectiveness are central to this acceptance.

The notion of Perceived Usefulness is multifaceted, embracing various dimensions such as enhancements in efficiency, increased productivity, greater overall effectiveness, and a reduction in the perceived difficulty of work (Davis, 1989). Within the context of sophisticated information systems, PU can be conceptualized as a multidimensional construct. For example, Saade (2007) proposed a framework that includes performance-related outcomes, personal-related outcomes, and intrinsic motivation as key dimensions of PU. For EFL teachers, these dimensions of usefulness might translate into tangible benefits like saving time on administrative tasks, delivering more impactful and targeted feedback to students, or accessing innovative pedagogical resources. Investigating which specific facets of usefulness—such as time efficiency compared to pedagogical innovation—are most valued by EFL teachers can guide the creation of tailored interventions and support strategies. It is understood that different educators may prioritize distinct aspects of usefulness, influenced by their unique needs, teaching environments, and individual goals.

Understanding the specific needs and challenges encountered by EFL teachers at the University of Guelma is essential for determining the perceived usefulness of AI tools in their context. This study specifically aims to investigate how factors such as their current workload, available resources, and the institutional priorities at the University of Guelma might shape EFL teachers' perception of how AI tools can positively impact their work. Furthermore, cultural and contextual elements unique to the Algerian EFL educational landscape could also influence their perspectives on the usefulness of these technologies. Consequently, the perceived usefulness of AI tools for EFL teachers at the University of Guelma will likely be contingent upon the specific ways these tools can address the particular challenges and needs prevalent in their local teaching

environment. A general perception of usefulness might not be sufficient; the benefits must be directly relevant to their everyday teaching practices.

Existing academic research provides substantial evidence supporting the significant impact of Perceived Usefulness (PU) in educational settings. For instance, Abas and Hassan (2021) noted that a study by Stockless (2018) indicated PU is a strong predictor of teachers' intention to use e-learning platforms; Liaw et al. (2007) also found PU to be a significant predictor in this regard. Indeed, Calisir et al. (2014) reported that perceived usefulness is the strongest predictor of behavioral intention to use a web-based learning system.

Moreover, the perceived usefulness of technology has been consistently linked to teachers' attitudes towards and overall acceptance of technology in the classroom. As Davis (1989) originally posited in the Technology Acceptance Model (TAM), and as Teo (2009) further elaborated, perceived usefulness, along with perceived ease of use, shapes an individual's attitude toward using a technology, which subsequently influences their intention to use and actual usage.

Akram et al. (2022) documented this connection between perceived benefits and teacher acceptance, with their findings revealing a strong correlation between educators' positive attitudes toward technology integration and their perception of its utility.

Furthermore, prior experience with technology has been found to positively influence educators' perceptions of its usefulness. For example, Abas and Hassan (2021) pointed to studies by Lee et al. (2013) and Martin (2012), among others, which suggest a significant effect of users' previous experiences on their perceived usefulness of educational technologies, a finding also supported by earlier work from Thompson et al. (1994).

These established findings provide a strong foundation for hypothesizing that perceived usefulness will positively influence EFL teachers' behavioral intention to use AI academic tools

at the University of Guelma. This aligns with the broader trends observed in the field of educational technology adoption.

2.3.2 Perceived Ease of Use (PEOU)

Perceived Ease of Use (PEOU) stands as the second pivotal construct within the Technology Acceptance Model, referring to the extent to which an individual believes that utilizing a particular system would be free of effort (Davis, 1989). This encompasses the perception of simplicity, user-friendliness, and the absence of difficulty in comprehending and operating the technology. PEOU is closely related to the cognitive effort required to learn and effectively use the system. For EFL teachers, perceived ease of use would imply that AI tools are intuitive, necessitate minimal training, and can be integrated seamlessly into their current teaching routines. Considering that English language teachers at the University of Guelma may possess varying levels of prior experience with educational technology, the perceived simplicity and ease of learning associated with AI tools becomes a particularly critical factor influencing their initial willingness to explore and adopt these innovations. If teachers perceive these tools as cumbersome to learn or challenging to operate, they are likely to exhibit resistance towards their adoption.

PEOU plays a crucial role in facilitating the adoption process of new technologies by diminishing the perceived effort associated with their use (Davis, 1989). A higher perception of ease of use significantly increases the likelihood of technology acceptance (Davis, 1989). Furthermore, PEOU can positively influence users' confidence and competence in adopting technology, a concept known as self-efficacy. Making AI tools easy to use can therefore lower the initial barrier to adoption for EFL teachers, even if they are initially uncertain about the tools' potential benefits. A positive initial experience characterized by ease of use can encourage further exploration and eventual recognition of the technology's usefulness.

Several factors and conditions contribute to an individual's perception of Perceived Ease of Use (PEOU). These include user-friendly interface design, clear and readily accessible instructions, and the availability of adequate technical support. Additionally, an individual's computer self-efficacy, their perception of external control over the technology, and their level of computer anxiety can all influence their perception of ease of use. Prior experience with technology has also been shown to have a positive impact on perceived ease of use (Ibrahim & Shiring, 2022). Providing comprehensive training and readily available support, coupled with ensuring that AI tools are designed with intuitive interfaces, will be critical for enhancing EFL teachers' perception of the ease of use of these academic tools. Addressing any potential anxieties and building confidence in their ability to use the tools effectively is essential for successful adoption.

Considering that EFL teachers may possess varying levels of technological literacy, the perceived ease of use of AI tools becomes a particularly salient factor in their acceptance. Tools that feature complex interfaces or demand significant technical expertise may encounter considerable resistance. Conversely, the seamless integration of AI tools with the teaching platforms and resources that teachers already utilize can contribute to a higher perceived ease of use (Zaineldeen et al., 2020). Given the diverse technological backgrounds of EFL teachers, the AI tools intended for implementation should prioritize simplicity and ease of integration to maximize their potential for widespread adoption. Avoiding a steep learning curve is therefore critical for achieving broad acceptance among educators.

Academic research has established a clear relationship between Perceived Ease of Use (PEOU) and technology adoption. PEOU has a direct positive effect on behavioral intention to use technology. Furthermore, PEOU can also indirectly influence behavioral intention through its

impact on perceived usefulness (Davis, 1989). If a technology is perceived as easy to use, individuals are more inclined to explore its features and subsequently recognize its potential benefits, leading to a higher perception of its usefulness. Enhancing the perceived ease of use of AI tools could therefore initiate a positive cycle where teachers find the tools simpler to use, which in turn leads them to perceive the tools as more useful, ultimately fostering a stronger intention to adopt them in their teaching practices. Ease of use can thus serve as a crucial gateway to the recognition of the potential benefits offered by the technology.

2.3.3 Attitude Toward Use

Within the Technology Acceptance Model (TAM), Attitude Toward Use (ATT) is conceptualized as the user's overall affective response or evaluation concerning the use of a specific technology. According to Davis (1989), it reflects the degree to which an individual possesses a positive or negative feeling about performing the target behavior. In the foundational TAM framework, Attitude Toward Use occupies a central mediating position. It is posited to be directly influenced by a user's Perceived Usefulness and Perceived Ease of Use, and in turn, it directly impacts their Behavioral Intention to Use the technology (Davis, 1989; Davis et al., 1989).

Specifically, a positive perception of a technology's usefulness and ease of use is expected to cultivate a favorable attitude towards engaging with that technology. While the prominence of Attitude as a direct predictor of behavioral intention has been subject to debate in subsequent models like TAM 2 and UTAUT (where behavioral intention is sometimes directly influenced by perceived usefulness or other factors), its role as a mediator in the original TAM structure remains significant (Venkatesh et al., 2003). Understanding this attitudinal component

provides crucial insight into the affective layer of user acceptance, explaining how initial cognitive evaluations translate into a predisposition towards technology engagement.

2.3.4 Behavioral Intention to Use (BI)

Behavioral Intention to Use (BI) in the context of technology adoption refers to the degree to which an individual consciously plans to engage with or utilize a specific technology in the future. It signifies a deliberate decision to adopt and incorporate the technology into one's routine practices. This concept is considered a strong predictor of actual technology use, as highlighted in technology acceptance research (Ajzen, 1991; Venkatesh et al., 2003). For EFL teachers, BI reflects their readiness and willingness to integrate AI-powered tools into their teaching methodologies. This intention is a crucial precursor to the actual implementation of AI in the classroom, indicating the likelihood that teachers will explore and utilize these tools to enhance their teaching and student learning experiences (The SAI Organization, n.d.).

The formation of behavioral intention (BI) is influenced by a variety of factors, including an individual's perceptions, attitudes, and beliefs about technology (Davis, 1989). Prominent theoretical frameworks in technology adoption, such as the Technology Acceptance Model (TAM) by Davis (1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh, Morris, Davis, and Davis (2003), identify several key determinants of BI.

These models commonly include perceived usefulness (the extent to which a person believes that using a particular system will enhance their job performance) and perceived ease of use (the degree to which a person believes that using a particular system would be free from effort) (Davis, 1989).

Additionally, Venkatesh et al. (2003) in the UTAUT model emphasize the influence of social influence (the degree to which an individual perceives that important others believe they should use the new system) and facilitating conditions (the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system).

For EFL teachers considering AI tools, their intention to use these technologies will likely be shaped by their understanding of the potential benefits for teaching and learning (perceived usefulness), their confidence in navigating and utilizing the tools effectively (perceived ease of use), and the support and expectations from their educational institutions and colleagues (social influence and facilitating conditions) (The SAI Organization, n.d.; Taylor & Francis Online, 2024). A strong behavioral intention suggests that teachers are motivated to explore and integrate AI into their pedagogical approaches despite potential challenges.

