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**Exploring the Usefulness of AI-driven Applications in Enhancing the Quality of Master's
Dissertation**

Case Study of Master Two Students of the Department of English at Relizane University

**Thesis submitted to the Department of English in partial fulfillment of the requirements
for the Degree of Master in Language and Communication**

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Statement of Originality

We, **CHETOUANE chemseddine**, and **BELGACEM Karima** , solemnly affirm that this thesis represents our original work which is researched and written by us , and it is not been published in any institution.

Dedications

I dedicate this work to

My beloved mother, CHETOUANE Zineb, your support, guidance, and love were the solid foundation of my academic journey. Your sacrifices and encouragement have been the source of my inspiration to pursue my dreams.

My elder brother, CHETOUANE Abdelbar , your inputs and support are worth their weight in gold.

My partner, BELGACEM Karima, for sharing in this challenging academic journey with me .

My family members, friends, and teachers, the love and encouragement you extended made this journey possible.

Chemseddine

This work is dedicated to

To my greatest source of strength my beloved Mother.

To my Father, whose presence means the world.

To my very special person Tazghat Redwane for his unwavering support and constant that stand by my side.

To my partner CHETOUANE chemseddine for his hard work and his company along the way.

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And to every single person who in any way contributed to this work with words, help, or support.

Karima

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Abstract

The incorporation of AI into the world of academic research has fundamentally changed the way Master's theses are developed. These advanced tools assist a more efficient approach to tasks such as data interpretation and refining written work. Nevertheless, concerns persist regarding their influence on originality and scholarly integrity, emphasizing the importance of striking a careful balance between technological innovation and academic standards. This investigation explored AI's capacity to enhance the quality of dissertations, gauged perceptions among students and educators, and evaluated its effect on research productivity and creativity. Employing a mixed-methods strategy, data collection involved student surveys and interviews with faculty members. Findings revealed that AI assistance heightened research productivity and improved clarity in writing, with students appreciating how these tools simplified complex processes. However, many participants voiced worries about potential risks of unintentional plagiarism, while instructors noted that although AI-aided work appeared more polished, it often lacked depth and originality. Overall, the results emphasize AI's role as a supportive instrument rather than a substitute for human input, emphasizing needing targeted training and ethical standards to mitigate risks like over-dependence. Future investigations should focus on the long-term implications for critical thinking, disciplinary variations in AI adoption, and the development of tools that uphold academic integrity while encouraging innovation.

Key words: AI (Artificial Intelligence) , Academic research , Master's theses , Scholarly integrity, Originality.

List of Abbreviations

AI: Artificial Intelligence

AIED: Artificial Intelligence in Education

TAM: Technology Acceptance Model

AI-TPACK: Artificial Intelligence-Technological Pedagogical Content Knowledge

LMS: Learning Management System

EFL: English as a Foreign Language

STEM: Science, Technology, Engineering, and Mathematics

NLP: Natural Language Processing

VR: Virtual Reality

IoT: Internet of Things

TPACK: Technological Pedagogical Content Knowledge

ITS : Intelligent Tutoring Systems

SPSS : Statistical Package for the social sciences

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General Introduction

A Master's dissertation stands as a major milestone within graduate education. It demonstrates a student's proficiency in conducting research, applying critical thinking, and deepening their understanding of their field. Beyond fulfilling academic requirements, it can be a foundation for future careers in research, industry, or academia.

In recent times, emerging technologies such as artificial intelligence have begun to reshape the way students approach their dissertations. AI tools assist data analysis, assist in refining writing, and enhance the overall quality of research. These innovations are transforming academic practices, offering new avenues for increased efficiency and creativity.

As AI continues to advance, it becomes essential to examine its integration into master's research. This study explores how students are currently employing AI in their dissertations and assesses its potential to enhance research quality and spark novel ideas. Gaining insight into these developments allows us to appreciate both the opportunities and challenges that AI presents in academic work.

Many Master's students struggle to produce high-quality dissertations because they lack enough resources and academic writing support. They often find it hard to organize their arguments, improve their language, or do research efficiently. AI writing tools can help with these problems by making ideas clearer, suggesting better ways to phrase things, and speeding up the research process. This can lead to better productivity and higher-quality work. But there's a problem: many students don't know about these tools or don't use them much. Some only use basic grammar checkers, and others worry about maintaining academic honesty. To fix this, we

need more guidance and training so students can use AI tools effectively. This will make writing easier without compromising academic standards.

This study aims to :

1. Explore the role of AI applications in improving the quality of Master's dissertation.
2. Raise awareness among students and teachers about the benefits of AI tools on research output .
3. Identify the impact of AI –aided tools on academic writing.

-The present study attempts to answer the following questions :

1. How can AI applications help students to improve the quality of Master's dissertations in terms of research speed and writing clarity ?
2. What are the teachers' and students' attitudes towards using AI in conducting Master's dissertation ?
- 3.To what extent do AI – Aided tools affect the originality and quality of students' academic writing?

As hypotheses, we propose:

1. AI tools enhance Master's dissertation quality by accelerating research processes and improving writing clarity through automated assistance.
2. Students exhibit more positive attitudes toward AI adoption for dissertation work compared to teachers, who express greater concerns about academic integrity.
3. AI-supported writing demonstrates improved technical quality but risks diminishing originality in academic work when over utilized.

This research holds considerable importance, as it tackles some of the most common challenges faced during Master's dissertation work. By exploring the integration of AI applications into academic research, the study aims to enhance overall efficiency, raise the quality of scholarly writing, and refine data analysis methods. AI tools can simplify the process of data collection and interpretation, improve the clarity and coherence of written work, and identify important patterns within large datasets. What's more, AI-driven adaptive learning systems have the potential to deliver personalized feedback customized to each student's unique needs. Automating routine administrative tasks also allows students to better manage their time, enabling them to focus more on developing advanced critical thinking skills.

This study adopts a mixed-methods approach to examine how AI applications can enhance the quality of Master's dissertations. The research focuses on Master's students and teachers from the English department at Relizane University, as they are directly engaged in the dissertation process. A total of 20 Master's students and 8 teachers will be purposefully selected for their relevant experience. Data will be collected through two main instruments: a standardized questionnaire for students and semi-structured interviews for teachers. The questionnaire will gather quantitative data on students' perceptions of AI tools, while the interviews will provide qualitative insights into teachers' views on the benefits and challenges of AI in academic writing. By analyzing both types of data, the study aims to offer a comprehensive understanding of AI's role in improving dissertation quality, identifying both its potential advantages and limitations.

This dissertation is structured into three chapters, each designed to fulfill a specific purpose. The first chapter establishes the theoretical foundation by exploring the literature on technology integration in education, with a focus on the role of AI-based tools in academic research. It reviews existing knowledge on how technology intersects with educational practices, particularly examining the applications and implications of AI in scholarly work

By doing so, this chapter sets the stage for the subsequent discussions in the study.

Chapter Two focuses on the empirical aspect of the study, detailing the methodology, data collection, analysis, and interpretation. This chapter provides an in-depth account of the research design, participant selection, data collection instruments, and analytical procedures employed to investigate the research question.

Chapter Three is devoted to the discussion of the findings and recommendations, highlighting the practical implications for enhancing Master's dissertation quality through the effective integration of AI-based tools. This final chapter consolidates the results, identifies key takeaways, and offers recommendations for stakeholders seeking to adopt AI-powered technologies to improve academic research outcomes

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1.1 Introduction

As technology continues to reshape the academic arena, the integration of Artificial Intelligence (AI) in academic research has become a emerging area of interest. Notably, the Master’s dissertation process has been identified as a key area where AI can add significant value. This literature review provides an overview about technology in education and in-depth examination of the existing research on AI integration in Master’s dissertations, with a specific focus on its potential to enhance quality. Moreover, this chapter aims to pull together the current state of knowledge, to Illustrate the benefits and challenges associated with AI integration, and to identify areas for further investigation. To rephrase, this review is to provide a comprehensive understanding of the complex interplay between AI, technology, and academic research. Therefore, this chapter is a critical step towards advancing our understanding of the role of AI in academic research.

1.2 Technology in education

The Emergence of technology has transformed the educational landscape, disrupting traditional pedagogical methods and rendering them increasingly obsolete. As Siemens (2005) sharply notices “the pipes of the education system are not designed to handle the flow of

knowledge in the 21st century.” This insightful observation points out the systematic limitations of the traditional education , highlighting the need for innovative solutions that can effectively harness the potential of technology.

The Purposeful incorporation of technology in educational settings can significantly enhance the learning experience, fostering self-paced learning, accessibility, and student engagement. Digital devices, in particular, have equalize access to educational resources, facilitating global connectivity, peer collaboration, and the acquisition of essential digital-age skills. According to a report by the American University (2020):

Technology provides students with easy-to-access information, accelerated learning, and fun opportunities to practice what they learn. It enables students to explore new subjects and deepen their understanding of difficult concepts, particularly in STEM. Through the use of technology inside and outside the classroom, students can gain 21st-century technical skills necessary for future occupations.

Hence, technology’s role in education extends far beyond mere supplementation of traditional teaching methods; rather, it fundamentally transforms the learning experience, making it immersive, interactive, and obviously more effective.

1.2.1 Connectivism and Blended learning theory

These two theories emphasize the pivotal role of technology in enhancing teaching and learning experiences, highlighting the potential for innovative, effective, and personalized education.

1.2.1.1 Connectivism

Connectivism sees learning as a networked process driven by digital interactions, with AI and technology playing key roles. Siemens (2005) argues that “learning rests in diversity of

opinions” (p. 5), highlighting how AI tools like chatbots, research assistants, and collaborative platforms expand access to diverse perspectives and real-time knowledge. In a connectivist model, learning is not confined to individual cognition but thrives through dynamic networks, as “the pipe is more important than the content within the pipe” (Siemens, 2005, p. 6), meaning AI’s ability to deliver and filter information efficiently is transformative. Downes (2012) reinforces this, stating that “knowledge is distributed across a network of connections” (p. 4), which AI helps navigate by personalizing learning pathways and automating information synthesis. However, connectivism also implies responsibility, learners must critically engage with AI-generated content, ensuring their networks remain active, ethical, and human-centered. Overall, AI in education through connectivism is not about replacing teachers but about building connected, decentralized learning environments.

1.2.1.2 Blended learning theory

Blended learning has transformed higher education by combining traditional classroom instruction with digital tools, creating more flexible and personalized learning experiences. Graham (2019) explains that blended learning is not merely about combining online and offline elements but rather about redesigning education to be more adaptive and inclusive (p. 45). One significant advantage is the integration of AI-powered tools that provide immediate feedback and tailored learning resources. For example, advanced writing assistants help students refine academic papers by analyzing structure, clarity, and coherence (Luckin, 2018, p. 112). As Luckin (2018) notes, AI does not replace educators but instead amplifies their capacity to address individual learning needs (p. 114).

Beyond individualized support, blended learning facilitates collaborative research through virtual discussions and peer review systems. Studies indicate that students in blended programs often achieve stronger learning outcomes compared to purely face-to-face or fully online formats,

thanks to the balanced structure (Means et al., 2013, p. 23). This approach also equips learners with essential digital competencies for modern workplaces. By automating tasks like data analysis and literature reviews, AI helps students focus more on critical thinking and creative problem-solving. When combined with smart technology, blended learning becomes more engaging, efficient, and learner-focused.

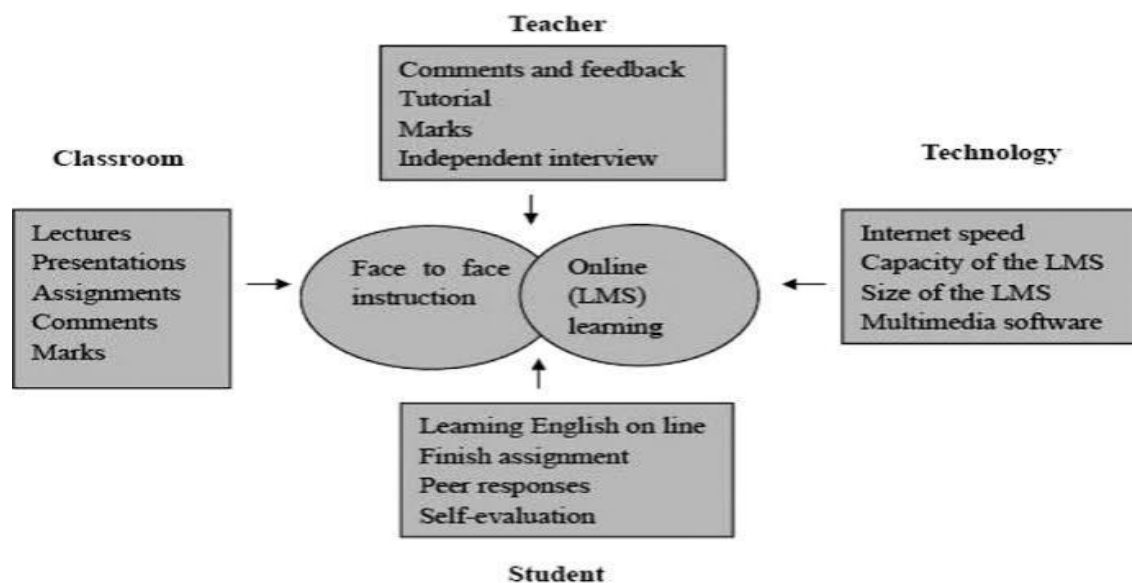


Figure 1. 1 Blended learning framework

This diagram explains the dynamic interplay between teachers and students in a blended learning setting, where traditional face-to-face instruction meets online learning. A key feature of this approach is the strategic use of Learning Management Systems ¹ (LMS) to deliver online courses, training programs, and educational resources. By utilizing the LMS, educators can create engaging learning experiences, track student progress, and encourage collaboration, while students enjoy flexibility and autonomy in their learning journey.

Connectivism and blended learning offer two complementary ways to bring AI and technology into education . Connectivism views learning as a networked, changing process where AI broadens access to different viewpoints, automates knowledge synthesis, and supports collaborative inquiry across digital spaces. It treats learning as ongoing conversations within digital ecosystems, with AI acting as both a connector and curator of information. Blended learning, meanwhile, creates a structured environment by merging face-to-face and online activities, making research more flexible and personalized. AI tools like writing assistants, automated feedback, and virtual collaboration platforms improve efficiency while respecting the importance of human mentorship, ensuring technology enhances critical thinking rather than replacing it. While connectivism explains how knowledge flows, blended learning shows where and when AI can improve the experience. Together, they promote a research process that is energetic, efficient, and human-centered ,where AI takes care of logistics, letting academics focus on analysis, creativity, and ethics. Finally, this approach uses technology as a tool to enable human potential in education and research.

1.3 Artificial Intelligence integration in Education

The strategic integration of Artificial Intelligence (AI) in education has transformed instructional paradigms, fostering personalized learning environments (Kumar et al., 2020). AI-powered adaptive systems dynamically tailor instruction to accommodate individual students' diverse needs, abilities, and preferences. Moreover, AI-driven analytics (learning analytics and instructional analytics) provide educators with actionable insights into students' learning patterns, facilitating data-informed instruction (Siemens, 2013)

Two critical frameworks support AI's seamless integration: Technological Acceptance Model (TAM) and Artificial Intelligence in Education (AIED). TAM facilitates AI adoption by assessing educators' perceptions and attitudes toward AI-driven tools (Davis, 1989). Specifically,

AI adoption relies on “perceived usefulness” and “perceived ease of use,” influencing attitude toward using (ATU), behavioral intention (BI), and actual use (AU). Understanding TAM factors and addressing ethical considerations will enhance AI-driven personalized learning, efficiency, and research practices, particularly in Master’s dissertation research. Conversely, the interdisciplinary AIED framework combines AI, education, and cognitive science to enhance learning environments (Woolf, 2009). It is based on student modeling, expert systems, intelligent tutoring systems (ITS), learning analytics, and Natural language processing (NLP). Thus , AIED facilitates AI adoption, improving instructional efficacy.

Using AI thoughtfully in education is changing how we teach and learn. Combining the Technology Acceptance Model with AI in Education helps make technology more accessible and effective for teachers and students. The first focuses on making educators comfortable with AI tools by emphasizing their usefulness and ease of use. The second integrates intelligent tech with teaching to create personalized experiences, like tutoring systems and performance feedback. Together, these strategies ensure AI supports teachers better and offers students personalized learning. For researchers, especially at the Master’s level, understanding these ideas opens new avenues to explore how AI can improve education , it is not just about adding technology ,but making learning better for everyone.

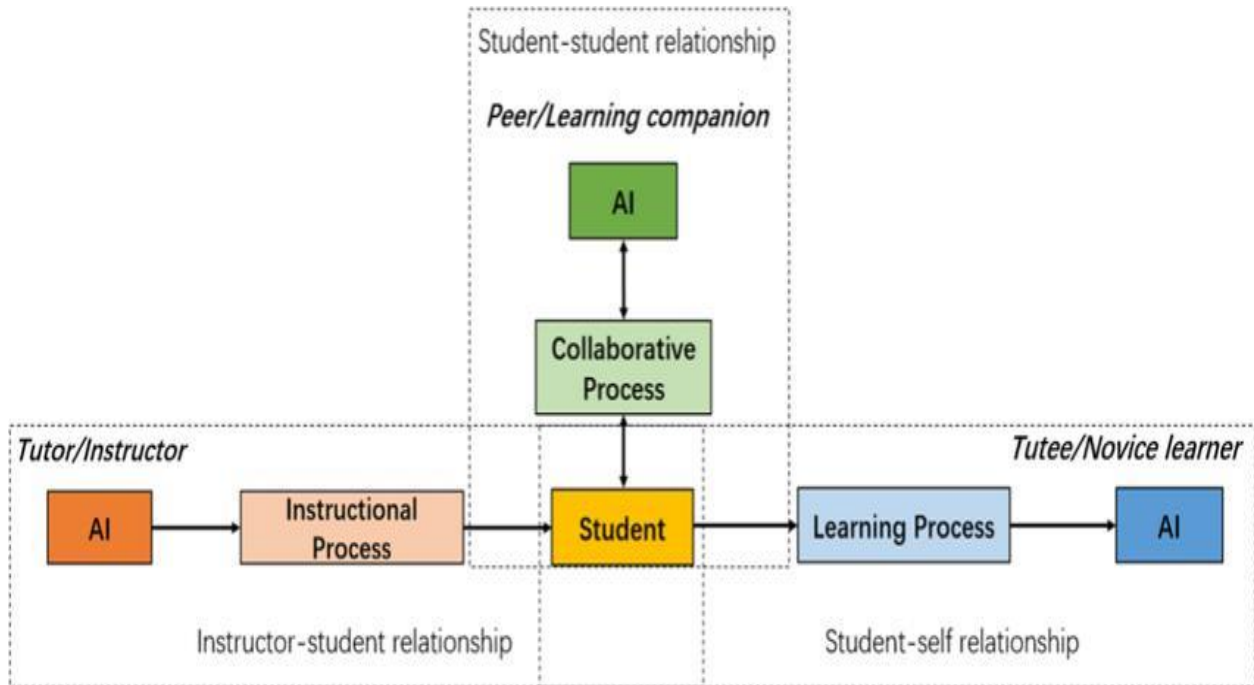
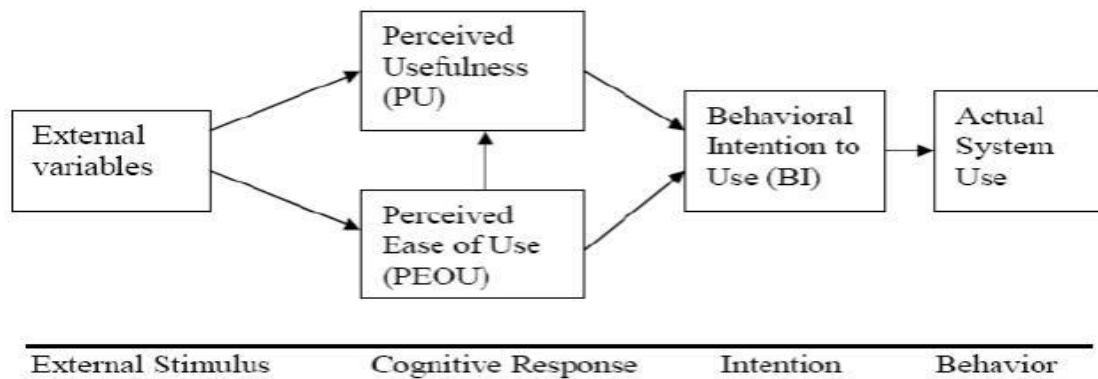


Figure 1. 2 Artificial intelligence in Education

The AIED diagram illustrates the dynamic interaction between learners, AI systems, and the learning environment, showcasing adaptive feedback and personalized learning. Highlighting the role of teachers as an instructor and guide, while student is active learner and critical thinker in different learning settings.



(Davis and Venkatesh, 1996.)

Figure 1.3 Technology Acceptance Model by Davis and Venkatesh (1996)

The TAM figure emphasizes the process of AI adopting in learning settings by learners (from the idea of using it to real use), illustrating the significant role of Perceived Usefulness (PU) and Perceived Ease of Use (PEU) in shaping user behavior, influencing adoption decisions, and forming attitudes towards technology.

1.2.1 Artificial Intelligence (AI) Definition

Artificial Intelligence (AI) refers to machine -based systems that can perform human like functions as the ability to see, perceive , understanding and translating language, and decision - making . In other words, it encompasses “ the development of computer systems that can perform tasks typically requiring human intelligence, such as visual perception, speech recognition, and translation ”.(Russell & Norving , 2010,p.1). Additionally, McCarthy (as cited in Zicari, 2005) defines AI back in 1956 as “ the science and engineering of making intelligent machines ”. These intelligent machines “ exhibit intelligent behavior, learn , demonstrate, explain, and advise users

”(Poole et al., 2013 , p.1). Therefore , AI is simulator of human functions , such as learning, reasoning, perception, and language understanding.

1.2.2 AI ‘s Historical Background

Since its inception in 1956, AI has greatly evolved. This journey began when John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon coined the term “Artificial Intelligence” during the Dartmouth Summer Research Project in 1955 . They built on foundational ideas from Alan Turing, who introduced the Turing Test in 1950. Pioneers like Frank Rosenblatt, the mind behind the perceptron created in 1958, and Arthur Samuel, who developed the first computer game in 1951, laid the groundwork for machine learning and computer vision. The 1980s saw the emergence of expert systems, spurred by researchers like Edward Feigenbaum, who developed the first expert system, DENDRAL², back in 1965. With the rise of Web 3.0, characterized by decentralized architecture and a focus on user-centric data management, the potential of AI has been further amplified. Today, AI tools and applications, driven by advancements in deep learning, natural language processing, and computer vision, are transforming a variety of industries, ranging from healthcare to finance and education to transportation. Leading the charge in AI innovation are companies like Google, under the leadership of Sundar Pichai, and Facebook, headed by Mark Zuckerberg.

1.2.3 AI – TPACK framework

The integration of artificial intelligence (AI) into academic contexts, particularly within the realm of postgraduate research supervision, demands a nuanced alignment of technological capabilities with pedagogical intentionality. Central to this discourse is the Artificial Intelligence-Technological Pedagogical Content Knowledge (AI-TPACK) framework, which synthesizes decades of AI innovation with foundational educational theories to guide ethical and effective applications in academia (Ning et al., 2024). This framework builds upon the seminal work of

Mishra and Koehler (2006), whose Technological Pedagogical Content Knowledge (TPACK) model established the interdependence of technology, pedagogy, and content knowledge as critical for meaningful educational innovation. Their insights remain pivotal in contextualizing how AI tools might enhance rather than disrupt the intellectual and relational dimensions of dissertation supervision.

In their foundational analysis, Mishra and Koehler (2006) articulate the complexity of effective teaching in technology-mediated environments, asserting the following:

Good teaching is not just about efficiently transmitting information, but about creating an environment that fosters engagement, creativity, and higher-order thinking. Effective technology integration requires a deep understanding of the complex interplay between technology, pedagogy, and content (TPACK). This includes knowing how to represent concepts and processes using a range of media, as well as how to adapt teaching to different learning contexts and needs (p. 102)

This statement emphasizes the importance of moving beyond a purely mechanistic approach to technology, a principle that takes on particular significance in AI-enhanced educational tools. It emphasizes that successful teaching depends on an educator's ability to effectively integrate technological resources with discipline-specific knowledge and student-centered strategies. Considering AI-TPACK, this suggests that supervisors guiding dissertations using AI should develop expertise not only in the technical aspects of AI but also in how to use these tools to support deep inquiry, encourage metacognitive development, and cater to the varied epistemological needs of students. For example, AI-based research assistants or data analytics tools can simplify tasks like literature reviews or methodological planning; however, their true value is realized only when supervisors can embed these tools within pedagogically sound frameworks that emphasize critical thinking and autonomous learning over mere automation.

The AI-TPACK framework represents the foundational vision of early AI pioneers like McCarthy and Feigenbaum, who saw artificial intelligence not as a substitute for human thinking, but as an extension of it (Koehler & Mishra, 2009). Incorporating ethical considerations and deliberate pedagogical intent into the process of integrating AI ensures that technological progress enhances, rather than diminishes, the essential mentorship role in dissertation supervision. This perspective resonates with the core objectives of academic institutions, where promoting independent scholarship and critical thinking remains a primary focus. Eventually, the creative cooperation between AI's computational capabilities and educators' pedagogical insights shapes the revolutionary power of frameworks like AI-TPACK uniting technological innovation with the enduring humanistic principles that support education.

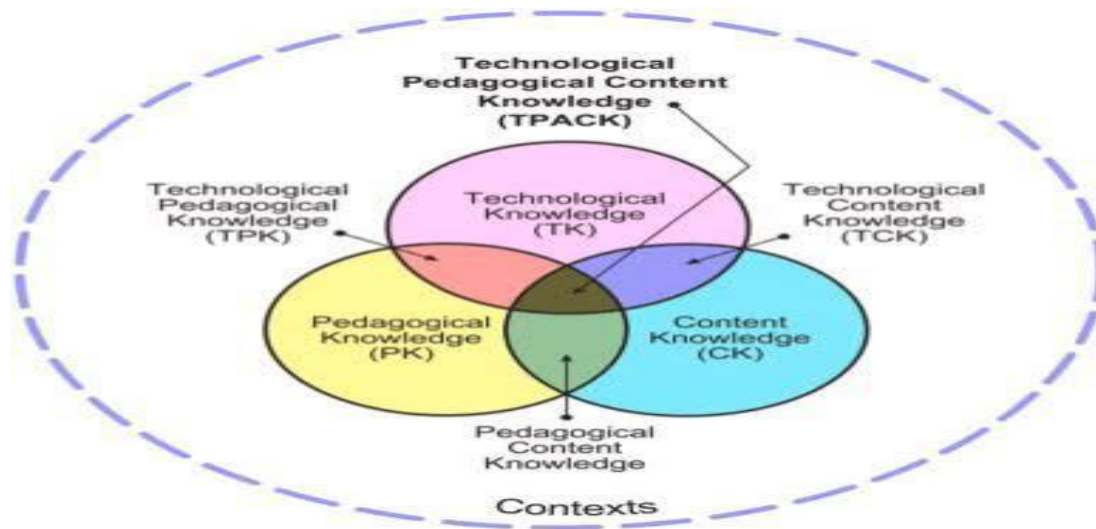


Figure (1.4) : AI- TPACK framework ' components (Ning et a., 2024).