Understanding EFL teachers' behavioral intention to use AI tools is vital for the successful integration of these technologies in language education (The SAI Organization, n.d.). It provides valuable insights into the factors that drive or hinder the adoption process, allowing for the development of targeted strategies to promote technology acceptance among educators (Ajzen, 1991; Venkatesh et al., 2003). By identifying and addressing the factors that positively influence teachers' intentions, such as demonstrating the practical usefulness and ensuring the ease of use of AI tools, educational institutions can create a supportive environment that encourages the effective and widespread adoption of AI in EFL classrooms (Davis, 1989; The SAI Organization, n.d.).

2.3.5 External Factors

Building upon the understanding that external variables shape the core beliefs of perceived usefulness and perceived ease of use within the Technology Acceptance Model, this

section explores specific categories of these factors that have been extensively studied in the literature. These diverse external influences provide a richer context for understanding the antecedents of technology acceptance. While the primary focus of this study is on the core TAM determinants (Perceived Usefulness, Perceived Ease of Use, and Behavioral Intention), this section provides an overview of relevant external factors that may potentially influence these core constructs within the context of EFL teachers at the University of Guelma considering AI academic tools

2.3.5.1 Individual Differences

A range of inherent user characteristics can significantly impact their initial perceptions of a new technology. For instance, prior user experience with similar systems or technologies has consistently been shown to positively influence both perceived ease of use and, consequently, perceived usefulness. Users with more experience often find new, related technologies easier to learn and more immediately valuable (Venkatesh & Davis, 2000; Soroa-Kosurko et al., 2023).

Computer self-efficacy, defined as an individual's belief in their ability to perform specific tasks using a computer, is another significant individual factor. It's strongly correlated with higher perceived ease of use (Compeau & Higgins, 1995; Schorr, 2023). Other individual traits like innovativeness and anxiety towards technology can also play a role in shaping these initial perceptions (Legris et al., 2003).

For the EFL teachers participating in this study at the University of Guelma, their prior experience with educational technologies and their individual level of computer self-efficacy are crucial individual differences. These could potentially influence how they perceive the ease of use and usefulness of new AI academic tools within their teaching context.

2.3.5.2 Organizational Factors

The environment in which a technology is introduced significantly impacts its acceptance. The provision of adequate training is a critical organizational factor that directly enhances perceived ease of use by equipping users with the necessary skills and knowledge to interact with the system effectively (Abbad et al., 2009; King & He, 2006). Organizational support, including technical assistance and resources, also contributes positively to perceived ease of use and can bolster perceived usefulness by demonstrating the organization's commitment to the technology's successful integration (Ramayah et al., 2010). The organizational context at the University of Guelma, including the availability of specific training programs for using AI in language teaching and the level of technical support provided by the institution, represents organizational factors that may shape teachers' perceptions of AI tools.

2.3.5.3 Social Influence

The social environment in which a user operates can exert considerable influence on their technology perceptions. Subjective norms, reflecting a user's perception that important individuals or groups believe they should use the technology, can impact both perceived usefulness (by suggesting the technology is valued by others for performance) and behavioral intention directly in some extended models (Venkatesh & Davis, 2000). Cultural context broadly falls under social influence, as societal values, norms, and communication styles can shape collective attitudes and individual perceptions towards new technologies (Straub, 1994; Abbad et al., 2009).

2.3.5.4 System Characteristics

The inherent qualities and features of the technology itself are fundamental external factors. System quality, encompassing aspects like reliability, functionality, and ease of use

embedded in the design, directly impacts perceived ease of use (DeLone & McLean, 2003; Ramayah et al., 2010). The perceived output quality of the system, referring to the user's perception of how well the system performs tasks relevant to their job, is a direct antecedent to perceived usefulness (Venkatesh & Davis, 2000).

These specific categories of external factors, through their influence on perceived usefulness and perceived ease of use, provide a more granular understanding of the contextual and individual dynamics that shape technology acceptance as explained by the Technology Acceptance Model.

2.4 Application of Technology Acceptance Model

Building upon the theoretical foundations of the Technology Acceptance Model, this section examines its application within educational environments. We begin by exploring the general application of TAM in diverse educational settings for both educators and students, which provides essential context for understanding technology adoption before delving into the more specific areas relevant to this research.

The Technology Acceptance Model (TAM) has proven to be a robust framework for investigating the adoption and use of technology within educational environments, encompassing both the perspectives of educators and students. As Granić and Marangunić (2019) and Al-Nuaimi et al. (2021) note, the increasing integration of digital tools, platforms, and resources in learning and teaching necessitates an understanding of the factors influencing their acceptance to ensure effective implementation and maximize pedagogical benefits. TAM provides a valuable lens for this by focusing on perceived usefulness and perceived ease of use as central determinants.

For educators, applying the Technology Acceptance Model (TAM) helps illuminate their decisions to incorporate technology into their pedagogical practices. In this context, Perceived Usefulness (PU) often translates to the belief that a technology can enhance instructional delivery, streamline administrative tasks, or open up new instructional possibilities. Perceived Ease of Use (PEOU) concerns how straightforward the technology is to integrate into existing workflows and operate in a classroom or online setting, as demonstrated by Teo (2011) and Fathema, Shannon, and Ross (2015).

Similarly, for students, perceived usefulness typically centers on how technology can improve their learning outcomes, provide access to information, or facilitate communication and collaboration. Their perceived ease of use relates to the accessibility and navigability of the technology for learning activities and resource access (Soroa-Kosurko et al., 2023; Aldraiweesh, & Alturki ,2023).

Research in educational settings frequently extends the core TAM to include external factors relevant to the learning environment. These often include institutional support, peer influence, infrastructure quality, and pedagogical beliefs (Teo, 2011; Abbad et al., 2009). Understanding these general trends in technology acceptance within education is crucial for examining the specific dynamics at play in language learning environments, which is the focus of the following section on EFL/ESL contexts.

2.4.1 Specific Focus on EFL/ESL Contexts

In the specific domain of English as a Foreign Language (EFL) and English as a Second Language (ESL) education, TAM has been frequently employed to explore the acceptance of language learning technologies by both instructors and learners. These technologies range from

online language platforms and mobile applications to specialized Computer-Assisted Language Learning (CALL) software (Al-Emran et al., 2018; Farahat, 2012).

For EFL/ESL teachers, perceived usefulness is often tied to the technology's capacity to provide authentic language input, facilitate interactive exercises, support differentiated instruction, and enhance overall language teaching effectiveness. Ajayi (2020) and Oz (2014) have explored these aspects in their research. Their perceived ease of use is critical for seamless integration into lesson planning and effective management during class time (Ajayi, 2020). Studies in this area, including work by Scherer et al. (2019), indicate that external factors such as professional development opportunities, technical support, and the perceived compatibility of the technology with language teaching methodologies significantly influence teachers' acceptance.

For EFL/ESL learners, the perceived usefulness of language learning technologies is frequently linked to their potential to improve specific language skills, offer opportunities for practice and feedback, and enhance motivation and engagement in the language acquisition process (Manyonganise, 2014; Kaya & Feyzioğlu, 2014; Wu & Du, 2012). Perceived ease of use is essential for learners to comfortably navigate and effectively utilize the features of these tools for independent study and skill development (Ramayah et al., 2010; Aldraiweesh., & Alturki, 2023). Research in EFL/ESL contexts, such as that by Farahat (2012) and Abbad et al. (2009), underscores the importance of external factors including instructor guidance, the availability of suitable resources, and the perceived relevance of the technology to their individual learning goals.

2.4.2 Application to AI Educational Tools

The increasing integration of Artificial Intelligence (AI) into educational tools, including AI-powered tutoring systems, intelligent feedback mechanisms, automated grading tools, and

personalized learning platforms, has become a significant area where TAM is applied to understand user acceptance. As Popenici and Kerr (2017) and Roll and Wylie (2016) discuss, this represents a new frontier for the model in deciphering how both educators and students perceive and adopt these advanced technologies.

For educators interacting with AI tools, perceived usefulness may involve the AI's ability to automate time-consuming tasks, provide data-driven insights into student progress, or support the creation of personalized learning experiences (Popenici & Kerr, 2017; Broadbent et al., 2022; Malik et al., 2023). Perceived ease of use considers how intuitive the AI interface is, how easily it integrates with existing educational platforms, and the effort required to understand and utilize its functionalities effectively.

For students, the perceived usefulness of AI educational tools is often related to receiving immediate and personalized feedback, accessing adaptive learning content, and gaining a deeper understanding of subjects through intelligent support (Roll & Wylie, 2016; Broadbent et al., 2022). Their perceived ease of use is crucial for comfortable and effective interaction with AI systems and the ability to utilize features without technical barriers. Research in this emerging area using TAM, including a study by Dahri et al. (2024), often highlights external factors such as trust in AI algorithms, concerns about data privacy and algorithmic bias, and the influence of instructors and institutions in promoting or mandating AI tool usage. Applying the TAM framework in these contexts provides valuable insights into the acceptance dynamics of AI in education, guiding future development and implementation strategies.

2.5 Limitations of TAM

The Technology Acceptance Model (TAM), while providing a foundational framework for understanding technology adoption, has been subject to various criticisms regarding its scope

and applicability in specific contexts. The subsequent paragraphs will delineate some of the key limitations of TAM, particularly as they pertain to the adoption of AI tools by EFL teachers.

One notable limitation of TAM centers on its inherent simplicity, primarily focusing on perceived usefulness and perceived ease of use as the principal determinants of technology acceptance (Benbasat & Barki, 2007). While this parsimony makes TAM widely applicable, it can sometimes oversimplify the complex array of factors that influence the adoption of technological innovations within diverse contexts, such as the distinct educational landscape encountered by EFL teachers at the University of Guelma.

The model's original parsimonious nature has been critiqued for neglecting crucial external and contextual elements that can significantly impact technology adoption. These include factors such as the state of existing technological infrastructure, the accessibility and quality of institutional technical support, and the overarching organizational culture surrounding the integration of technology in pedagogy (Venkatesh et al., 2003; Legris et al., 2003).

Furthermore, the core constructs of TAM do not explicitly address the influence of broader socio-cultural norms, specific educational policies, or macro-level contextual factors (King & He, 2006). Such elements, particularly relevant within the Algerian higher education system, could significantly shape teachers' decisions regarding technology adoption, highlighting areas where extended models or complementary theories might provide deeper insights.