The diagram displays the AI-TPACK framework with seven interconnected elements. Three foundational components form its basis: Pedagogical Knowledge, which covers teaching

strategies and assessments, Content Knowledge, representing expertise in academic subjects, and AI-Technological Knowledge, involving skills in AI tools like adaptive systems. Their intersections create three composite components: Pedagogical Content Knowledge, merging teaching methods with subject matter, AI-Technological Pedagogical Knowledge, applying AI to improve instruction, and AI-Technological Content Knowledge, using AI to model subject-specific ideas. The framework centers on AI-TPACK, the integration of all elements to align AI tools with curriculum goals, ethical standards, and adaptable learning environments, emphasizing the synergy of pedagogy, content, and technology.

1.2.4 Types of AI tools

Artificial Intelligence tools are now woven into almost every aspect of our lives, each designed to meet different needs. In education, platforms like Knewton and Coursera adapt lessons to individual learners, making studies more engaging and accessible. When it comes to fun and games, engines such as Unity and Lumen5 give creators the power to build everything from immersive video games to dynamic social media videos. In healthcare, systems like IBM Watson Health analyze mountains of medical data to help doctors make faster, more accurate decisions.

At home and work, assistants like Google Assistant handle routine tasks whether setting reminders or searching for information so we can focus on what matters most. For artists and writers, tools like Adobe Fresco and Grammarly spark creativity, helping turn ideas into polished sketches or prose.

Beyond these general uses, AI also tailors solutions for specific industries. Financial services rely on platforms like Alpaca to spot market trends and manage risk. Online retailers use chatbots powered by Dialogflow to answer customer questions instantly. Transportation apps such as Waze find the quickest routes through traffic, while security firms lean on AI from companies like Palo Alto Networks to detect threats before they strike.

Looking ahead, the blend of augmented reality and the Internet of Things promises even richer interactions imagine smart glasses overlaying directions in your field of view, or connected home devices that learn your preferences over time. In short, AI is not just a single tool but a vast ecosystem that's reshaping education, entertainment, healthcare, productivity, and beyond transforming how we live and work every day.

1.2.4.1 Types of AI tools within educational field

In recent years, AI-powered platforms have started to change how teachers create lessons and how students interact with content. For example, Coursera uses machine learning to personalize learning paths, automatically grade assignments, and suggest resources based on each student's progress (Pappano, 2012). Udacity also offers adaptive assessments and real-time feedback, providing immediate guidance and allowing instructors to monitor understanding as it happens (Holmes, Bialik, & Fadel, 2019). Tools like Turnitin's AI module not only detect plagiarism but also give personalized feedback to help students improve their writing (Turnitin, 2024). GradeMark supports educators by helping them create content, generate interactive simulations, and guide students through personalized learning journeys (Smith, 2023).

AI is also opening new opportunities for engagement and inclusion. Top Hat powers interactive lectures with live polls and analytics, giving instructors instant insights into student understanding (Top Hat, 2025). Kahoot uses AI to turn review sessions into game-like activities, with automated feedback and real-time engagement tracking (Kahoot!, 2024). For students with diverse needs, ReadSpeaker offers AI-enhanced text-to-speech, audio descriptions, and personalized reading support to make materials accessible to everyone (ReadSpeaker, 2024). As Luckin et al. (2016) note, "AI has the potential to release new opportunities for personalized and comprehensive learning and teaching experiences," leading to more effective instruction and deeper engagement.

1.2.5 Benefits of AI in Education

AI- Educational ' integration promotes a harmonious Synergy that amplifies benefits for both instructors and learners. Notably, AI assists teachers by handling administrative tasks and saving time, and educational platforms connect students with educators from various countries, offering diverse perspectives. Additionally, AI -driven analytics enable teachers to identify knowledge gaps, providing equal opportunities for students (Sadiku et al , 2022). Meanwhile, students experience both personalized learning and interactive cooperative learning through technologies like VR and Gamification. Also , AI – based applications provide students with real-time feedback from teachers (Mubin et al , 2019 ,p.160). Basically, incorporating AI into education revolutionizes the learning environments by bridging gaps between teachers and students, and cultivating effective, energetic learning ecosystems.

1.3 Master's dissertation

A Master's dissertation is a comprehensive and systematic piece of research work that students conduct as a crucial part of their Master's degree. This substantial work demonstrates students' in-depth understanding of their chosen subject and showcases their research skills, revealing their ability to think critically, analyze complex information, and produce original work. Conducting original research on a specific topic within their field of study, students demonstrate their ability to design and execute a research project independently. Additionally , the dissertation usually follows a structured format, consisting of an introduction that provides an overview of the research topic, a literature review that critically examines existing research, a methodology section that outlines the research design and methods, a findings section that presents the results, and a references section that provides a comprehensive list of sources cited. Thus, the Master's dissertation is an academic research work that exemplifies students' abilities and skills in searching, analyzing, and constructing.

1.3.1 Components of Master dissertation

When writing a master's dissertation, it's essential to include several key components. These parts work together to present your research, analysis, and findings in a clear and logical manner.

Here are the main components:

1. Front Page: Includes dissertation title, name, degree program, institution, and date.
2. Abstract: Brief summary of research question, methodology, findings, and conclusions.
3. Acknowledgments: Express gratitude to supporters.
4. Table of Contents: Lists chapters, subheadings, and sections.
5. General Introduction : Introduces topic, outlines research problem, states objectives, and explains relevance.
6. Literature Review: Critically reviews existing research.
7. Methodology: Describes research design, data collection, and analysis.
8. Results/Findings: Presents data collected.
9. Discussion: Interprets and analyzes findings.
10. General Conclusion : Summarizes key findings, significance, limitations, and future research.
11. References/Bibliography: Lists cited sources.
12. Appendices: Includes supplementary material.

All the parts of a dissertation work together to make a clear and well-organized paper. It starts with the title page and abstract, which introduce the study and help readers find what they need easily. The introduction talks about the research problem, the goals, and why the topic is important. The literature review looks at other studies to show how the current research fits in and what gaps it fills. The methodology section explains how the study was done, so others can understand it or even repeat it. The findings part shows the data collected, and the discussion explains what these results mean in real life or in theory. The conclusion sums up the main discoveries, talks about any limitations, and suggests ideas for future research. References and appendices back up the work with trusted sources and extra details. When all these parts come together, they guide the reader smoothly through the research, blending careful analysis with clear sharing of ideas to help others understand and learn more about the topic.

1.3.2 Characteristics of a good Master dissertation

A good master's dissertation is characterized by a clear and focused research questions that guide the entire study. As Creswell (2014) states: "Research questions need to be specific, concise, and clear, and they need to emerge from the research problem"(p. 124). This research questions should be original and contribute something new to the academic field. A comprehensive literature review is also essential, providing a critical review of existing research, theories, and frameworks. This review should demonstrate the student's ability to analyze and synthesize information, drawing meaningful conclusions.

A well-defined methodology is also crucial, clearly outlining the research design, data collection methods, and analysis techniques. The writing should be clear and concise, using academic language to present a logical and well-supported argument. Proper citation and referencing are also essential, accurately crediting all sources and following a consistent citation style. Furthermore, a good dissertation should reflect on its limitations, acknowledging areas where

further research is needed. Finally, the conclusion should summarize the key findings, significance, and implications for future research, providing a clear direction for future study.

Thus, a high-quality Master's dissertation is characterized by clarity of arguments, methodological rigor, originality, coherence, and critical engagement with sources (Smith, 2023). AI-driven tools like Grammarly or ChatGPT enhance clarity and coherence by refining syntax, eliminating redundancies, and suggesting structural improvements (Johnson & Lee, 2022). Methodological rigor is advanced through AI tools such as IBM Watson or Python's Scikit-learn libraries, which automate data analysis, reduce statistical errors, and identify patterns in large datasets (Chen et al., 2023). Originality is ensured by AI-powered plagiarism detectors like Turnitin, which cross-reference global databases to maintain scholarly integrity (Turnitin, 2023). AI literature-review tools (e.g., Research Rabbit, Semantic Scholar) streamline the identification of research gaps by analyzing thousands of papers and highlighting understudied areas (Green et al., 2022). NLP-based tools like Elicit or Iris.ai facilitate critical engagement by surfacing conflicting viewpoints and summarizing research abstracts (Kumar, 2023). Automating tasks such as citation formatting via Zotero's AI features allows students to focus on higher-order thinking (Brown & Wilson, 2023). However, scholars emphasize that AI must serve as a collaborator rather than a substitute for critical agency, requiring rigorous verification of outputs to avoid biases or inaccuracies (Cornell University, 2023; Patel et al., 2023).

1.3.3 Writing and defense strategies

Writing a master's dissertation requires a strategic approach to ensure success. To begin, it is essential to start early and plan ahead, breaking down the dissertation into manageable tasks and setting realistic deadlines (Morabito, 2025). Creating an outline is also crucial, as it helps organize thoughts and structure chapters logically (Postgrad, 2025). Regular writing is vital, and setting aside dedicated time for writing can help maintain momentum (Bamford, 2021). Using clear and

concise language is also important, avoiding overly complicated sentences or jargon. Additionally, revising and editing are critical steps, as they help refine the writing and ensure accuracy (Oxbridge Editing, 2020).

To further enhance the writing process, it is helpful to be critical and analytical, engaging with the literature and findings in a thoughtful and reflective manner (Kritz, 2023). Getting feedback from supervisors or peers can also provide valuable insights and suggestions for improvement (Morabito, 2025). Following the required format and citation style is also essential, as it demonstrates attention to detail and academic integrity (Postgrad, 2025). Using visuals, such as charts or graphs, can help clarify complex data and enhance the overall presentation (Bamford, 2021). Finally, practicing and rehearsing the presentation can help build confidence and prepare for the defense (Kroemer, 2021).

Defending a master's dissertation requires a different set of strategies. To begin, it's essential to know the dissertation inside out, being familiar with every aspect of the research (Kroemer, 2021). Preparing for possible questions and practicing responses can also help build confidence and ensure a smooth defense (Morabito, 2025). Explaining the research clearly and concisely, avoiding technical jargon, can help the audience understand the research (Bamford, 2021). Being confident but humble, acknowledging limitations and areas for future research, can also demonstrate maturity and academic integrity (Kritz, 2023). Anticipating criticism and being open to feedback can help address concerns and improve the research (Oxbridge Editing, 2020). Finally, staying focused on the big picture, highlighting the significance and implications of the research, can help demonstrate its value and contribution to the field (Postgrad, 2025).

1.4 The Role of AI in Enhancing Master's dissertation Quality

The production of high-quality research is a key objective of Master's-level study. As students begin their dissertation journey, they aim to produce work that makes a valuable contribution to their field of study. In recent years, Artificial Intelligence (AI) has emerged as a powerful tool that can enhance the quality of Master's dissertations. By using AI's capabilities, students can improve the accuracy, validity, and overall quality of their research

1.4.1 AI-driven Innovation in Master's dissertation

AI is really changing how students do research for their dissertations. It makes things easier at three main stages. First, during the research part, tools like Litmaps and ResearchRabbit help students see how studies are connected and spot what's missing in the current knowledge. This makes it easier to come up with unique research questions (Tlili et al., 2024). For example, platforms like Elicit use natural language processing to quickly summarize hundreds of papers, so researchers can focus on topics that haven't been studied much. When it comes to writing, tools like Grammarly make sentences clearer and better organized, while Turnitin checks for originality by comparing work to many sources around the world (Deloitte, 2024).

During data analysis phase, AI can handle complicated tasks like calculations and creating visuals, which reduces mistakes and makes results more accurate. Programs like Zotero also help format citations automatically, saving time and letting students think more critically about their work. While AI makes research more thorough and creative, students need to use it responsibly. It's important to double-check AI's suggestions to avoid bias and ensure they support, not replace, human judgment (Tlili et al., 2024). By combining AI tools with careful oversight, students can better focus on connecting ideas and understanding their findings, leading to work that is both innovative and trustworthy.

1.4.2 Evidence -based for AI improved dissertations

In recent years, more and more people are noticing how AI is impacting Master's dissertation research. Many studies have shown that AI tools can really help improve the quality of these research papers. For example, Zou and Huang (2023) looked at how Chinese PhD students feel about using AI tools like ChatGPT when writing their theses. They found that students thought ChatGPT was easy to use and helpful for tasks like drafting ideas and improving arguments. Most didn't see many ethical problems with using it.

Similarly, Ngo (2023) found that students generally had a positive view of AI tools for academic writing. They appreciated how these tools made idea generation faster and helped save time. But Ngo also pointed out some issues, like students struggling to keep citations accurate and figuring out if sources are trustworthy, which could affect the quality of their work.

Conversely, Ben Merabet (2024) studied both students learning English as a foreign language (EFL) and their teachers. He found that many are familiar with AI tools like Quillbot, which students like because it helps improve their language, but teachers worry about students relying too much on these tools. Teachers also worry about accidental plagiarism since AI sometimes misses the full context.

Albert (2023) went further to discuss the ethical side of working with AI. He suggests that there need to be clear rules for when AI contributes to writing, especially because AI-generated text can be mistaken for original work. Without proper checks, there is a risk of academic dishonesty, since AI cannot be held accountable or guarantee facts are correct.

Studies collectively highlight AI's potential in enhancing dissertations through efficiency and idea generation (Zou & Huang , 2023; Ngo, 2023), while also noting risks like citation

inaccuracies (Ngo, 2023), plagiarism concerns (Ben Merabet,2024),and ethical ambiguities in authorship (Albert, 2023).

1.5 Challenges and limitations of AI 's integration

Notwithstanding the benefits of AI in Master's dissertations, several obstacles and constraints must be acknowledged. Effective integration requires a nuanced understanding of the challenges and limitations involved. This section will delve into the key challenges and limitations associated with AI integration in Master's dissertations, highlighting the need to address these issues.

1.5.1 Limitations

While AI tools can help with drafting and analyzing data, they do have some important limitations in academic research. For instance, AI often finds it hard to match the detailed critical thinking needed to evaluate complicated arguments or to place findings in the larger context of scholarly discussions, as shown in studies about creating synthetic knowledge (Bozkurt, 2023). These tools may also struggle to adapt when research topics change quickly or involve multiple fields, which can limit their usefulness for innovative projects. Plus, AI cannot replace the human touch, like mentorship and teamwork , that are essential for developing strong analytical skills. Experts like Crawford (2021) warn that relying too much on AI could widen educational gaps, since students without access to advanced tools might find it harder to produce competitive work.

1.5.2 Challenges

Using AI in dissertations also brings practical and ethical issues. A major challenge is finding the right balance between automation and human oversight, because AI-generated content can sometimes contain biases or inaccuracies if not carefully checked (Zawacki-Richter et al., 2019). Teaching students how to use AI tools properly adds another layer of difficulty, especially

for those already burdened with heavy workloads. Concerns about academic honesty are also rising, since AI can paraphrase or generate text that blurs the line between original work and plagiarism if institutions do not have clear rules in place. Lastly, making sure everyone has fair access to AI tools around the world remains an open problem, as emphasized in recent global education reports (UNESCO, 2023)

1.6 Conclusion

Theories and Frameworks like AIED, TAM , and AI-TPACK help us understand how AI can be effectively used in academic research. They show AI's ability to make tasks like data analysis and literature review easier, while also helping with time management and personalized feedback. Still, challenges remain, such as ethical questions about originality and needing proper training to use these tools responsibly. Since AI technology keeps developing, students and teachers need to stay adaptable. Overall, careful adoption of these frameworks can improve research quality, making AI a helpful and balanced part of future academics.

Chapter two: Data collection, Analysis, and Interpretation

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2.1 Introduction

The methodology chapter outlines the key sections and subsections covered in this part of the study. It includes the research design, which explains the mixed-methods approach combining quantitative and qualitative data. Next, the research instruments subsection details the use of a student questionnaire and teacher interviews as primary tools for data collection. The analysis section describes how statistical and thematic methods were applied to interpret the responses. Finally, the interpretation subsection discusses how findings from both tools were synthesized to address the research objectives. Each part connects logically to provide a clear framework for understanding the study's approach.

2.2 Research Design

This study employed a mixed-methods approach, blending qualitative and quantitative research to gain a deeper understanding of how master's students perceived and experienced the use of AI applications in their dissertation research. By combining the strengths of both qualitative and quantitative methods, we aimed to capture a more complete picture of this complex issue. Our research questions were designed to explore the nuances of students' experiences and attitudes towards AI-powered tools, shedding light on the benefits and challenges they encountered.

2.3 Sample and Population

A total of 20 Master's students took part in the study with two of them coming from the English department at Relizane University. This group represented 68.97 percent of the original 29 students considered for the research. Alongside these students, eight teachers from the same English department also joined the study. To ensure focused and meaningful insights, the purposive sampling method was used to select participants. This approach allowed the researchers to gather

detailed and relevant data directly from individuals who have practical experience and deep understanding of the research topic.

2.4 Data collection instruments

The study used two main tools to collect data. For the teachers, semi-structured interviews were conducted to explore their experiences and insights in depth. These interviews were flexible yet focused, allowing teachers to share detailed perspectives while staying aligned with the research goals. For the students, a questionnaire with standardized questions was designed to gather their opinions and feedback systematically. Both tools were carefully chosen to match the study's purpose, ensuring the data was both meaningful and reliable. The interviews provided rich qualitative insights through guided conversations, while the questionnaires offered structured quantitative data, creating a balanced approach to understanding the research topic from multiple angles. This combination helped capture a comprehensive view of the participants' experiences and ideas.

2.4.1 Students ' Questionnaire

The questionnaire in this study explored how Masters students use AI tools in their academic work. It included 16 simple questions split into three parts. The first part asked about students' awareness and daily use of AI applications, such as how often they relied on these tools. The second part focused on their personal opinions, including their comfort levels when using AI, the benefits they noticed, and any concerns they had. The final section examined how students applied specific AI tools in their research and how effective they found them. By using clear questions, the survey aimed to understand how AI impacts dissertation quality and students' academic experiences.

To ensure the questionnaire was reliable, it was first tested with five students. Their feedback helped improve unclear questions. Participants received a simple information sheet explaining the study's goals, ethical practices, and their right to withdraw at any time. After agreeing to participate, they completed the questionnaire online through Google Forms, making the process quick and accessible. This approach helped collect honest responses efficiently while minimizing errors and encouraging participation.

2.3.2 Teachers' Interview

This study used semi-structured interviews to learn what teachers think about using AI tools to improve Master's dissertations. These interviews combined prepared, open-ended questions with the flexibility to explore what participants shared in more detail. The questions focused on three main areas: teachers' experiences supervising students, their familiarity with AI tools, and how they think these technologies could help improve dissertations. The semi-structured format allowed for natural, in-depth conversations while still making sure key topics were covered. The goal was to find out both the challenges and the benefits of adding AI into the thesis supervision process.

Data was collected through a process that was both organized and adaptable. First, participants received a consent form explaining the purpose of the study, how their data would be kept private, and their right to withdraw at any time. To make sure the questions were clear, we did two practice interviews in person, which helped us identify any confusing parts. The rest of the interviews were done online via email, giving participants the chance to respond comfortably and with thought. Using both in-person and email methods made it easier to gather detailed responses from people with different schedules. This approach helped us collect useful data while still capturing the different opinions about AI and how it could support academic research supervision.

2.4 Data Analysis and Interpretation

2.4.1 Questionnaire Analysis

Demographic information :

Q1: what is your age ?

Table 2.1: Respondents 'age

Options	Responses	Percentage
20-25	16	80%
26-30	2	10%
31-35	1	5%
36 and above	1	5%
Total	20	100%

According to the table 2.1 , 80% of participants 'age fall between 20 to 25 years old, 10% of them vary from 26 to 30 years old, and 5% of the subjects also are range between 31and 35 years old . While, the rest of participants (5%) are classified between 36 years old and above.

Q2: what is your gender ?

Table 2.2 : Participants 'gender

Options	Responses	Percentage
Male	6	30%
Female	14	70%
Total	20	100%

Table 2.2 demonstrates that the vast majority of respondents were females with 70% , while only 30% of them were males.

Section one: AI applications in learning process

Q1: How familiar are you with AI applications?

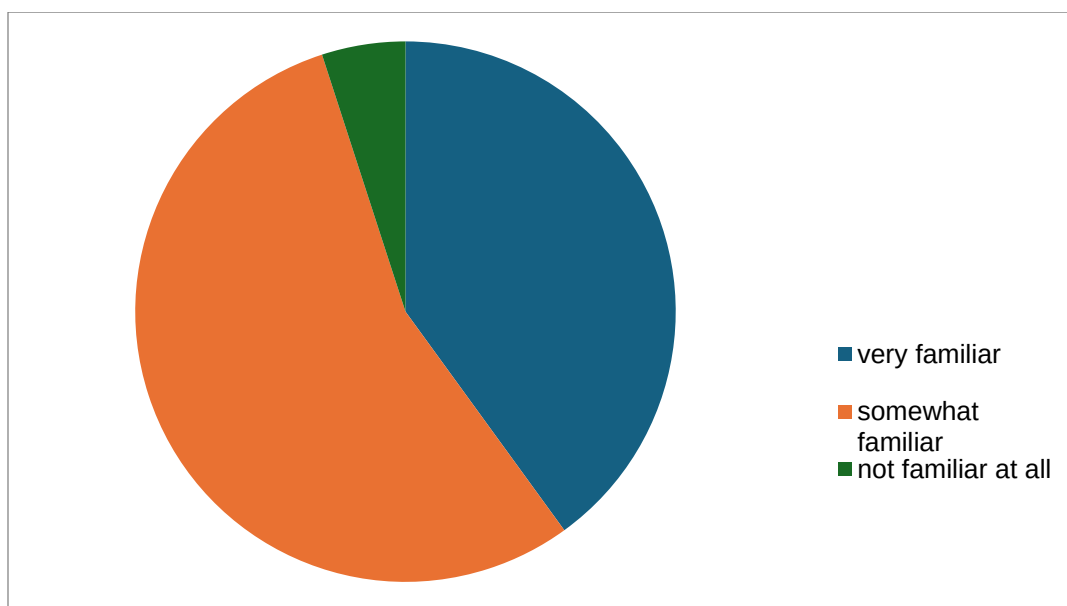


Figure 2.1: Students familiarity with AI applications

The answers reveal that (40 %)of subjects were very familiar with AI applications, and (55%) of them were somewhat familiar with these applications. However, (5%) of respondents were not familiar with AI applications .

Q2: Have you ever utilized AI applications in learning process?

Table 2.3: Utilization of AI tools in learning process

Options	Responses	Percentage
Yes	20	100%
No	0	0%
Total	20	100%

The results indicate that 100% of the respondents (Master- two students) utilized AI applications in their learning process.

Q3- what do you use AI applications for in your learning process?

Table 2.4 :Purpose of using AI applications in the learning process .

Options	Responses	Percentage
Writing	5	25%
Study materials	8	40%
Quizzes and exams	1	5%
Revision and Research	6	30%
Total	20	100%

The table shows the priorities reported by participants. The majority focused on study materials at 40%, followed by revision and research at 30%. Writing accounted for 25%, while quizzes and exams received the least attention at 5%.

Q4-: How often do you utilize AI – powered tools?

Table 2.5: AI – powered tools use' frequency

Options	Responses	Percentage
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Daily	5	25%
Weekly	11	55%
Monthly	1	5%
Rarely	3	15%
Total	20	100%

The table displays participant responses on frequency. A majority reported weekly at 55%, followed by daily at 25%. Rarely accounted for 15%, while monthly had the smallest proportion at 5%.

Section two: Students 'perceptions and experiences with AI applications in academic work

Q1- how comfortable are you with using AI tools in your academic work?

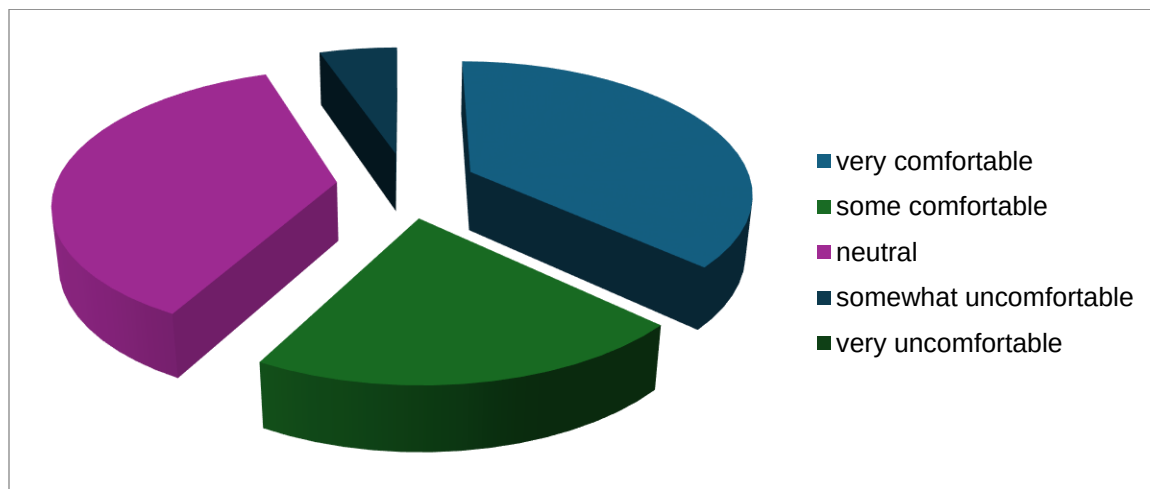


Figure 2.2: Comfort levels with AI in academic work

The majority of respondents (70%) reported being either very comfortable (35%) or neutral (35%) when using AI applications in their academic work. In contrast, (20%) felt somewhat

comfortable, while (10%) of them expressed some level of discomfort (5% somewhat uncomfortable and 5% very uncomfortable).