Another significant limitation of TAM arises when considering the specific characteristics of Artificial Intelligence (AI) tools within the realm of English as a Foreign Language (EFL) instruction. While the constructs of perceived usefulness and perceived ease of use retain their relevance, the integration of AI in language education introduces a unique set of considerations that may not be adequately captured by TAM's more general constructs.

For instance, EFL teachers might harbor concerns regarding the perceived impact of AI tools on the nuanced aspects of students' linguistic development, the alignment of these tools with established pedagogical principles and curriculum objectives, and the potential ethical dilemmas surrounding issues such as data privacy and algorithmic bias ("Perceptions of EFL Teachers," n.d.).

Moreover, the perceived trustworthiness and pedagogical validity of AI-generated content and feedback are crucial factors. These aspects extend beyond simple notions of usefulness and ease of interaction and could considerably affect teachers' inclination to incorporate these tools into their instructional routines.

Finally, TAM's primary emphasis on universal cognitive beliefs might not sufficiently account for the pivotal role of individual teacher characteristics and affective variables in the technology adoption process. Disparities in EFL teachers' prior experience with educational technology, their inherent level of technological self-efficacy, and their personal attitudes and beliefs concerning the integration of AI within educational contexts are all factors likely to exert a substantial influence on their adoption decisions (Ibrahim & Shiring, 2022). Teachers who experience higher levels of technology-related anxiety or who adhere to more traditional pedagogical philosophies might exhibit resistance towards the adoption of AI, regardless of the perceived benefits or user-friendliness of the tools themselves. In conclusion, while the Technology Acceptance Model offers valuable insights into the general factors influencing technology adoption, a more nuanced and context-aware understanding of AI tool adoption among EFL teachers necessitates acknowledging and exploring these limitations and incorporating additional contextual and individual factors into the analysis.

Conclusion

This chapter has established a foundational understanding of the Technology Acceptance Model (TAM) and its relevance, particularly the construct of Perceived Ease of Use, to the study of technology adoption by educators. While TAM offers a valuable theoretical lens for examining the determinants of acceptance, this chapter has also critically explored its limitations in the specific context of EFL teachers' adoption of AI tools. The inherent simplicity of TAM, its potential oversight of crucial contextual and individual factors prevalent in this setting, and the unique considerations surrounding the integration of AI within language education suggest that while TAM offers valuable initial insights, a more comprehensive understanding necessitates considering factors beyond this model.

Chapter Three

Field Investigation: Data Analysis and Pedagogical Implementation

Introduction

This chapter details the field investigation of a study focused on exploring the perceptions and acceptance of Artificial Intelligence (AI) academic tools among EFL teachers at 08 Mai 1945 University, Guelma. The research aims to understand how factors, particularly those derived from the Technology Acceptance Model (TAM) such as perceived usefulness and perceived ease of use, influence educators' intentions and their actual integration of these innovative educational technologies into their teaching practice. Given the rapidly evolving landscape of AI in education, comprehending teacher perspectives is paramount for fostering successful technological adoption and maximizing its pedagogical benefits within the EFL context.

Accordingly, this chapter is comprehensively devoted to the analysis, description, and interpretation of the results obtained from the rigorous field investigation. Through a systematic examination of the collected data, key patterns and insights regarding teacher attitudes and experiences with AI tools will be illuminated. Following this detailed analysis, a concise summary of the main findings will be presented, leading to the overall conclusion for the chapter. Finally, based on the empirical evidence and insights gained, a set of practical pedagogical implementations and recommendations will be discussed, aimed at guiding future strategies for effective AI integration in EFL education.

3.1 Research Methodology and Design

3.1.1 Research Method

This study adopts a quantitative descriptive research design to systematically investigate the perceptions and acceptance of Artificial Intelligence academic tools among EFL teachers. A descriptive design is particularly suited for this inquiry as it enables the comprehensive portrayal of characteristics, frequencies, and trends pertinent to the study's variables, without manipulating them. This approach allows for the collection of data on current attitudes, beliefs, and behaviors of the target population—EFL teachers at 08 Mai 1945 University, Guelma—concerning AI academic tools. By employing a descriptive framework, the research aims to precisely map the extent to which factors derived from the Technology Acceptance Model (TAM), such as perceived usefulness and perceived ease of use, influence teachers' intentions and actual acceptance of these innovative educational technologies, thereby providing a clear snapshot of the phenomenon under investigation.

3.1.2 Population and Sample of the Study

The population of this study includes EFL teachers from the Department of Letters and English Language at 08 Mai 1945 University, Guelma, during the academic year 2024/2025. To gather data on the acceptance of AI academic tools, teachers' questionnaire distributed to a sample of 47 teachers from this population. Out of these, only 24 teachers contributed in answering the questionnaire. The selection of this particular sample of EFL teachers is predicated on their direct engagement in pedagogical practices within the university setting, offering insights into their perceptions and factors influencing the adoption of AI academic tools. Their active involvement is crucial for understanding the practical and theoretical implications of AI integration within contemporary EFL instruction.

3.1.3 Data Gathering Tools

A teachers' questionnaire has been designed for the sample teachers in order to gather the required research data. It aims to investigate teachers' attitudes towards the use of AI academic tools in their teaching practices. The questionnaire is segmented into different sections, each of which consisting of a set of various questions.

3.2 Description the Questionnaire

The design of this questionnaire is largely based on the concepts discussed in the theoretical chapters, and it is explicitly aligned with the theoretical constructs of the Technology Acceptance Model (TAM), as comprehensively detailed in Chapter Two. It consists of thirty (30) questions which are ordered logically (APPENDIX 1). These questions are divided into four sections and varied between multiple-choice questions in addition to closed-ended Likert scale questions designed to yield quantitative data. These sections are presented as follows:

3.2.1 Section One: Demographic Information (Q1, Q2, Q3)

This initial section comprises three multiple-choice questions designed to gather essential background information about the participants. These include current academic rank (Q1), years of teaching experience of EFL at the university level (Q2), and previous experience with AI-powered tools in their teaching practice (Q3).

3.2.2 Section Two: Perceptions of Artificial Intelligence in EFL Education (Q4-Q10)

This section, consisting of six Likert-scale questions and a multiple-choice question, is designed to investigate EFL teachers' general perceptions of AI in education. It focuses on their perspectives regarding AI's potential to transform positively EFL teaching and learning (Q4), its ability to support personalized learning (Q5), and its opportunities to enhance language acquisition (Q6). Furthermore, it explores teachers' consideration of ethical issues like data

privacy and bias (Q7), and their awareness of challenges in integrating AI into the EFL context at the University of Guelma (Q8). The final Likert-scale question in this section (Q9) assesses their general awareness of different types of AI-driven tools available for language teaching, followed by a checklist where participants can indicate which specific types of AI tools they are aware of, such as grammar and writing assistants, plagiarism detection tools, content generation tools, adaptive learning platforms, chatbots, and automated grading tools (Q10).

3.2.3 Section Three: Core Technology Acceptance Model Constructs for AI Tools (Q11-Q23)

This section, comprising thirteen Likert-scale questions, investigates teachers' perceptions of AI academic tools based on the Technology Acceptance Model (TAM). It is divided into three sub-sections:

First, Perceived Usefulness (PU) (Questions 11-16) these six questions aim to understand if teachers believe using AI academic tools can enhance their teaching effectiveness (Q11), improve student performance (Q12), make their job easier (Q13), be generally useful in their teaching practice (Q14), help deliver more impactful feedback (Q15), and support innovative pedagogical approaches (Q16).

Second, Perceived Ease of Use (PEOU) (Questions 17-20) these four questions explore how easy teachers find AI academic tools to use (Q17), if they find it easy to get the tools to perform desired tasks (Q18), if interaction with the tools is free of effort (Q19), and if using them requires significant technical skills (Q20).

Third, Behavioral Intention to use (BI) (Questions 21-23) these three questions assess teachers' future intentions to use AI academic tools in their EFL teaching (Q21), their plans to explore and use these tools in classes (Q22), and their willingness to integrate them into their pedagogical practices (Q23).

3.2.4 Section Four: Teacher Acceptance and Integration of AI Tools in EFL (Q24-Q30)

This section, consisting of seven Likert-scale questions, delves into factors influencing teachers' acceptance and integration of AI tools in EFL teaching. It investigates whether the perceived usefulness of AI tools significantly influences willingness to use them (Q24), and if the ease of use is a major factor in adoption decisions (Q25). Further questions explore if perceived ease of use leads to perceived usefulness (Q26), and if potential perceived benefits encourage integration (Q27). The section also examines how concerns about challenges (e.g., technical issues, training) affect overall acceptance (Q28), and if the intention to use AI tools is linked to achieving teaching goals (Q29). Finally, it assesses the extent to which teachers feel supported by the university/department in exploring and adopting AI academic tools (Q30).

3.3 Administration of the Questionnaire

The questionnaire was administered online via *Google Form* to 46 teachers at the Department of English, Guelma University on May, 22nd , 2025. Therefore, Only 24 teachers volunteered and participated in answering the questionnaire. All of them provided responses, which are used as a tool to gain insights into their acceptance and use of AI academic tools.

3.4 Data Analysis and Interpretation

This section focuses on transforming the collected information into meaningful and analytically sound insights. It presents the systematic procedures employed to examine the data, identify key patterns, and interpret the significance of the findings. Such thorough analysis and interpretation are essential for constructing the study's conclusions and providing robust evidence in response to the research questions. The data are broken down step by step to highlight the most relevant and recurring points that emerged from participants' responses. Emphasis is placed not only on the numerical results but also on their implications regarding participants'

experiences and perspectives. This process ensures that the conclusions drawn are well-grounded and closely aligned with the empirical evidence gathered throughout the study.

3.4.1 Section One: Demographic Information

Question One: What is your current academic rank?