Q2: How important is it for you to have access to AI driven Applications in your academic work?

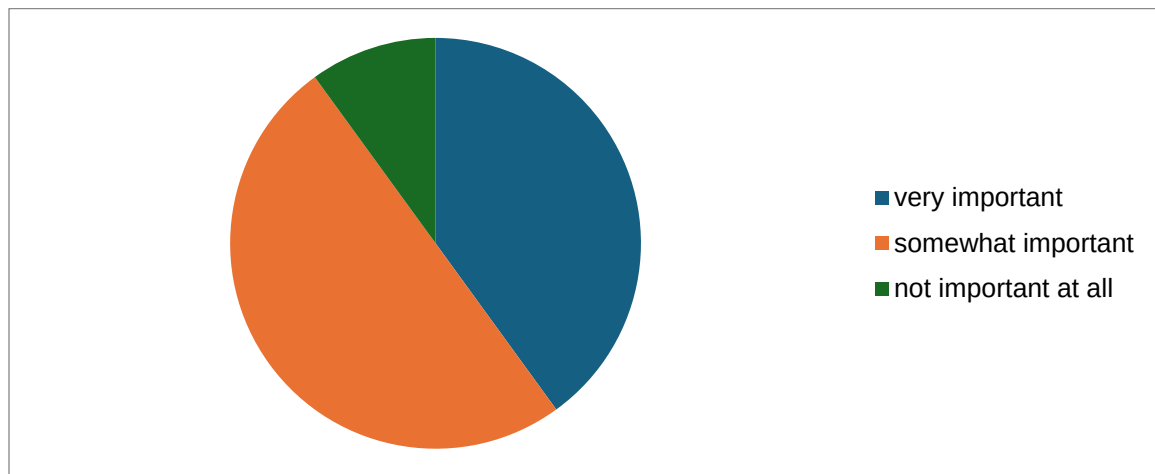


Figure 2.3 :Perceived importance f AI tools in academia

The majority of participants (90%) considered having access to AI driven Applications in their academic work to be important, with (40%) finding it very important and (50%) somewhat important .While(10%) of them did not consider it important at all.

Q3: Do you think AI tools could help improve the quality of your research work?

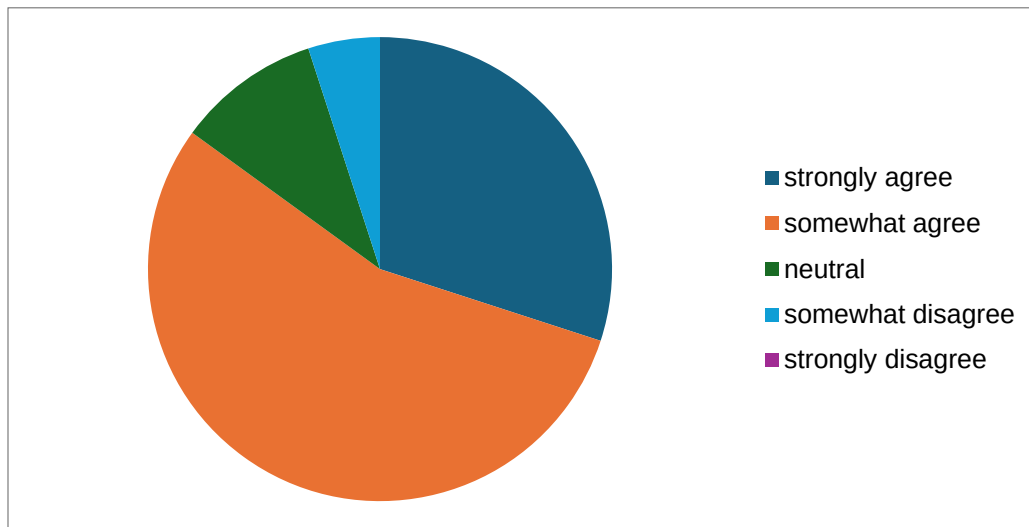


Figure 2.4: Students' attitudes toward AI – enhanced Research work

The majority of participants (85%) agree that AI driven tools can enhance the quality of Master's dissertation, with (30%) strongly agreeing and (55%) somewhat agreeing . Only (15%) of respondents were neutral or disagree with the statement.

Q4-: Do you have concerns about the potential misuse of AI tools in academic work?

Table 2.6: AI misuse Concerns in academia

Options	Responses	Percentage
Yes	19	95%
No	1	5%
Total	20	100%

The table 2.6 shows that a total of 95% of respondents reported concerns about the potential misuse of AI tools in academic work, while 5% of them did not.

Q5: What concerns do you have?

Table 2.7: Specific Risks of AI misuse in academia

Options	Responses	Percentage
Plagiarism	12	60%
False information	7	35%
Data privacy and security	1	5%
Job replacement	0	0%
Total	20	100%

Participants concerns about AI in academia are distributed as follows: plagiarism (60%), false information (35%), and data privacy and security (5%). While, no respondents expressed concerns about job replacement.

Section three: AI -driven tools in research process

Q1: Have you utilized AI tools in your research process ?

Table 2.8: Adoption of AI in research

Options	Responses	Percentage
Yes	19	95%
No	1	5%
Total	20	100%

The table 2.8 reveals that a total of 95% of subjects had used AI tools in their research process, while 5% of them did not utilize these tools.

Q2: Which AI tool have you used?

Table2.9: Primary applications of AI in academic research

Options	Responses	Percentage
Quillbot	8	40%
Grammarly	5	25%
Aithor Ai	5	25%
Research Rabbit	1	5%
Turnitin	1	5%
Microsoft Academic	0	0%
Total	20	100%

Most participants preferred Quillbot, with 8 people (40 %) selecting it as their tool of choice. Grammarly and Aithor AI were equally popular, each chosen by 5 people (25 %). Research Rabbit and Turnitin were each used by 1 person (5 %), while Microsoft Academic had no users (0 %).

Q3: what do you mainly use it for?

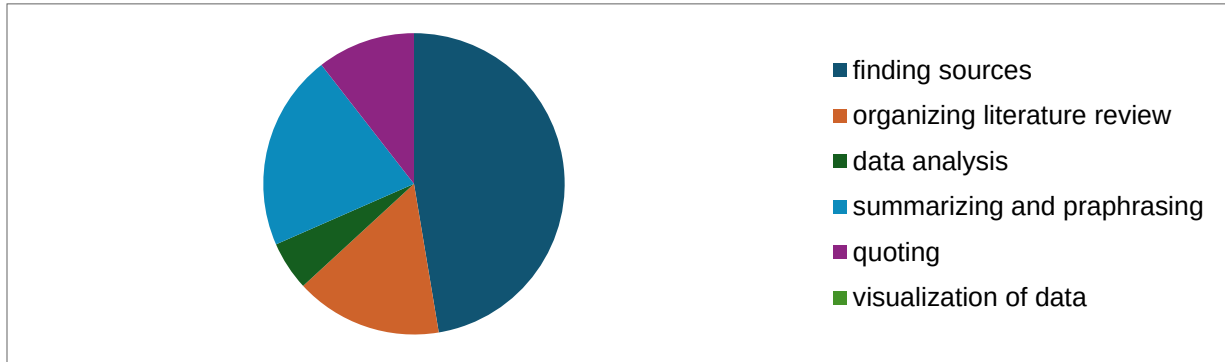


Figure 2.5: Primary Applications of AI in Academic Research

While (45%) of participants used the tools mainly for finding sources,(15%) of them utilized it primarily for organizing literature review. And , (20%) of respondents relied on the tools for summarizing and paraphrasing. A smaller proportion of subjects (10%) used it mainly for quoting. And the rest of them (10%) employed the tools for data analysis and visualization.

Q4- To what extent did AI assisted tools influence your dissertation writing?

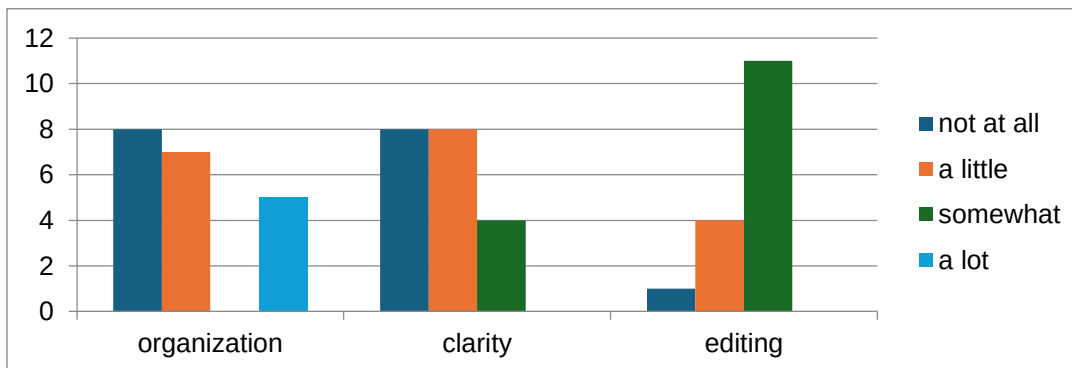


Figure 2.6 : AI impact on dissertation writing.

When asked how AI tools influenced organization, 8 participants felt they helped somewhat, 7 noticed a little improvement, and 5 felt they made a lot of difference. For clarity, responses were balanced: 8 said AI improved clarity somewhat, 8 saw a little benefit, and 4 reported a lot of improvement. Editing saw the strongest support, with 11 participants finding AI tools somewhat helpful, 4 noticing a little or a lot of impact, and 1 person feeling they didn't help at all. Overall, AI tools were most widely recognized for aiding editing tasks, with mixed but generally positive effects on organization and clarity. While many saw moderate benefits, a smaller group found them highly impactful, reflecting varied experiences depending on the task.

Q5: Rate the effectiveness of AI driven tools in enhancing your writing quality?

Table 2.10 : AI ' Effectiveness in enhancing writing quality

Options	Responses	Percentage
Very effective	4	20%
Effective	15	75%
Ineffective	1	5%
Very ineffective	0	0%
Total	20	100%

The results show that (75%) of respondents rated AI driven tools as “effective”, while (20%) of them rated these tools as “very effective ”. In contrast, (5%) of the participants rated AI driven tools as “ineffective” and none (0%) rated them as “very ineffective ”.

Q6: How do you perceive the impact of AI tools on the originality of your academic work?

Table 2.11: AI 's Impact on originality in academic work

Options	Responses	Percentage
Significantly enhance originality	1	5%
Somewhat enhance originality	10	50%
Somewhat reduce originality	7	35%
Significantly reduce originality	2	10%
Total	20	100%

The majority of respondents (50%) believed that AI tools somewhat enhanced originality of their academic work, plus, (5%) of them also declared that AI tools significantly enhance originality. In contrast, (35%) of participants thought that AI tools somewhat reduced originality, and (10%) of them believed that these applications significantly reduced originality.

Q7:what barriers have you encountered while using AI applications in your dissertation research?

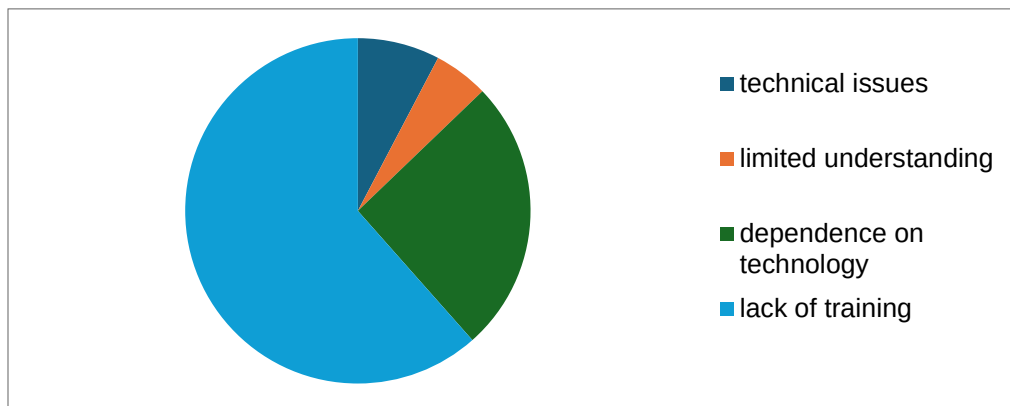


Figure 2. 7 :Barriers of AI adoption in Dissertation Research

The primary barrier encountered by respondents while using AI in their dissertation is lack of training, cited by (50%) of them. Dependence on technology was the second most common barrier, reported by (25%) of subjects. Technical issues were a barrier for (15%) of participants, while, limited understanding of AI is the least common barrier, cited by (10%) of respondents .

2.4.2 Interpretation of Questionnaire 'findings

The analysis emphasizes a noticeable upsurge in the adoption of artificial intelligence within educational settings, especially among younger learners, as evidenced by the data collected. The majority of participants, approximately 80%, were within the age bracket of twenty to twenty-five years, with a major proportion(around 70%)identifying as female. Nearly all students used AI tools to support their learning processes, predominantly for tasks such as developing study guides or reviewing course content. In contrast, only a small fraction employed these tools for assessments like quizzes or exams. More than half of the respondents, roughly 55%, reported engaging with AI on a weekly basis, illustrating how smoothly these technologies integrate into their daily academic routines.

Despite the extensive use of AI tools, ethical considerations remain prominent. An overwhelming majority(90%)considered AI indispensable for academic achievement, yet an even larger proportion(95%) expressed concerns about potential misuse, including issues like plagiarism and the dissemination of false information. Sentiments regarding comfort with AI varied; approximately one-third, around 33%, felt entirely at ease using such tools, while another third expressed indecision, reflecting a cautious approach. When debating the impact on originality, opinions were evenly divided: half believed AI could infuse work with a unique touch, whereas over a third, about 35%, viewed it as a potential obstacle to creativity, emphasizing a tension between convenience and the preservation of academic integrity.

Practical obstacles also tempered initial enthusiasm. Half of the respondents, 50%, identified insufficient training as a major barrier, while a quarter (25%) voiced apprehensions about over-dependence on technology. Among various tools, Quillbot, known for its writing assistance features, became the preferred choice. Despite these concerns, approximately 75% of students praised AI's role in enhancing the quality of their writing. However, questions persisted regarding its effects on clarity and originality. Overall, students acknowledge AI's ability to boost efficiency, yet they remain cautious, endeavoring to strike a balance between welcoming technological innovation and safeguarding academic standards.

2.4.3 Teachers' Interview Analysis

Q1: Based on your experience as a supervisor, what are the key factors for effective supervision?

Most participants emphasized that effective supervision fundamentally relies on consistent communication, providing constructive feedback, and developing a clear understanding of students' academic strengths and weaknesses. These components are viewed as important for guiding students through the detailed research process. A smaller group emphasized the importance of non-digital strategies, such as tactile organizational methods or handwritten notes, to promote originality and encourage deeper cognitive engagement.

One participant stated:“ Effective supervision fundamentally relies on consistent communication, providing constructive feedback, and developing a clear understanding of students' academic strengths and weaknesses. ”

Q2: What standards do you use to evaluate the writing quality of a Master's dissertation?

The majority of respondents prioritized clarity, coherence, and strict adherence to academic standards, including proper formatting and citation practices. A subset focused on discipline-

specific norms, such as maintaining an appropriate academic tone or ensuring logical progression. Others distinguished between outputs that are technically polished and those that genuinely reflect authentic intellectual effort, even if imperfect. A respondent noted: “ we as teachers prioritize clarity, coherence, and strict adherence to academic standards, including proper formatting and citation practices. ”

Q3: What challenges do you think students typically face when writing their Master’s dissertations?

The main issues identified include procrastination, poor time management, and a lack of methodological skills. These challenges often relate to difficulties in formulating research questions or conducting comprehensive literature reviews. A minority expressed concerns about over-reliance on AI tools, such as chatbots for content generation, which they argued could hinder critical engagement with sources. One participant mentioned: “ The main issues include procrastination, poor time management, and a lack of methodological skills. ”

Q4: How do you support students in overcoming the common challenges and limitations they face during their research?

Participants generally recommended structured workshops, iterative feedback sessions, and access to supportive resources like writing templates and grammar-checking tools. Several endorsed integrating AI for tasks such as data organization. A few proposed innovative approaches, such as instituting tech-free periods for analog brainstorming or requiring documentation of idea development to ensure organic argument formation. A respondent shared: “as teacher I recommend structured workshops, iterative feedback sessions, and access to supportive resources like writing templates and grammar-checking tools. ”

Q5: How familiar are you with AI applications for academic work?

Many respondents reported familiarity with tools such as Grammarly, Zotero, and ChatGPT, often using them for drafting or managing citations. A smaller group preferred traditional methods like manual note-taking or physical archival research, cautioning against AI adoption without understanding its limitations. One participant explained : “ I AM familiar with tools such as Grammarly, Zotero, and ChatGPT, often using them for drafting or managing citations. ”

Q6: Do you think AI applications can help students overcome these challenges? If so, how?

While many acknowledged AI’s potential to enhance efficiency, by automating repetitive tasks like grammar checking and citation formatting, some warned that excessive dependence might limit creativity or promote dependency. This is particularly relevant if students rely on AI to bypass critical analysis.

A respondent commented: “ While many acknowledged AI’s potential to enhance efficiency by automating repetitive tasks like grammar checking and citation formatting some warned that excessive dependence might limit creativity or promote dependency. ”

Q7: Can AI applications help students become more independent in their research? Why or why not?

Most see AI as a tool that, when used judiciously, can promote independence—optimizing literature reviews or data organization. Conversely, others worry that overuse could lead to passive learning, hindering the development of problem-solving skills.

One participant argued: “ Most see AI as a tool that, when used judiciously, can promote independence optimizing literature reviews or data organization. ”

Q8: In your opinion, what are the possible downsides of using AI applications in academic writing?

Nearly all participants emphasized over-reliance on AI as a major risk, noting it can produce generic outputs, reduce critical thinking, and raise concerns about plagiarism. There are also worries about the homogenization of ideas and the potential loss of students' unique academic voices within AI-generated work.

A respondent warned: “ over-reliance on AI is a major risk, it can produce generic outputs, reduce critical thinking, and raise concerns about plagiarism. ”

Q9: Have you observed any differences in dissertation quality between students who use AI applications and those who do not?

Many observed that work aided by AI tends to be technically polished but often lacks originality and depth, whereas non-AI work feels more authentic despite structural flaws. A minority commented that AI-produced writing sometimes appears flat or lacking in intellectual personality. One participant observed: “ we as teachers observed that work aided by AI tends to be technically polished but often lacks originality and depth. ”

Q10: In your opinion, should students be taught about AI applications as part of their dissertation preparation?

A majority recommended structured training on ethical AI use, emphasizing proper integration and fact-checking. A smaller group stressed the importance of mastering foundational research skills before integrating AI tools, to ensure a solid grasp of traditional methodologies.

A respondent suggested: “A majority recommended structured training on ethical AI use, emphasizing proper integration and fact-checking. ”

Q11: In what aspects do you think AI applications would help students in dissertation writing?

AI was widely recognized for its usefulness in tasks such as drafting outlines, organizing references, or simplifying data analysis. However, some urged caution against relying on AI for core intellectual activities like developing arguments, emphasizing the continued importance of human judgment. One participant noted : “AI was widely recognized for its usefulness in tasks such as drafting outlines, organizing references, or simplifying data analysis. ”

Q12: How can students use AI applications for research and writing while ensuring their work remains original?

Most suggested using AI as a supplementary resource, cross-checking outputs, transparently citing AI assistance, and maintaining one’s original analysis. A common theme was the need to preserve the distinctive human fingerprint to uphold academic integrity. A respondent advised: “Most suggested using AI as a supplementary resource cross-checking outputs, transparently citing AI assistance, and maintaining one’s original analysis. ”

Q13: Are there any AI applications you would recommend to students working on their thesis?

The most commonly endorsed tools include Grammarly (for writing), Zotero (for citations), and SPSS (for data analysis). A smaller subset emphasized more niche tools like ResearchRabbit for literature discovery, while reaffirming the value of traditional practices such as deep reading and handwritten notes. One participant recommended :“The most commonly endorsed tools include Grammarly for writing, Zotero for citations, and SPSS for data analysis.”

2.4.4 Interpretation of Interview ' Findings

The findings from the analysis indicate that effective supervision depends heavily on consistent communication, constructive feedback, and a clear understanding of students' academic capabilities and methodological strengths and weaknesses. Supervisors who customize their support based on individual student needs help build confidence and guide students through the complexities of research.

Participants also emphasize that clarity, coherence, and strict adherence to academic conventions are fundamental standards for producing high-quality dissertations. Beyond these formal criteria, genuine intellectual engagement over time is what truly signifies original contributions.

Furthermore, the analysis emphasizes some of the key challenges students encounter when undertaking dissertation research. These include tendencies toward procrastination, difficulties with time management, inadequate methodological skills, and an over-reliance on AI tools. To address these issues, supervisors recommend offering structured support—such as workshops and collaborative activities, along with practical tools like writing templates and grammar checkers. Unconventional approaches, like brainstorming without using technology or documenting the evolution of ideas, are also encouraged.

In addition, the analysis examines the advantages and potential drawbacks of using AI tools in academic work. While AI can be highly beneficial for automating repetitive tasks and assisting non-native speakers, overdependence may lead to generic outputs, diminished critical thinking skills, and a loss of the students' authentic academic voice. Therefore, ethical AI training is essential, educating students to view these tools as supplements rather than replacements. For example, using ChatGPT for brainstorming ideas, rather than drafting entire sections, promotes deeper originality.

On the whole, while AI has the potential to increase efficiency, supervisors advise caution in relying on it for core intellectual activities such as developing arguments. Thus ,Striking a balance between human effort and AI-assisted tools is therefore recommended .

2.6 Conclusion

Overall, this study thoughtfully combines theoretical insights with practical analysis to assess the influence of artificial intelligence on Master's dissertations. Students recognized that employing AI tools offered them enhanced efficiency and greater accuracy in their work. Meanwhile, educators emphasized the importance of maintaining a critical perspective to uphold academic standards and protect originality. The results suggest that when AI is used as an auxiliary resource rather than a replacement for scholarly effort, AI has the potential to enhance the quality of dissertations. This balanced approach allows technology to support human expertise, promoting high-caliber research that preserves academic integrity.

Chapter Three: Discussion of Findings, and Recommendations

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3.1 Introduction

This chapter offers a comprehensive discussion of the analysis findings, emphasizing how AI tools assist the management of complex tasks while also addressing concerns related to originality and critical thinking. To provide a clearer perspective, it explores feedback from both students and educators, presenting a detailed understanding of AI's practical role within academic settings. Building upon these insights, several actionable recommendations are suggested, including the integration of AI into research methodology courses, the development of dedicated AI training programs, and the organization of supplementary workshops to enhance understanding and responsible use.

3.2 Discussion of Findings

3.2.1 Benefits of AI Tools in Dissertation Writing

The findings highlight significant advantages of AI in streamlining research and writing processes. Students reported using tools like Quillbot and Grammarly to simplify tasks such as paraphrasing, organizing literature reviews, and formatting citations activities that traditionally consume substantial time. This aligns with Siemens' Connectivism theory, which emphasizes AI's role in expanding access to knowledge networks and fostering collaborative learning. For instance, 75% of students rated AI as effective for improving writing quality, reflecting Davis' Technology Acceptance Model, where perceived usefulness drives adoption. Teachers acknowledged AI's potential to automate repetitive tasks, such as grammar checks, freeing students to focus on critical analysis. Luckin supports this, noting AI's capacity to personalize learning and amplify educators' efforts. However, while students praised efficiency, scholars caution that AI's value lies not in replacing human effort but in augmenting it, a nuance echoed by teachers who advised using AI as a supplement, not a substitute.

3.2.2 Challenges and Limitations of AI Integration

Despite its benefits, AI adoption is fraught with ethical and practical hurdles. A striking 95% of students expressed concerns about plagiarism and misinformation, resonating with Albert's warnings about blurred authorship and academic integrity. Teachers observed that AI-assisted work, while technically polished, often lacked originality a tension highlighted by Crawford, who warns that over-reliance on AI risks homogenizing ideas. Practical barriers also emerged: 50% of students cited insufficient training, aligning with Zawacki-Richter et al., who argue that perceived ease of use diminishes without proper guidance. Additionally, 35% of students feared AI might reduce originality, contrasting with Siemens' ideal of AI as a catalyst for diverse perspectives. This gap underscores the need for frameworks like AI-TPACK, which stress balancing technological tools with pedagogical intent to preserve critical thinking. Teachers reinforced this, advocating for tech-free brainstorming sessions to nurture creativity, reminder that AI cannot replicate the human capacity for nuanced argumentation.

3.2.3 Ethical and Practical Considerations in AI Adoption

The study reveals both harmony and discord between theoretical frameworks and real-world experiences. Connectivism's vision of AI as a connector of ideas aligns with students' use of tools like ResearchRabbit to map literature networks. Similarly, Blended Learning's emphasis on merging digital and traditional methods mirrors the 55% of students who integrated AI weekly without abandoning conventional study habits. Yet tensions arise: the Technology Acceptance Model's assumption of intuitive technology use clashes with students' struggles to navigate AI ethically, highlighting the need for structured training, a gap teachers sought to address through workshops. The AI-TPACK framework bridges these divides by advocating for ethical, pedagogy-driven AI integration. For example, while students viewed AI as a time-saver, teachers stressed its

limitations in fostering authentic academic voice, echoing Mishra and Koehler's call for human-centered technology use. These contrasts emphasize that theoretical models must evolve to address practical complexities, such as balancing efficiency with originality.

3.2.4 Balancing Innovation and Academic Integrity

To harness AI's potential while mitigating risks, the study suggests a balanced approach. Scholars advocate for AI as a collaborative tool, which aligns with teachers' advice to use ChatGPT for brainstorming rather than drafting entire sections. Structured training programs could address students' lack of preparedness, ensuring they use AI ethically and effectively. Meanwhile, frameworks like AI-TPACK remind institutions to prioritize pedagogy over automation, ensuring technology enhances, not replaces, critical thinking. Students' mixed views on originality underscore the need for clear guidelines on AI's role in academic work. Ultimately, the goal is to foster a symbiotic relationship where AI handles logistics, like data organization, while humans drive creativity and analysis, a vision that honors networked learning and the irreplaceable value of human intellect.