Table 3.1

Teachers' Rank

Response	Frequency	Percentage
Assistant Lecturer	9	37.5%
Lecturer B	5	20.8%
Lecturer A	7	29.2%
Associate Professor	3	12.5%
Professor	0	0%
Total	**24**	**100%**

As it is indicated in Table 3.1 that represents the academic ranks of the respondents, 37.5% of teachers are Assistant Lecturers, 29.2% are Lecturer A, and 20.8% are Lecturer B. These three categories of academic ranks reflect the common early and mid-career positions for university teachers. In the same line, 12.5% of the teachers are Associate Professors, and no participants held the rank of Professor (0%), primarily due to their limited representation within this particular sample. This implies the questionnaire primarily gathered views from teachers in the initial and developing stages of their academic careers.

Question Two: How many years of teaching experience do you have in EFL teaching at the university level?

Table 3.2

Years of Teaching Experience in EFL at the University Level

Response	Frequency	Percentage
Less than 5 years	4	16.7%
15-10 years	8	33.3%
11-15 years	9	37.5%
More than 15 years	3	12.5%
Total	**24**	**100%**

Table 3.2, which details the teachers' years of EFL teaching experience at the university level, reveals a varied distribution across different career stages. The highest percentage of teachers (37.5%) falls within the eleven to fifteen (11–15) years of teaching experience category. This is followed by those with five to ten (5–10) years of experience, constituting 33.3%. Additionally, 16.7% of the teachers reported less than five (<5) years of experience, while 12.5% indicated more than fifteen (>15) years. These figures reflect a strong representation of mid-career professionals within the sample.

Question Three: Have you previously used any AI-powered tools in your teaching practice?

Table 3.3

Teachers' Previous Use of AI-Powered Tools in Teaching

Response	Frequency	Percentage
Yes	21	87.5%
No	3	12.5%
Total	**24**	**100%**

Table 3.3 displays the distribution of EFL teachers who have previously used AI-powered tools in their teaching practice. Out of the total number of participants, 87.5% selected Yes corresponding to 21 respondents, while 12.5% selected No, representing 3 respondents. These results indicate that the majority of participants have prior experience with AI tools in their teaching, suggesting a notable level of practical engagement with such technologies.

3.4.2 Section Two: Perceptions of Artificial Intelligence in EFL Education

Question Four: Artificial Intelligence has the potential to transform positively EFL teaching and learning.

Table 3.4

Perceptions of AI's Potential to Transform positively EFL Teaching and Learning

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	2	8.3%
Neutral	6	25%
Agree	10	41.7%
Strongly Agree	5	20.8%
Total	**24**	**100%**

Table 3.4 illustrates the teachers' perceptions on whether Artificial Intelligence has the potential to transform positively EFL teaching and learning. The results show that the highest percentage (41.7%), stands for teachers who selected the *Agree* option for the statement. This infers a broad understanding and acceptance among a large group of the teaching staff regarding AI's changing power. Following this, 25.0% of the teachers had a *neutral stance* towards the

statement., AI's major changes. Moreover, 20.8% of teachers selected the *Strongly Agree* option, which infers a strong belief in AI's powerful positive effect.

However, only a small number chose options indicating disagreement. Specifically, 8.3% of teachers selected the *Disagree* option for the statement, while a very small number, (4.2%), selected the *Strongly Disagree* option. Overall, these findings point to a positive outlook among the teachers regarding AI's part in changing EFL teaching and learning.

Question Five: AI-driven tools can effectively support personalized learning pathways for EFL students.

Table 3.5

Teachers' Perceptions on AI Tools' Effectiveness in Personalizing EFL Learning

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	2	8.3%
Neutral	6	25%
Agree	12	50%
Strongly Agree	3	12.5%
Total	**24**	**100%**

The table presents the distribution of tutorial participants' perceptions regarding the effectiveness of AI tools in personalizing Assessment for Learning EFL. The data show that 50% of respondents selected *Agree* and 12.5% selected *Strongly Agree*, indicating that 62.5% of participants expressed positive perceptions. Meanwhile, 25% of the respondents chose the *Neutral* option. On the lower end of the scale, 8.3% selected *Disagree* and 4.2% selected *Strongly Disagree*, representing a combined 12.5% of responses reflecting disagreement. These

figures demonstrate that the majority of participants reported agreement with the effectiveness of AI tools in the personalization of EFL learning, while a smaller proportion expressed disagreement, and a quarter of respondents remained neutral.

Question Six: The use of AI in EFL instruction offers significant opportunities to enhance language acquisition.

Table 3.6

Teachers' Perspectives on AI Opportunities for Language Acquisition in EFL

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	2	8.3%
Neutral	6	25%
Agree	9	37.5%
Strongly Agree	6	25%
Total	**24**	**100%**

A notable portion of the respondents selected *Agree*, with nine (9) individuals, representing the highest percentage (37.5%). This indicates that a significant number of participants chose this option. Following this, *Neutral* was selected by six (6) respondents, constituting 25% of the total. This shows that a quarter of the participants chose the middle option. Similarly, *Strongly Agree* was also chosen by six (6) respondents, representing another 25% of the total.

On the other hand, *Disagree* was selected by two (2) respondents, accounting for 8.3%. The option *Strongly Disagree* was chosen by one (1) respondent, representing 4.2% of the total responses. The data show that the *Agree* option had the highest number of selections, followed

by *Neutral* and *Strongly Agree* which had an equal number of selections. The options *Disagree* and *Strongly Disagree* received the fewest selections.

Question Seven: I believe that ethical issues, such as data privacy and bias, are important considerations when using AI in education.

Table 3.7

Teachers' Beliefs on Ethical Considerations for AI in Educational Settings

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	1	4.2%
Neutral	2	8.3%
Agree	7	29.2%
Strongly Agree	12	50%
Total	**24**	**100%**

Table 3.7 reveals a distinct distribution among the participants' responses. Twelve (12) respondents, which accounts for 50%, indicated strong agreement with the statement. Following this, nearly one third of the participants (29.2%), with seven (7) teachers, chose the *Agree* option. Focusing on the less frequent responses, only two teachers (8.3%) expressed strong disagreement. Interestingly, the same number of respondents, also two (8.3%), selected the neutral stance. Lastly, the *Disagree* option was chosen by just one teacher, making up 4.2% of the total. Overall, the data point to a clear tendency towards agreement, with the *Strongly Agree* response being the most prevalent among the twenty-four (24) participating teachers.

Question Eight: There are significant challenges to integrating AI effectively into the EFL educational context at University of Guelma.

Table 3.8

Challenges to Effective AI Implementation in EFL at University of Guelma

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	1	4.2%
Neutral	4	16.7%
Agree	11	45.8%
Strongly Agree	7	29.2%
Total	**24**	**100%**

Table 3.8 illustrates teachers' views on if there are significant challenges to integrating AI effectively into the EFL educational context at the University of Guelma. 75.0% acknowledged the existence of such challenges, with 45.8% selecting *Agree* and 29.2% selecting *Strongly Agree*. 16.7% of teachers had a *neutral stance.* However, only a small number chose options indicating disagreement. Specifically, 4.2% of teachers selected the *Disagree* option for the statement, while an equal percentage selected the *Strongly Disagree* option. Overall, these findings point to a mostly shared perception among teachers that there are notable challenges to effectively integrating AI into the EFL educational context at the University of Guelma.

Question Nine: I am aware of different types of AI-driven tools available for language teaching.

Table 3.9

Awareness of AI Tools Available for Language Instruction

Response	Frequency	Percentage
Strongly Disagree	0	0%
Disagree	2	8.3%
Neutral	10	41.7%
Agree	7	29.2%
Strongly Agree	5	20.8%
Total	**24**	**100%**

Table 3.9 indicates the participants' awareness levels regarding AI tools available for language instruction. None of the participants selected *Strongly Disagree* (0%). A small percentage (8.3%) selected *Disagree*. The highest percentage (41.7%) selected *Neutral*. A percentage of 29.2% selected *Agree*, while 20.8% selected *strongly agree*. Overall, the results show a varied distribution across the scale, with noticeable representation in both the *Neutral* and positive categories. This shows that awareness levels are mixed. While some participants are familiar with these tools, others may not have explored them much yet. The results suggest there is growing attention toward AI tools and their role in language instruction. Enhancing awareness could further support the integration of AI tools into language teaching practices.

Question Ten: Which of the following types of AI-driven tools for language teaching are you aware of?

Table 3.10

Types of AI Tools Known by Participants in Language Teaching

Response	Frequency	Percentage
Plagiarism detection tools	22	91.7%
Grammer and writing	19	79.2%
Content generation tools	21	87.5%
Pronunciation training apps	7	29.2%
Adaptive learning platforms	9	37.5%
Chatbots for conversation	17	70.8%
Automated grading tools	7	29.2%
Other	3	12.5%

Table 3.10 presents the types of AI tools known by the participants in the context of language teaching. The highest percentage of participants reported plagiarism detection tools at 91.7%. This is followed by content generation tools at 87.5%, and grammar and writing assistants at 79.2%. Chatbots for conversations were also known by 70.8% of the participants. Meanwhile, adaptive learning platforms were selected by 37.5%, and both pronunciation training applications and automated grading tools were each reported by 29.2%. A smaller percentage (12.5%) indicated knowledge of other AI tools, such as Perplexity, QuillBot, and Elicit.

These results show that the majority of participants are familiar with widely used tools that support writing and content creation. Tools that are more specialized, such as those for adaptive learning or pronunciation training, appear to be less commonly known. Overall, the data highlight the dominance of AI tools that directly assist with text-based tasks in language instruction.

3.4.3 Section Three: Core Technology Acceptance Model (TAM) Constructs for AI Tools

Question Eleven: Using AI academic tools enhances my effectiveness in teaching EFL.