3.3 Recommendations for stakeholders

Artificial intelligence has the potential to greatly change the environment of education. These tools can enable educators to teach more effectively, personalize learning experiences to individual students, and enhance the quality of research. However, realizing their full potential requires a collaborative and mindful approach among policymakers, teachers, students, and other stakeholders. By doing so, we can ensure that technology is employed responsibly, equitably, and in ways that genuinely enhance the learning process. AI applications like personalized learning platforms, research aids, and data analysis tools can customize educational content to meet each student's unique needs, simplify administrative tasks, and boost academic productivity.

Nonetheless, it is important to address challenges such as biased algorithms, disparities in access to technology, and over-reliance on AI that could diminish critical thinking skills. To navigate these issues, we recommend practical strategies customized for each group: policymakers should establish clear ethical guidelines; teachers should integrate AI literacy into their curricula while maintaining a focus on human-centered education; and students should be guided on the ethical and effective use of AI tools without substituting their own analytical efforts. While this study primarily centers on enhancing Master's dissertations through AI, the principles are applicable across various educational contexts. Through thoughtful policy-making, updated pedagogical approaches, and student enablement, we can create an educational environment where AI encourages increased efficiency, sparks innovation, improves accessibility, and preserves academic integrity. The following sections outline actionable steps for each stakeholder, balancing AI's promising benefits with responsible management to ensure continuous improvement in education over time.

3.3.1 Practical guidelines for Policymakers

1. Develop a national AI education strategy using platforms like Google AI for Education and Microsoft AI for Learning
2. Create an AI Center of Excellence leveraging Coursera and edX resources for educator training and research
3. Fund innovative AI EdTech startups such as Knewton and DreamBox Learning to advance adaptive learning
4. Implement an AI accreditation framework with Turnitin's tools and IBM/Amazon's data protection standards

5. Strengthen global partnerships through UNESCO's AI in Education initiative for knowledge sharing
6. Train educators on AI integration using tools like Adobe AI creative suite for enhanced teaching materials
7. Ensure accessibility in AI education via Microsoft and Amazon's assistive technologies
8. Monitor AI impact systematically using Tableau and Power BI analytics for continuous improvement

A national AI education strategy should integrate platforms like Google AI for Education and Microsoft AI for Learning to build foundational knowledge, while establishing an AI Center of Excellence using Coursera and edX to train educators and support research. Funding adaptive learning startups like Knewton and DreamBox can personalize education, and an accreditation framework using Turnitin, IBM, and Amazon's standards can ensure ethical AI use and data security. Global collaboration through UNESCO's AI initiative will foster knowledge sharing, and training educators with tools like Adobe's AI suite will enhance teaching materials. Accessibility must be prioritized using Microsoft and Amazon's assistive technologies, while analytics tools like Tableau and Power BI should monitor progress to ensure continuous improvement, creating an inclusive and effective AI education ecosystem.

3.2.2 Best practices for teachers

1. Leverage virtual exploration tools to take students on digital field trips anywhere in the world right from their classroom making geography and science lessons more immersive and memorable
2. Implement smart tutoring systems that provide one-on-one support to students adapting explanations and practice problems based on each learner's unique pace and understanding

3. Adopt intelligent lesson platforms that automatically adjust difficulty levels and teaching methods matching how individual students learn best while keeping them appropriately challenged
4. Incorporate creative AI assistants in art and design classes that suggest improvements generate ideas and help students bring their imaginative concepts to life with professional tools
5. Utilize classroom helper applications that automate routine tasks like attendance grading and parent communication freeing up teachers to focus more on actual teaching
6. Introduce interactive simulations that transform complex math and science concepts into visual hands-on experiences making abstract ideas easier to grasp
7. Deploy writing evaluation tools that provide instant feedback on student work checking for grammar originality and clarity while offering constructive suggestions
8. Establish professional development programs that keep educators updated on the latest AI teaching tools and strategies through workshops online courses and peer learning communities.

AI can empower teachers to create richer, more personalized learning experiences. With virtual field trips, educators can transport students anywhere in the world without leaving the classroom, making lessons more vivid and engaging. Smart tutoring systems and adaptive lesson platforms help teachers tailor instruction to each student's needs, while AI assistants in art classes spark creativity. By automating routine tasks like grading and attendance, teachers gain more time to focus on what matters, connecting with students and delivering impactful lessons. Interactive simulations and writing feedback tools make complex subjects easier to teach and understand. And with ongoing professional development, teachers can confidently integrate these AI tools, ensuring they stay at the forefront of innovative education. This is not about replacing teachers, it is about giving them powerful tools to inspire and support every learner.

3.3.3 Actionable steps for students

1. **Create a Great Online Portfolio** If you find website design complicated, don't worry. Use free AI tools like Google Sites or Wix. They guide you step by step, making it simple to build a professional-looking portfolio that shows off your projects, artwork, or school assignments.
2. **Turn Data into Easy-to-Understand Visuals** If you work with numbers or research, tools like Tableau and Power BI use AI to help you make charts and graphs. These make your data clear and simple to understand. They're great for presentations, science projects, or school reports.
3. **Learn at Your Own Speed with Clever Tutors** Everyone learns differently. AI platforms like Khan Academy and Duolingo adjust to your level and give Personalized lessons. If you're stuck with math, languages, or any other subject, these can help you improve faster.
4. **Get Help with Your Mental Health** School stress can get tough. Apps like Woebot offer friendly, AI-powered chats to help you manage anxiety, stay motivated, or just vent. It's like having a little counselor in your pocket, anytime you need.
5. **Improve Your Writing with AI Help** Having trouble with essays or emails? Tools like Grammarly and ProWritingAid act like a second pair of eyes. They fix mistakes and suggest clearer ways to phrase your ideas. They're great for polishing your work before turning it in.
6. **Save Time by Automating Small Tasks** Why spend time on boring, repetitive stuff? Apps like Zapier and IFTTT can automatically organize your files, send reminders, or sort your emails. This lets you focus more on studying or doing things you enjoy.
7. **Make Learning Fun with Virtual Reality** Imagine exploring the pyramids or diving into the human body, all from your classroom. AI-powered VR tools like Google Expeditions turn lessons into exciting immersive experiences.
8. **Stay Updated on AI and Education Tech** changes fast. To keep up, check out sites like EdSurge or listen to The AI Education Podcast. Knowing how AI affects learning helps you stay ahead and use new tools early.

AI is not just for tech experts, but it is also a helpful tool for students too. By using these smart resources, students can work more efficiently, learn better, and even reduce stress. Starting with one or two tips, and gradually explore more. The key is to let AI handle the small stuff so they can focus on growing and achieving their goals.

3.3.4 University Capacity development

This section presents several additional actionable recommendations that can be effectively implemented within a university setting.

I. Training program for EFL teachers

Title : Empowering EFL Thesis Supervisors and Students: AI Integration for Effective Guidance

Target Group: EFL Thesis Supervisors and Students at Relizane University

Duration: 2 weeks, 3 days a week, 3 hours a day

Objectives:

By the end of this program, supervisors and students will be able to:

1. Use AI tools to streamline thesis supervision and writing tasks.
2. Develop strategies to guide students in using AI tools for research and writing while promoting academic integrity.
3. Address ethical considerations related to AI use in thesis writing.

Teaching Method

The program will employ a combination of lectures, hands-on activities, and peer review workshops to facilitate learning and application. Participants will have the opportunity to engage with AI tools, share their experiences, and receive feedback from peers and instructors.

Overview

This program aims to empower university professionals with the skills and knowledge needed to excel in their roles. Through a combination of theoretical foundations and practical applications, participants will learn how to integrate AI tools into their academic practices, enhancing their productivity, research, and teaching.

What to Do ?

1. Learn: Participants will engage in theoretical sessions to understand the basics of AI and its applications in academia.
2. Practice : Hands-on activities will allow participants to explore AI tools and develop practical skills in using them for research, teaching, and other academic tasks.
3. Apply: Participants will apply their knowledge and skills to real-world scenarios, developing strategies for integrating AI into their academic practices.

Program Outline

Week 1: AI Tools for Thesis Supervision and Writing

Day 1: Introduction to AI in Thesis Supervision and Writing

- Morning Session (Theoretical): Understanding AI basics and its applications in academia
- Afternoon Session (Practical): Exploring AI tools for thesis supervision and writing (e.g., Grammarly, Turnitin, Google Scholar)
- Instructions: How to use Grammarly for grammar and spell checkin
- Hands-on activity: Using Grammarly to edit a sample thesis paragraph

Day 2: AI Tools for Literature Review and Research Organization

- Morning Session (Theoretical): Using AI tools for literature review and research organization
- Afternoon Session (Practical): Hands-on experience with AI tools (e.g., citation management with Zotero, paper summarization with Scholarly
- Instructions: How to use Zotero for citation management
- Hands-on activity: Creating a citation library using Zotero

Day 3: AI Tools for Thesis Writing and Feedback

- Morning Session (Theoretical): Strategies for using AI to provide personalized feedback and guidance
- Afternoon Session (Practical): Workshop on using AI tools to analyze student work and provide constructive feedback (e.g., Grammarly, ProWritingAid)
- Instructions: How to use ProWritingAid for writing improvement
- Hands-on activity: Using ProWritingAid to improve a sample thesis paragraph

Week 2: Effective Thesis Supervision and Writing with AI

Day 4: Ethics and Bias in AI-Assisted Thesis Writing

- Morning Session (Theoretical): Recognizing and addressing bias in AI-generated content
- Afternoon Session (Practical): Workshop on evaluating AI-generated thesis content for cultural relevance and academic integrity
- Instructions: How to evaluate AI-generated content for cultural relevance
- Hands-on activity: Evaluating AI-generated thesis content for cultural relevance

Day 5: AI-Enhanced Thesis Supervision and Writing Strategies

- Morning Session (Theoretical): Integrating AI tools into thesis supervision and writing practices
- Afternoon Session (Practical): Peer review workshop on AI-enhanced thesis supervision and writing plans
- Instructions: How to create an AI-enhanced thesis supervision plan
- Hands-on activity: Creating an AI-enhanced thesis supervision plan

Day 6: Final Project Presentation and Feedback

- Morning Session: Presenting AI-enhanced thesis supervision and writing plans
- Afternoon Session: Peer feedback and refinement of plans

Tools to be used

- ✚ Grammarly: grammar and spell checking
- ✚ Turnitin: plagiarism detection
- ✚ Google Scholar: literature search
- ✚ Zotero: citation management
- ✚ Scholarcy: paper summarization
- ✚ ProWritingAid: writing improvement
- ✚ ChatGPT: generating ideas and outlines

Key Takeaways

- AI can handle routine tasks, freeing supervisors to focus on guidance and mentorship.
- Ethical considerations are crucial when using AI tools in thesis supervision and writing.
- AI should enhance, not replace, human judgment and expertise in thesis supervision and writing.

II. AI – Enhanced Research Methodology syllabus

Level : Master two

Syllabus:

1/Revision

Selecting Research Topics, Objectives, Questions, Hypotheses, and the Research Problem

- AI Tools and Applications
 - Exploring Topics: Use platforms like Elicit.org or IBM Watson Discovery to analyze current trends and identify gaps in existing literature.
 - Generating Hypotheses: Use ResearchGPT (a custom GPT for academic research) to suggest potential variables and relationships based on prior studies.
 - Refining Research Questions: Employ ChatGPT with prompt engineering to brainstorm and fine-tune research questions.

Activity: Students develop a mind map of potential research areas using AI tools and receive feedback via AI-powered gap analysis.

2/Designing a Research Proposal

- AI Tools and Applications
 - Structuring the Proposal: Use Jenni.ai or Paperpal to outline and draft sections.
 - Planning the Timeline: Implement Trello or Asana with AI plugins to predict task durations and optimize scheduling.

Activity: Students use AI-generated proposal templates and conduct peer reviews with Turnitin's AI Detection to ensure originality.

3/General Introduction: Elements and Content

- AI Tools and Applications
- Drafting Support: Use QuillBot or GrammarlyGO to paraphrase content and enhance clarity.
- Structural Feedback: Apply Wordtune to align introductions with disciplinary conventions.

Activity: Compare AI-generated introductions with human-written examples to critique strengths and limitations.

4/ Literature Review Chapter

- AI Tools and Applications
- Mapping Literature: Use ResearchRabbit or Connected Papers to visualize relationships studies.
- Summarizing Content: Employ Scholarcy or SciSpace Copilot to condense articles.
- Managing Citations: Use Zotero with AI plugins for automatic tagging and reference organization.
- Ensuring APA Compliance: Use Trinka or Citeomatic for real-time citation style verification.

Activity :Generate an annotated bibliography and automatically identify thematic clusters using AI tools.

5/Methodological Chapter

- AI Tools and Applications
- Designing Research Methods: Use IBM SPSS Modeler to compare methodologies aligned with objectives.
- Data Collection: Use Qualtrics AI for survey question optimization and Otter.ai for interview transcription.

- Determining Sample Sizes: Employ AI-powered calculators (e.g., SurveyMonkey's Genius) for sampling.
- Data Analysis: Use NVivo Assist for qualitative coding or RapidMiner for predictive modeling.

Activity: Simulate data workflows with AI tools and reflect on ethical considerations.

6/Final Chapter: Elements and Organization

AI Tools and Applications

- Synthesizing Results: Use Tableau or Power BI for advanced data visualization.
- Drafting Conclusions: Generate draft conclusions with ChatGPT based on results.
- Ensuring Consistency: Apply Writefull to check alignment among hypotheses, results, and conclusions.