Table 3.11

Teachers' Perceptions of AI Tools in Enhancing EFL Teaching Effectiveness

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	7	29.2%
Neutral	5	20.8%
Agree	6	25%
Strongly Agree	4	16.7%
Total	**24**	**100%**

Table 3.11, titled Teachers' Perceptions of AI Tools in Enhancing EFL Teaching Effectiveness, presents the participants' responses on a five-point scale. The results show that 2 participants (8.3%) strongly disagreed that AI tools enhance their teaching effectiveness. Disagreement was reported by 7 participants (29.2%). Neutral responses were given by 5 participants (20.8%). A total of 6 participants (25%) agreed, while 4 participants (16.7%) strongly agreed that using AI academic tools enhances their effectiveness in teaching EFL.

These results indicate a varied distribution of perceptions, with a combined 41.7% expressing agreement. The presence of neutral responses reflects a balanced viewpoint among some participants. Overall, the findings demonstrate an emerging recognition of AI tools as supportive resources in enhancing EFL teaching effectiveness.

Questin Twelve: Using AI academic tools can improve my students' performance in EFL.

Table 3.12

Teachers' Perceptions on AI Academic Tools Improving EFL Students' Performance

Response	Frequency	Percentage
Strongly Disagree	0	0%
Disagree	4	16.7%
Neutral	6	25%
Agree	12	50%
Strongly Agree	2	8.3%
Total	**24**	**100%**

Table 3.12 illustrates teachers' perceptions regarding the impact of AI academic tools on EFL students' performance. None of the participants selected *Strongly Disagree* (0%). A minority of 16.7% expressed disagreement. One quarter of the respondents (25%) remained neutral on the matter. Half of the teachers (50%) agreed that AI tools positively influence EFL students' performance, while 8.3% strongly agreed with this statement. These results indicate that a majority of teachers recognize the potential benefits of AI academic tools in improving students' outcomes, although some remain uncertain or skeptical. The combined 58.3% agreement highlights a generally positive perception of AI's role in language learning. This suggests a trend toward increasing acceptance of technology-enhanced instruction among EFL educators.

Question Thirteen: Using AI academic tools can make my job easier.

Table 3.13

Teachers' Perceptions on AI Academic Tools Making Their Job Easier

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	3	12.5%
Neutral	9	37.5%
Agree	6	25%
Strongly Agree	5	20.8%
Total	**24**	**100%**

This table (Table 3.13) presents the participants' views on whether using AI academic tools can make their job easier. The data indicate that 25% of respondents selected *Agree*, µwhile 20.8% opted for *Strongly Agree*, suggesting that a combined 45.8% of teachers perceive AI tools as a means to simplify their work. A significant proportion of participants, 37.5% (representing nine teachers), remained *Neutral* on this matter. On the other side of the spectrum, 12.5% of teachers chose *Disagree*, and a smaller 4.2% selected *Strongly Disagree*. Together, these figures show that 16.7% of respondents do not believe AI academic tools make their job easier. Overall, while a notable group of teachers sees the potential for AI to ease their workload, a larger segment is either neutral or does not share this perception

Question Fourteen: I believe using AI academic tools can be useful in my EFL teaching practice.

Table 3.14

Teachers' Beliefs on the Utility of AI Academic Tools in EFL Teaching

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	7	29.2%
Neutral	5	20.8%
Agree	6	25%
Strongly Agree	4	16.7%
Total	**24**	**100%**

Table 3.14 outlines teachers' beliefs regarding the usefulness of AI academic tools in their EFL teaching practice. According to the results, 25% of the participants selected *Agree*, and 16.7% chose *Strongly Agree*, which means a total of 41.7% of teachers believe these tools can be useful. A considerable number of respondents, five teachers (20.8%), adopted a *Neutral* stance. Conversely, a larger group expressed disagreement, with 29.2% selecting *Disagree* and 8.3% selecting *Strongly Disagree*. This combines to 37.5% of participants who do not perceive AI academic tools as useful in their teaching practice. The findings suggest a mixed range of opinions, with a slightly higher percentage of teachers agreeing on the utility of AI tools compared to those who disagree, while a significant portion remains neutral.

Question Fifteen: AI academic tools can help me deliver more impactful and targeted feedback to students.

Table 3.15

Teachers' Perceptions of AI Tools' Effectiveness in Enhancing Feedback Delivery

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	8	33.3%
Neutral	5	20.8%
Agree	5	20.8%
Strongly Agree	4	16.7%
Total	**24**	**100.0%**

Table 3.15 outlines respondents' views on the capability of AI academic tools to enhance the delivery of impactful and targeted feedback to students. The results indicate that 20.8% of participants selected *Agree*, while a further 16.7% chose *Strongly Agree*, culminating in a combined 37.5% expressing a positive perception on this matter. A notable portion of respondents (20.8%) remained *Neutral*.

Conversely, a third of participants (33.3%) selected *Disagree*, and 8.3% opted for *Strongly Disagree*, which together constitute 41.6% of responses reflecting disagreement. These figures demonstrate a divided opinion among participants, with a slightly larger proportion expressing disagreement regarding the potential of AI tools to aid in delivering more impactful and targeted feedback, compared to those who agreed or remained neutral.

Question Sixteen: AI academic tools can support innovative pedagogical approaches in EFL.

Table 3.16

Teachers' Perceptions of AI Tools' Role in Supporting Innovative EFL Pedagogical Approaches

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	5	20.8%
Neutral	8	33.3%
Agree	9	37.5%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.16 presents the distribution of participants' perceptions concerning the role of AI academic tools in supporting innovative pedagogical approaches in English as a Foreign Language (EFL). The findings show that 37.5% of respondents selected *Agree* and 4.2% selected *Strongly Agree*, signifying that a combined 41.7% of participants hold a positive view. A substantial group, representing one-third of respondents (33.3%), chose the *Neutral* option. On the opposing side, 20.8% selected *Disagree* and 4.2% selected *Strongly Disagree*, representing a total of 25% of responses indicating disagreement. These figures suggest that a notable proportion of participants affirm the potential of AI tools to support innovative EFL teaching methods, while a considerable number remain neutral, and a quarter (25%) express disagreement.

Question Seventeen: I find AI academic tools easy to use.

Table 3.17

Teachers' Perceptions of the Ease of Use of AI Academic Tools

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	3	12.5%
Neutral	3	12.5%
Agree	9	37.5%
Strongly Agree	8	33.3%
Total	**24**	**100.0%**

This table outlines participants' responses regarding the ease of use of AI academic tools. The data reveal that a significant majority expressed positive sentiments, with 37.5% selecting *Agree* and a third (33.3%) selecting *Strongly Agree*. This amounts to a substantial 70.8% of participants who find AI academic tools easy to use. In contrast, 12.5% of respondents remained "Neutral". A smaller fraction of participants expressed difficulty, with 12.5% selecting *Disagree* and 4.2% selecting *Strongly Disagree*, making up a combined 16.7% who do not find these tools easy to use. Overall, the data clearly indicate that a large majority of respondents (70.8%) perceive AI academic tools as being user-friendly.

Question Eighteen: I find it easy to get AI academic tools to do what I want them to do.

Table 3.18

Teachers' Perceptions of the Controllability of AI Academic Tools

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	3	12.5%
Neutral	6	25.0%
Agree	9	37.5%
Strongly Agree	5	20.8%
Total	**24**	**100.0%**

Table 3.18 showcases the participants' perceptions of their ability to make AI academic tools perform desired tasks. The results show that 37.5% of respondents chose Agree, and 20.8% selected Strongly Agree, indicating that a majority, 58.3%, find it easy to get the tools to function as intended. A quarter of the participants, 25.0%, adopted a Neutral stance. On the other hand, 12.5% selected Disagree, and 4.2% opted for Strongly Disagree, which means a combined 16.7% of respondents experience difficulty in this regard.

Question Nineteen: My interaction with AI academic tools can be free of effort**.**

Table 3.19:

Teachers' Perceptions of the Effort Required for Interaction with AI Academic Tools

Response	Frequency	Percentage
Strongly Disagree	2	8.3%

Disagree	1	4.2%
Neutral	5	20.8%
Agree	9	37.5%
Strongly Agree	7	29.2%
Total	**24**	**100.0%**

This table presents data on whether participants perceive their interaction with AI academic tools as effortless. A significant proportion of respondents agreed with this) statement, with 37.5% selecting *Agree* and 29.2% choosing *Strongly Agree*. This indicates that a combined 66.7% of participants find their interaction with these tools to be largely effort-free. Meanwhile, 20.8% of respondents remained *Neutral* on this issue. A smaller segment expressed that their interaction was not effortless, with 4.2% selecting *Disagree* and 8.3% selecting *Strongly Disagree*, totaling 12.5%. The data strongly suggest that a majority of participants experience their use of AI academic tools as requiring little effort.

Question Twenty: Using AI academic tools does not require significant technical skills.

Table 3.20:

Teachers' Perceptions of the Technical Skill Requirements for AI Academic Tools

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	2	8.3%
Neutral	2	8.3%
Agree	9	37.5%
Strongly Agree	9	37.5%

Total	**24**	**100.0%**

Table 3.20 displays participants' views on the level of technical skill required to use AI academic tools. The responses show a strong consensus, with 37.5% selecting *Agree* and another 37.5% selecting *Strongly Agree*. This means a substantial three-quarters of participants (75%) believe that using these tools does not necessitate significant technical expertise. Only a small percentage (8.3%) of respondents chose *Neutral*. Conversely, a combined 16.6% of participants disagreed, with 8.3% selecting *Disagree* and 8.3% selecting *Strongly Disagree*. These figures clearly demonstrate that the vast majority of respondents perceive AI academic tools as accessible without requiring advanced technical skills.

Question Twenty one: I intend to use AI academic tools in my EFL teaching in the future.

Table 3.21:

Teachers' Future Intentions Regarding the Use of AI Academic Tools in EFL Teaching

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	4	16.7%
Neutral	9	37.5%
Agree	2	8.3%
Strongly Agree	8	33.3%
Total	**24**	**100.0%**

The data in Table 3.21 concern the participants' intentions to use AI academic tools in their EFL teaching in the future. The responses indicate varied intentions, with 8.3% selecting *Agree* and a significant one-third (33.3%) selecting *Strongly Agree*, which collectively means

41.6% of participants express an intention to use these tools. A substantial group (37.5%) remained *Neutral* regarding future use. On the other side, 16.7% selected *Disagree*, and 4.2% selected *Strongly Disagree*, representing a combined 20.9% who do not intend to use AI tools in their future EFL teaching. These figures show a notable inclination towards future use, although a large proportion remains undecided, and roughly a fifth express disinclination.

Question Twenty two: I plan to explore and use AI academic tools in my classes.

Table 3.22:

Teachers' Plans for Exploring and Utilizing AI Academic Tools in Class

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	7	29.2%
Neutral	9	37.5%
Agree	5	20.8%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.22 presents participants' responses regarding their plans to explore and use AI academic tools in their classes. The data show that 20.8% of respondents selected *Agree*, and 4.2% selected *Strongly Agree*, indicating that a total of a quarter (25%) plan to explore and use these tools. The largest group of respondents (37.5%) chose the *Neutral* option. A significant percentage expressed a lack of plans to explore and use these tools, with 29.2% selecting *Disagree* and 8.3% selecting *Strongly Disagree*, making up a combined 37.5%. These figures demonstrate that a larger proportion of participants either do not plan to use or are neutral about exploring AI tools in their classes, compared to those who affirmatively plan to do so.

Question Twenty three: I will make an effort to integrate AI academic tools into my pedagogical practices.

Table 3.23:

Teachers' Willingness to Exert Effort for Integrating AI Tools into Pedagogical Practices

Response	Frequency	Percentage
Strongly Disagree	3	12.5%
Disagree	8	33.3%
Neutral	8	33.3%
Agree	4	16.7%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.23 outlines participants' willingness to make an effort to integrate AI academic tools into their pedagogical practices. The responses show that 16.7% selected *Agree* and 4.2% selected *Strongly Agree*, meaning that 20.9% of participants are willing to make an effort. A significant proportion, 33.3%, remained *Neutral*. On the other hand, 33.3% selected *Disagree*, and 12.5% selected *Strongly Disagree*, which combines to 45.8% of respondents who are not inclined to make an effort. These figures indicate that a considerable percentage of participants are not prepared to actively integrate AI tools, surpassing those who are willing or neutral.

Question Twenty Four: My perception of the usefulness of AI tools significantly influences my willingness to use them in my EFL teaching.

Table 3.24:

Influence of Perceived Usefulness on Teachers' Willingness to Use AI Tools in EFL Teaching

Options	Number	Percentage
Strongly Disagree	1	4.2%
Disagree	5	20.8%
Neutral	9	37.5%
Agree	8	33.3%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.24 presents data on whether participants' perception of the usefulness of AI tools influences their willingness to use them in EFL teaching. The findings indicate that 33.3% of respondents selected *Agree*, and 4.2% selected *Strongly Agree*, showing that for a combined 37.5%, perceived usefulness is an influential factor. The largest group, 37.5% of respondents, remained *Neutral* on this statement. Conversely, 20.8% selected *Disagree*, and 4.2% selected *Strongly Disagree*, totaling 25% who do not consider perceived usefulness as a significant influence or disagree with the statement's premise. The results suggest that while perceived usefulness influences a notable group, an equal number are neutral, and a quarter indicate it is less of a factor.

Question Twenty five: *The ease with which I can use AI tools is a major factor in deciding whether to adopt them for my classes.*

Table 3.25:

Influence of Perceived Ease of Use on Teachers' Decisions to Adopt AI Tools for Classes

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	5	20.8%
Neutral	9	37.5%
Agree	7	29.2%
Strongly Agree	2	8.3%
Total	**24**	**100.0%**

Table 3.25 displays participants' views on whether the ease of use of AI tools is a major factor in their adoption for classes. The data show that 29.2% of respondents selected *Agree*, and 8.3% selected *Strongly Agree*, which means for 37.5% of participants, ease of use is a major deciding factor. A significant proportion, 37.5%, chose *Neutral*. On the other side, 20.8% selected *Disagree*, and 4.2% selected *Strongly Disagree*, indicating that for a combined 25%, ease of use is not a major factor or they disagree with the statement.

Question Twenty six: *If I believe an AI tool is easy to use, I am more likely to perceive it as useful for my teaching.*

Table 3.26:

Relationship Between Perceived Ease of Use and Perceived Usefulness of AI Tools in Teaching

Response	Frequency	Percentage
Strongly Disagree	1	4.2%
Disagree	3	12.5%
Neutral	9	37.5%

Agree	9	37.5%
Strongly Agree	2	8.3%
Total	**24**	**100.0%**

Table 3.26 outlines the relationship between the perceived ease of use of an AI tool and its perceived usefulness for teaching. The responses indicate that 37.5% of participants selected *Agree*, and 8.3% selected *Strongly Agree*, demonstrating that for a combined 45.8%, ease of use positively influences their perception of usefulness. A considerable group, 37.5%, remained *Neutral*. In contrast, 12.5% selected *Disagree*, and 4.2% selected *Strongly Disagree*, making up 16.7% who do not share this view. The data suggest that for a notable proportion of respondents, there is a positive correlation between how easy an AI tool is to use and how useful they perceive it to be for their teaching, though a large segment is neutral.

Question Twenty-seven: The potential benefits of using AI in EFL, as I perceive them, encourage my intention to integrate these tools.

Table 3.27:

Influence of Perceived Potential Benefits on Teachers' Intention to Integrate AI Tools in EFL

Response	Frequency	Percentage
Strongly Disagree	4	16.7%
Disagree	3	12.5%
Neutral	10	41.7%
Agree	6	25.0%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.27 presents participants' responses on whether their perception of potential benefits of AI in EFL encourages their intention to integrate these tools. The data show that 25% of respondents selected *Agree*, and 4.2% selected *Strongly Agree*, meaning that for a combined 29.2%, perceived benefits encourage integration. The largest proportion, 41.7%, opted for *Neutral*. On the opposing side, 12.5% selected *Disagree*, and 16.7% selected *Strongly Disagree*. These figures demonstrate a divided opinion: while nearly a third are encouraged by perceived benefits, an equal number are not, and a significant plurality remains neutral.

Question Twenty eight: Concerns about the challenges of using AI (e.g., technical issues, training needs) affect my overall acceptance of these tools.

Table 3.28

Effect of Concerns Regarding AI Challenges on Teachers' Overall Acceptance of AI Tools

Response	Frequency	Percentage
Strongly Disagree	0	0.0%
Disagree	3	12.5%
Neutral	7	29.2%
Agree	9	37.5%
Strongly Agree	5	20.8%
Total	**24**	**100.0%**

Table 3.28 displays participants' views on whether concerns about challenges associated with AI use affect their overall acceptance of these tools. The results indicate a strong affirmative response, with 37.5% selecting *Agree* and 20.8% selecting *Strongly Agree*. This signifies that for a substantial 58.3% of participants, such concerns indeed affect their acceptance. Meanwhile, 29.2% of respondents chose *Neutral*. A smaller group, 12.5%, selected *Disagree*, and notably,

none of the participants selected *Strongly Disagree*, meaning only 12.5% disagree with the statement. These figures clearly show that for a majority of participants, potential challenges significantly impact their willingness to accept AI tools.

Question Twenty-Nine: My intention to use AI academic tools is directly linked to whether I believe they will help me achieve my teaching goals.

Table 3.29

intention to use AI academic tools is directly linked to teaching goals.

Response	Frequency	Percentage
Strongly Disagree	2	8.3%
Disagree	4	16.7%
Neutral	7	29.2%
Agree	6	25.0%
Strongly Agree	5	20.8%
Total	**24**	**100.0%**

This table outlines the connection between participants' intention to use AI academic tools and their belief that these tools will help achieve teaching goals. The data reveal that 25.0% of respondents selected *Agree*, and 20.8% selected *Strongly Agree*, indicating that for a combined 45.8%, this direct link exists. A significant 29.2% remained *Neutral*. On the other hand, 16.7% selected *Disagree*, and 8.3% selected *Strongly Disagree*, totaling 25% who disagree with the statement. The results suggest that for a notable proportion of participants, the perceived utility of AI tools in achieving teaching objectives is a key driver for their intention to use them, though a considerable number are neutral or disagree.

Question Thirty: I feel supported by the university/department in exploring and potentially adopting AI academic tools for EFL instruction.

Table 3.30

Teachers' Perceptions of Institutional Support for Exploring and Adopting AI Tools in EFL Instruction

Response	Frequency	Percentage
Strongly Disagree	7	29.2%
Disagree	6	25.0%
Neutral	6	25.0%
Agree	4	16.7%
Strongly Agree	1	4.2%
Total	**24**	**100.0%**

Table 3.30 presents participants' perceptions of support from their university or department in exploring and adopting AI academic tools for EFL instruction. The findings show a predominantly negative perception of support, with 25.0% selecting *Disagree* and a significant 29.2% selecting *Strongly Disagree*. A quarter of respondents, 25.0%, remained *Neutral*. Conversely, only a small proportion felt supported, with 16.7% selecting *Agree* and 4.2% selecting *Strongly Agree*, totaling 20.9%. These data clearly show that a majority of participants do not feel adequately supported by their institution in the exploration and adoption of AI tools for EFL instruction.

3.5 Summary of the Findings

This study investigated the acceptance of AI academic tools among EFL teachers at the University of Guelma English Department, framed by the Technology Acceptance Model

(TAM). The research hypothesized that EFL teachers' acceptance of these tools is primarily determined by the interplay between Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), where PEOU influences both Behavioral Intention (BI) and PU.

The 24 participating EFL teachers were mainly early to mid-career academics, with over 60% having 5-15 years of teaching experience. A significant majority (87.5%) reported prior experience with AI-powered tools. Teachers generally expressed a positive outlook on AI's potential to transform positively EFL teaching and learning (62.5% agreement), support personalized learning (62.5% agreement), and enhance language acquisition (62.5% agreement). Ethical considerations were deemed highly important by 79.2%. However, a substantial 75% also acknowledged significant challenges in integrating AI effectively within their university context.

The central hypothesis posits that EFL teachers' acceptance of AI academic tools is determined by the interplay between perceived usefulness and perceived ease of use, whereby perceived ease of use influences both behavioral intention to use and perceived usefulness of the AI academic tools. This was broken down and tested as follows:

- **Hypothesis 1: Perceived Ease of Use (PEOU) positively influences Perceived Usefulness (PU).**
- **Supported.** The data from Table 3.26 (Q26: "If I believe an AI tool is easy to use, I am more likely to perceive it as useful for my teaching") show that 45.8% of teachers agreed or strongly agreed with this statement. While a notable 37.5% remained neutral, the agreement was considerably higher than the disagreement (16.7%). This suggests that for a significant portion of teachers, the effortlessness of using a tool contributes to their belief in its utility.

- **Hypothesis 2: Perceived Ease of Use (PEOU) positively influences Behavioral Intention (BI) to use AI academic tools.**
- **Partially Supported.** According to Table 3.25 (Q25: "The ease with which I can use AI tools is a major factor in deciding whether to adopt them for my classes"), 37.5% of participants agreed or strongly agreed that ease of use is a major factor in their adoption decisions. However, an equal percentage (37.5%) remained neutral, and 25% disagreed or strongly disagreed. While PEOU is a factor for a considerable group, its direct influence on BI is not overwhelmingly strong across the entire sample due to the large neutral segment. Teachers' perceptions regarding the ease of use of AI tools were observed across several measures. For Question 17, 70.8% of teachers indicated that AI tools were easy to use. Furthermore, 66.7% of respondents for Question 19 reported that interaction with these tools was effort-free. Similarly, 75% of teachers affirmed in Question 20 that the tools did not necessitate significant technical skills.

  Despite these findings indicating a high Perceived Ease of Use (PEOU), observations regarding teachers' overall Behavioral Intention (BI) suggested a degree of hesitancy. For instance, only 25% of teachers, as indicated by Question 22, planned to explore and actively use AI tools in their classrooms. Additionally, a notable 45.8% of respondents for Question 23 expressed that they were not inclined to make an effort to integrate these tools into their teaching practice.
- **Hypothesis 3: Perceived Usefulness (PU) positively influences Behavioral Intention (BI) to use AI academic tools.**
- **Partially Supported.** Data from Table 3.24 (Q24: "My perception of the usefulness of AI tools significantly influences my willingness to use them in my EFL teaching")

indicate that 37.5% of teachers agreed or strongly agreed. Yet, 37.5% were neutral, and 25% disagreed or strongly disagreed. Similarly, for Table 3.29 (Q29: "My intention to use AI academic tools is directly linked to whether I believe they will help me achieve my teaching goals"), 45.8% concurred, but 29.2% were neutral and 25% disagreed. PU does influence BI for a substantial group, particularly when linked to achieving teaching goals, but the considerable neutral and disagreeing responses temper the strength of this relationship across the board. Perceptions of usefulness itself were mixed across different aspects (e.g., Q11: 41.7% agreed AI enhances teaching effectiveness; Q15: 37.5% agreed AI helps deliver impactful feedback, while 41.6% disagreed).

The findings suggest that the hypothesized interplay determining acceptance is present but complex. PEOU is high and does positively influence PU. Both PEOU and PU show some positive influence on BI, but this is not universally strong, with significant neutrality among teachers. This indicates that while the core TAM relationships hold to some extent, other factors are critically shaping overall acceptance and intended usage. Beyond the core TAM interplay, the study identified other critical factors:

Teachers see that the direct encouragement of integration by expected benefits (Q27) showed mixed results. Only 29.2% agreed that these expected benefits encouraged their integration, while 29.2% disagreed, and a plurality (41.7%) remained neutral. This suggests that even when expected benefits are present, they don't automatically translate into an intention to integrate for many.

Concerns about challenges (e.g., technical issues, training needs) significantly affect overall acceptance for a majority (58.3% agreement for Q28). This appears to be a major barrier tempering enthusiasm.

A striking finding concerning teachers' perceptions of support for exploring and adopting AI tools in EFL instruction was that 54.2% of teachers felt unsupported by their university or department when exploring and adopting AI tools (Q30). Only 20.9% felt supported. This lack of a supportive ecosystem is a crucial impediment.

In conclusion, while EFL teachers at the University of Guelma find AI tools generally easy to use and PEOU positively influences PU, the translation of these factors into strong, widespread behavioral intention is moderated by variable perceptions of actual usefulness in specific teaching contexts, significant concerns about practical challenges, and a critical lack of institutional support. The core TAM model provides a valuable framework, but these additional contextual factors are paramount in understanding the full picture of AI acceptance.

3.6 Pedagogical Implementations and Recommendations

The study's findings, highlighting the core TAM interplay alongside critical influencing factors like challenges and institutional support, inform the following pedagogical implementations and recommendations:

For EFL Teachers:

1. Since AI tools are generally found easy to use, teachers should leverage this to explore tools that can enhance areas where PU is currently varied or low, such as AI for impactful feedback or innovative pedagogies.
2. Connect AI use to specific teaching goals: given that the link between achieving teaching goals and intention to use AI is a relatively stronger aspect of PU influencing BI, teachers should focus on identifying and utilizing AI tools that clearly align with their specific EFL curriculum objectives and student needs.

3. Peer mentoring and collaborative workshops: teachers who have successfully integrated AI tools and perceive their usefulness can mentor colleagues or lead workshops. This can help bridge the gap for those who are neutral or skeptical about PU or BI.
4. Advocate for support and resources: teachers should collectively communicate their needs for specific training, tools, and support mechanisms to address the challenges they perceive and the lack of institutional support.

For University Departments and Administration:

1. Strengthen institutional support systemically: Addressing the profound lack of perceived support is paramount. This includes:
    - Providing dedicated training focused not just on technical skills but on pedagogical integration and demonstrating clear usefulness.
    - Ensuring access to reliable AI tools and robust technical assistance.
    - Developing supportive institutional policies for AI integration in teaching.
2. Demonstrate and validate usefulness (PU): to convert neutral stances on PU and its influence on BI, the administration should actively showcase how AI tools can practically enhance teaching effectiveness, improve student outcomes, and even make aspects of the job easier. Pilot programs with clear evaluation metrics can be beneficial.
3. Mitigate perceived challenges: acknowledge and proactively address the significant challenges teachers perceive with AI integration. This includes improving infrastructure, offering ongoing professional development, and reducing burdens associated with adopting new technologies.

4. Foster a culture of experimentation and innovation: Encourage teachers to explore AI tools by providing time, resources, and recognition. This can help in improving the intention to integrate tools.

For AI Tool Developers and Curriculum Designers

1. Since PEOU positively influences PU (H1 supported), developers should continue to prioritize intuitive design while clearly demonstrating how this ease of use translates into tangible benefits and usefulness for EFL teachers.
2. Provide strong evidence of pedagogical value: address the mixed perceptions of usefulness by providing clear use cases, research-backed evidence of effectiveness in EFL contexts, and testimonials from educators.
3. Develop Tools for Specific EFL Needs: Create or adapt AI tools that directly address the identified needs and goals of EFL teachers, such as enhancing feedback quality, supporting diverse learning pathways, and fostering innovative teaching methods.
4. Offer Comprehensive Support and Training Materials: Provide resources that not only explain how to use the tool but also how to integrate it effectively into EFL pedagogical practices, addressing potential challenges.

3.7 Research Perspectives and Limitations

This study has offered valuable insights into EFL teachers' acceptance of AI academic tools at the University of Guelma, particularly by testing core TAM hypotheses. However, like any other research, this study also faced several limitations and challenges during the research process. Despite these limitations, the study successfully achieved its aim and confirmed its research hypothesis. The challenges encountered are discussed not only to ensure transparency but also to serve as guidance for future researchers. By understanding these obstacles, future

studies can better anticipate potential issues and adopt strategies to overcome them, thereby improving the quality and reliability of their research.

1. Sample and Context: The findings are based on 24 EFL teachers the English department, which may not be representative of all EFL teachers in the same department. The specific institutional environment, available resources, and prior AI exposure are unique to this sample.
2. Quantitative Focus: The primary use of a quantitative questionnaire, while effective for testing TAM relationships and identifying trends, does not fully capture the qualitative richness of teachers' experiences, the reasoning behind their (often neutral) attitudes, or the specific nuances of the challenges faced.
3. Self-Reported Data: The study relies on teachers' self-reported perceptions, intentions, and experiences, which can be subject to biases. Actual classroom integration of AI might differ from reported intentions.
4. Dynamic Nature of AI: AI technology and its applications in education are evolving rapidly. This study reflects a specific point in time (academic year 2024/2025), and perceptions may change with further developments and exposure.
5. is important to note that the original Technology Acceptance Model (TAM) includes five key constructs: Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use, Behavioral Intention to Use, and Actual System Use. However, due to time constraints and the practical need to keep the questionnaire concise and manageable for participants, this study focused only on three core variables: Perceived Ease of Use, Perceived Usefulness, and Behavioral Intention. Including all five constructs would have resulted in a much longer questionnaire, which could have affected response quality and

participation. Future studies are encouraged to incorporate the full model for a more comprehensive analysis of technology acceptance.

Conclusion

This chapter detailed the field investigation undertaken to explore the acceptance of Artificial Intelligence academic tools among EFL teachers at the University of Guelma. Through the administration of a structured questionnaire based on the Technology Acceptance Model (TAM), quantitative data were collected from 24 EFL teachers.

The subsequent data analysis and interpretation revealed that while teachers perceive AI tools as generally easy to use, their acceptance and intention to integrate these tools are shaped by a nuanced interplay of factors. The findings indicated partial to full support for the core TAM hypotheses, showing that perceived ease of use positively influences perceived usefulness, and both constructs, in turn, influence behavioral intention, though with significant moderation by other variables.

Key among these influencing factors were the considerable challenges teachers perceive in AI integration and a significant lack of institutional support, which appear to temper the positive impact of ease of use and potential usefulness. The chapter has therefore presented a comprehensive analysis of these findings, leading into a discussion of their pedagogical implications, recommendations for various stakeholders, and an outline of research limitations and perspectives for future inquiry.

General Conclusion

This study aimed to investigate the acceptance of Artificial Intelligence (AI) academic tools among EFL teachers at the University of Guelma English Department, utilizing the Technology Acceptance Model (TAM) as its theoretical framework. The research sought to understand teachers' perceptions of AI, the influence of perceived usefulness (PU) and perceived ease of use (PEOU) on their behavioral intention (BI) to use these tools, and the role of other contextual factors such as perceived challenges and institutional support.

To achieve these objectives, a quantitative descriptive research method was employed, with data gathered through a structured questionnaire administered to 24 EFL teachers. The findings revealed a multifaceted perspective on AI adoption. While a majority of teachers reported prior experience with AI tools and generally held positive views about AI's transformative potential in EFL education, their acceptance and intention to integrate these tools were influenced by a complex interplay of factors.

The study tested the central hypothesis that EFL teachers' acceptance of AI academic tools is determined by the interplay between PU and PEOU, with PEOU influencing both BI and PU. The hypothesis that PEOU positively influences PU was supported, with a significant portion of teachers indicating that ease of use contributes to their belief in a tool's utility. However, the hypotheses that PEOU positively influences BI, and that PU positively influences BI, were only partially supported. While PEOU was generally high, and PU did influence BI for a substantial group (especially when linked to achieving teaching goals), significant neutrality in responses indicated that these relationships were not universally strong across the sample.

Beyond the core TAM constructs, the findings underscored the critical impact of contextual factors. Concerns about challenges, such as technical issues and training needs,

significantly affected overall acceptance for a majority of teachers. Perhaps most strikingly, a predominant perception of inadequate institutional support emerged as a crucial impediment to AI adoption. Thus, while the TAM framework provided valuable insights, the study concludes that variable perceptions of practical usefulness, coupled with significant integration challenges and insufficient support, moderate the translation of generally positive PEOU into widespread behavioral intention.

The findings of this research contribute to the theoretical understanding of technology acceptance in educational contexts, particularly within the growing field of AI in language teaching. Practically, the study offers insights for implementing AI academic tools in EFL teaching. Based on the results, several pedagogical recommendations were proposed for EFL teachers, university departments, and AI tool developers, focusing on enhancing institutional support, validating the usefulness of AI, mitigating challenges, and leveraging the high PEOU to foster deeper engagement with AI tools.

The study acknowledged its limitations, including the context-specific nature of the findings, the sample size, and the reliance on self-reported data. Suggestions for future research include broader comparative studies, the adoption of mixed-methods approaches for richer data, longitudinal tracking of AI acceptance, and intervention-based research to assess the impact of targeted support strategies.

In essence, fostering successful AI integration in EFL education at the University of Guelma, and likely in similar contexts, requires more than just providing easy-to-use tools. It necessitates a holistic approach that demonstrates clear pedagogical value, proactively addresses teachers' concerns and challenges, and, most importantly, builds a robust ecosystem of institutional support to empower educators in leveraging AI to its full potential.

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Appendix One

Questionnaire on the Acceptance and Use of AI Academic Tools by EFL Teachers at the University of Guelma

Dear Esteemed Teachers,

As Artificial Intelligence (AI) tools increasingly influence English as a Foreign Language (EFL) education, understanding teachers' acceptance is vital for effective integration. This academic study, guided by the Technology Acceptance Model (TAM), investigates factors influencing AI academic tool acceptance among English Department teachers at the University of Guelma. Your crucial insights will directly inform efforts to support educators and integrate AI effectively. This questionnaire is anonymous and all information provided will be confidential and thus used for scientific purposes only. We highly value your expertise and contribution to this research.

Ms. Nedjah Belhaddad

Department of English

University of 8 Mai 1945, Guelma

Section 1: Demographic Information

1. What is your current academic rank?
    - Assistant Lecturer ☐
    - Lecturer B ☐
    - Lecturer A ☐
    - Associate Professor ☐

- Professor ☐

2. How many years of teaching experience do you have in EFL at the university level?

   - Less than 5 years ☐
   - 5-10 years ☐
   - 11-15 years ☐
   - More than 15 years ☐

3. Have you previously used any AI-powered tools in your teaching practice?

   - Yes ☐
   - No ☐

Section 2: Perceptions of Artificial Intelligence in EFL Education

4. Artificial Intelligence has the potential to transform EFL teaching and learning.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

5. AI-driven tools can effectively support personalized learning pathways for EFL students.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

6. The use of AI in EFL instruction offers significant opportunities to enhance language acquisition.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

7. I believe that ethical issues, such as data privacy and bias, are important considerations when using AI in education.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

8. There are significant challenges to integrating AI effectively into the EFL educational context at University of Guelma.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

9. I am aware of different types of AI-driven tools available for language teaching.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

10. Which of the following types of AI-driven tools for language teaching are you aware of?

- Grammar and writing assistants (e.g., Grammarly, Hemingway Editor) ☐
- Plagiarism detection tools (e.g., Turnitin) ☐
- Content generation tools (e.g., ChatGPT for creating exercises or texts) ☐
- Adaptive learning platforms (e.g., Duolingo, platforms that adjust difficulty) ☐
- Chatbots for conversation practice (e.g., integrated into language apps) ☐
- Automated grading tools (e.g., for essays) ☐

- Other.....

Section 3: Core Technology Acceptance Model (TAM) Constructs for AI Tools

Perceived Usefulness (PU)

11. Using AI academic tools can enhance my effectiveness in teaching EFL.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

12. Using AI academic tools can improve my students' performance in EFL.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

13. Using AI academic tools can make my job easier.

Strongly Agree	
Agree	

Neutral	
Strongly Disagree	
Disagree	

14. I believe using AI academic tools can be useful in my EFL teaching practice.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

15. AI academic tools can help me deliver more impactful and targeted feedback to students.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

16. AI academic tools can support innovative pedagogical approaches in EFL.

Strongly Agree	

Agree	
Neutral	
Strongly Disagree	
Disagree	

Perceived Ease of Use (PEOU)

17. I find AI academic tools easy to use.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

18. I find it easy to get AI academic tools to do what I want them to do.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

19. My interaction with AI academic tools can be free of effort.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

20. Using AI academic tools does not require significant technical skills.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

Behavioral Intention to Use (BI)

21. I intend to use AI academic tools in my EFL teaching in the future.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

22. I plan to explore and use AI academic tools in my classes.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

23. I will make an effort to integrate AI academic tools into my pedagogical practices

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

Section 4: Teacher Acceptance and Integration of AI Tools in EFL

24. My perception of the usefulness of AI tools significantly influences my willingness to use them in my EFL teaching.

Strongly Agree	
Agree	
Neutral	

Strongly Disagree	
Disagree	

25. The ease with which I can use AI tools is a major factor in deciding whether to adopt them for my classes.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

26. If I believe an AI tool is easy to use, I am more likely to perceive it as useful for my teaching.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

27. The potential benefits of using AI in EFL, as I perceive them, encourage my intention to integrate these tools.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

28. Concerns about the challenges of using AI (e.g., technical issues, training needs, etc.) affect my overall acceptance of these tools.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

29. My intention to use AI academic tools is directly linked to whether I believe they will help me achieve my teaching goals.

Strongly Agree	
Agree	
Neutral	

Strongly Disagree	
Disagree	

30. I feel supported by the university/department in exploring and potentially adopting AI academic tools for EFL instruction.

Strongly Agree	
Agree	
Neutral	
Strongly Disagree	
Disagree	

Thank you for your time and valuable contributions to this research.

الملخص

يعد إدماج أدوات الذكاء الاصطناعي الأكاديمية في تعليم اللغة الإنجليزية كلغة أجنبية تطورا مهما، حيث يتيح فرصا جديدة إلى جانب مواجهته بعض التحديات. وعلى الرغم من الفوائد المحتملة لهذه الأدوات في تحسين الممارسات التعليمية، إلا أن قبولها واستخدامها الفعلي من قبل أساتذة اللغة الإنجليزية كلغة أجنبية لا يزال غير مؤكد. تهدف هذه الدراسة إلى استكشاف مدى تقبل أساتذة اللغة الإنجليزية كلغة أجنبية في قسم اللغة الإنجليزية بجامعة قالمة لأدوات الذكاء الاصطناعي الأكاديمية، وذلك من خلال نموذج تقبل التكنولوجيا. تعالج هذه الدراسة فجوة مهمة في الأدبيات المتعلقة بتطبيق "نموذج تقبل التكنولوجيا" في سياق تدريس اللغة المعزز بالذكاء الاصطناعي، مما يقدّم دلالات قيمة للمؤسسات التعليمية. وعليه، اعتمدت منهجية الدراسة على تصميم البحث الوصفي الكمي، مستخدمة استبيانا منظما مبنيا على محاور"نموذج تقبل التكنولوجيا" لجمع البيانات. تم نوزيع الاستبيان على عينة مكونة من 24 أستاذًا للغة الإنجليزية. وتؤكد النتائج فرضية البحث القائلة بأن سهولة الاستخدام المتصورة تؤثر على الفائدة المتصورة. ومع ذلك، فإن الفرضيتين المتعلقتين بتأثير سهولة الاستخدام المتصورة و الفائدة المتصورة على النية السلوكية قد تم دعمهما جزئيا. وعلى الرغم من التحديات التي واجهتها هذه الدراسة، فقد تم تقديم عدة توصيات لدعم الدمج الفعّال لأدوات الذكاء الاصطناعي في تدريس اللغة الإنجليزية كلغة أجنبية، وتوجيه البحوث المستقبلية في هذا المجال.