Activity: Peer review AI-generated conclusions and refine them for academic rigor.

7/Ethical Considerations Part

Discussion Topics

- Biases in AI tools (e.g., skewed literature recommendations).
- Over-dependence on AI for critical thinking tasks.
- Proper attribution and avoiding plagiarism with AI-generated content. .

Teachers and students roles :

A/ Teachers role :

- Guide AI Tools exploration, providing feedback on topics
- Explain each point and lead discussions and debates

- Demonstrate AI tools, and critique AI drafts
- Teach citation ethics

Teacher= facilitator+ ethical advisor+ guide

B/ Students role:

- Use AI tools to brainstorm topics, refine questions
- Learn paraphrasing with AI and compare with human examples
- Learn in text citation using AI tools, focusing on APA style
- Optimize surveys with Qualtrics Ai and analyze data via Nvivo
- Learn to avoid over- reliance on AI, and how to balance your efforts with AI use

Students = Active AI practitioner+ critical evaluator

III. AI integration in higher Education workshops

1/ AI in Education: Introducing Innovation to the Classroom

□ Workshop Subtitle: How to Use AI Tools While Maintaining Human Connections

Focus: Practical strategies for integrating AI applications such as ChatGPT and adaptive learning technologies into daily teaching practices, all while preserving empathy, promoting creativity, and strengthening relationships between educators and students.

2/ Co-Creating with AI: Developing Engaging and Comprehensive Lesson Plans

□ **Workshop Subtitle:** Transforming Ordinary Lessons into Inspiring Experiences with AI
Focus: Examining how AI can assist in generating innovative lesson ideas, accommodating diverse learning styles, and managing administrative tasks, thereby enabling teachers to dedicate more time to mentoring and meaningful student engagement.

3/ The Ethical Educator: Navigating AI Biases and Challenges

□ **Workshop Subtitle:** Ensuring Fairness in Algorithms

Focus: Confronting real-world ethical considerations such as biased grading data and student privacy issues, and developing school policies to promote responsible AI use.

4/ Preparing for Tomorrow: Equipping Students and Educators with AI Skills

□ **Workshop Subtitle:** Building AI Literacy for an Algorithm-Driven Future

Focus: Teaching essential skills such as critically evaluating AI outputs, identifying misinformation, and ethical AI use, while modeling continuous learning for both students and teachers alike.

3.5 Conclusion

This chapter explores AI's dual role in academia, emphasizing how it can make research easier while raising concerns about maintaining originality and depth. Students and teachers share that AI offers benefits like quicker workflows but also pose ethical issues, such as risking independent thinking and scholarly standards. To navigate this, it suggests practical approaches: including AI literacy in research courses, providing specialized tech training, and hosting ethics workshops. These steps aim to develop skills and uphold values like integrity and critical judgment. The chapter emphasizes the importance of collaboration among institutions, teachers, and students to create balanced frameworks that incorporate technology without compromising core academic principles like creativity and independent inquiry. By carefully integrating AI, academia can use its benefits while protecting human-centered values, ensuring technology serves learning and research without eroding the essence of meaningful scholarship.

General Conclusion

This study explored the role of artificial intelligence (AI) in enhancing the quality of Master's dissertations. It investigates how AI tools can assist students in conducting research more efficiently, improve clarity in their writing, and uphold academic integrity. The primary objective is to understand how students are integrating AI into their research processes and to gather insights from educators regarding their perspectives on this technology. Also, the study evaluates the influence of AI on research speed and the originality of student work. By analyzing survey responses from students alongside in-depth interviews with teachers, the research aims to present a balanced overview of the benefits and challenges associated with employing AI in academic research.

The findings confirmed the first hypothesis, revealing that AI tools significantly accelerate research processes and enhance writing clarity. Students reported using applications like Quillbot and Grammarly for tasks such as paraphrasing, citation management, and grammar checks, which saved time and improved technical accuracy. Teachers acknowledged these benefits but emphasized the need for oversight to ensure quality. This aligns with the idea that AI serves as a valuable assistant rather than a replacement for human effort, supporting the claim that it can enhance dissertation quality when used judiciously.

However, the second hypothesis, which suggested that students hold more positive attitudes toward AI than teachers, was only partially supported. While students appreciated AI's efficiency, many expressed concerns about plagiarism and misinformation, indicating cautious optimism rather than unreserved enthusiasm. Teachers, on the other hand, recognized AI's potential but worried about its impact on critical thinking and originality. Their reservations

highlighted a tension between embracing innovation and preserving academic rigor, suggesting that attitudes are more nuanced than initially presumed.

The third hypothesis, which proposed that AI improves technical quality but may diminish originality, was also supported. Students noted that AI tools helped refine their writing but admitted that overreliance could lead to generic or less original work. Teachers observed that AI-assisted dissertations were often polished yet lacked depth, reinforcing the need for a balanced approach. These findings underscore the importance of using AI as a supplement to human creativity, ensuring that it enhances rather than undermines scholarly originality.

In light of these findings, the study advocates for embedding AI literacy within research methodology curricula, instituting specialized training sessions for students and educators alike, and developing comprehensive guidelines to ensure ethical AI deployment. Organizing workshops focused on responsible AI integration, complemented by practical tools such as plagiarism detection software and citation management systems, can effectively reduce potential risks while enhancing the positive impact. What's more, academic institutions should promote collaboration between faculty members and policymakers to devise frameworks that promote innovation, all while safeguarding academic integrity and standards.

Future research could explore the long-term effects of AI on academic writing, particularly how it influences critical thinking and creativity over time. Comparative studies across disciplines or institutions may reveal varying patterns of AI adoption and their implications for education. Additionally, investigating the development of more advanced AI tools tailored to academic needs could open new avenues for enhancing research quality while safeguarding originality. By continuing to examine these dynamics, the academic community can harness AI's potential while addressing its challenges, ensuring a future where technology and human expertise work in harmony.

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Appendices

Appendix A

Information Project Sheet

Affiliation : Department of English , faculty of Letters and Languages, Relizane University

Title of the Study

Exploring the Usefulness of AI Applications in Enhancing the Quality of Master's Dissertations: A Case Study of Master 2 Students at the Department of English, Relizane University

Supervisor : Dr Lakehal Benchaa

Introduction

This study investigates the effectiveness of AI-driven applications in enhancing the quality of Master's dissertations among Master 2 students in the Department of English at Relizane University. The research aims to identify the benefits and challenges of integrating AI tools into the dissertation process, exploring their impact on research quality, writing efficiency.

Research Objectives

1. To explore the role of AI applications in improving the quality of Master's dissertations.
2. To raise awareness among students and teachers about the benefits of AI tools on research output.

3. To identify the impact of AI devices on academic writing.

Investigator information

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Appendix B: Interview Consent Form

Title :Exploring the Usefulness of AI Applications in Enhancing Master's Dissertation Quality

Please read the following statements carefully and indicate your consent by putting a tick(✓) :

1. I understand that the purpose of this interview is to gather my perspectives on the benefits and challenges of using AI applications in Master's dissertation writing. (.)
2. I am aware that my participation is voluntary, and I may withdraw from the study at any time without mentioning the reason. (.)
3. I grant permission for audio/video recording of the interview, and I understand that recordings will be stored securely and anonymously. (.)
4. I understand that my responses will be kept confidential and anonymous, and that my name and institution will not be associated with my responses in any publications or presentations. (.)
5. I am aware that I will receive a copy of this consent form, and that I can ask questions or clarify concerns before signing. (.)
6. I consent to participate in this interview and confirm that I have read and understood the above statements. (.)

Participant's Signature : _____

Date : _____

Researcher's Names :

CHETOUANE CHEMSEDDINE

BELKACEM KARIMA

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Appedix C : Students ' Questionnaire

Dear Participant,

The purpose of this questionnaire is to explore the usefulness of AI applications in enhancing the quality of Master's dissertations among Master 2 students at the Department of English, Relizane University. Your responses will be kept confidential and will only be used for academic purposes, Thank you for taking the time to participate in this survey .

Instructions: -Put a tick [✓] on the appropriate answer .

-Write your answer in the space provided.

Demographic Information

1. What is your age?

- [] 20-25

- [] 26-30

- [] 31-35

- [] 36 and above

2. What is your gender?

- [] Male

- [] Female

Section1: AI applications in learning process

1. How familiar are you with AI applications?

- Not familiar at all [.]
 - Some what familiar [.]
 - Very familiar [.]
2. Have you ever utilized AI applications in your learning process?
- Yes [.]
 - No [.]
3. What do you use AI – based tools for in your learning process?
- Writing [.]
 - Study Materials [.]
 - Quizzes and exams [.]
 - Others (please specify)
-
4. How often do you utilize AI – powered tools?
- Daily [.]
 - Weekly [.]
 - Monthly [.]
 - Rarely [.]

Section 2: students ’ perceptions and experiences with AI applications in academic work

1. How comfortable are you with using AI applications in your academic work ?
- Very comfortable [.]
 - Somewhat comfortable [.]
 - Neutral [.]
 - Somewhat uncomfortable [.]
 - Very uncomfortable [.]

2. Do you think AI tools could help improve the quality of your research work?
 - Strongly agree [.]
 - Somewhat agree [.]
 - Neutral [.]
 - Somewhat disagree [.]
 - Strongly disagree [.]
3. How important is it for you to have access to AI driven Applications in your academic work?
 - Not important at all [.]
 - Somewhat important [.]
 - Very important [.]
4. Do you have concerns about the potential misuse of AI tools in academic work ?
 - Yes [.]
 - No [.]
5. What concerns do you have?
 - Plagiarism [.]
 - Data privacy and security [.]
 - Job replacement [.]
 - Other (please specify):

.....

Section 3: AI driven tools in conducting Research

1. Have you utilized AI tools in your research processes?
 - Yes []
 - No []

2. Which AI tools have you used ?

- Grammarly [.]
- Turnitin [.]
- Research Rabbit [.]
- Microsoft Academic [.]
- Others (please specify) :

.....

3. What do you mainly use it for ?

- Finding sources [.]
- Organizing literature review [.]
- Data analysis [.]
- Visualization of data [.]
- Other (please specify) :

.....

4. To what extent did AI assisted tools influence your dissertation writing?

1/ organization

- Not at all [.]
- A little [.]
- Somewhat [.]
- A lot [.]

2/ clarity

- Not at all [.]
- A little [.]
- Somewhat [.]

- A lot [.]

3/ Editing

- Not at all [.]
- A little [.]
- Somewhat [.]
- A lot [.]

5. Rate the effectiveness of AI tools in enhancing your writing quality?

- Very effective [.]
- Effective [.]
- Ineffective [.]
- Very ineffective [.]

6. How do you perceive the impact of AI devices on the originality of your academic writing?

- Significantly enhance originality [.]
- Somewhat enhance originality [.]
- Somewhat reduce originality [.]
- Significantly reduce originality [.]

7. What barriers have you encountered while using AI applications in your dissertation research?

- Technical issues [.]
- Limited understanding [.]
- Dependence on technology [.]

Others:.....

Thank you for your participation! Your insights are invaluable to this research.

ملخص

أدى دمج الذكاء الاصطناعي في عالم البحث الأكاديمي إلى تغيير جذري في طريقة إعداد رسائل الماجستير حيث تساعد هذه الأدوات المتقدمة في تبني منهجية أكثر كفاءة لمهام مثل تفسير البيانات وصقل الأعمال الكتابية. ومع ذلك، لا تزال هناك مخاوف بشأن تأثيرها على الأصالة والنزاهة العلمية، مما يؤكد أهمية تحقيق توازن دقيق بين الابتكار التكنولوجي والمعايير الأكاديمية. واستكشف هذا البحث قدرة الذكاء الاصطناعي على تعزيز جودة الرسائل العلمية، وقياس تصورات الطلاب والمعلمين، وتقييم أثره على إنتاجية البحث والإبداع. واعتمدت الدراسة استراتيجيةً منهجيةً مختلطةً جمعت البيانات عبر استبيانات للطلاب ومقابلات مع أعضاء هيئة التدريس. وكشفت النتائج أن المساعدة بالذكاء الاصطناعي عززت إنتاجية البحث وحسّنت وضوح الكتابة، حيث أبدى الطلاب تقديرهم لقدرة هذه الأدوات على تبسيط العمليات المعقدة. ومع ذلك، أعرب كثير من المشاركين عن قلقهم من مخاطر الانتحال غير المقصود، بينما لاحظ المدرسون أنه رغم أن الأعمال المدعومة بالذكاء الاصطناعي تبدو أكثر انسيابية، إلا أنها تفتقر غالباً إلى العمق والأصالة. بشكل عام، تؤكد النتائج دور الذكاء الاصطناعي كأداة داعمة وليس بديلاً عن الجهد البشري، مع التركيز على ضرورة توفير تدريبات مستهدفة ومعايير أخلاقية لتخفيف مخاطر مثل الاعتماد المفرط. يجب أن تركز الأبحاث المستقبلية على التداعيات طويلة المدى على التفكير النقدي، والتباينات بين التخصصات في تبني الذكاء الاصطناعي، وتطوير أدوات تحافظ على النزاهة الأكاديمية مع تشجيع الابتكار.

Résumé

L'intégration de l'IA dans le monde de la recherche académique a fondamentalement changé la manière dont les mémoires de Master sont élaborés. Ces outils avancés aident à adopter une approche plus efficace pour des tâches telles que l'interprétation des données et l'amélioration des travaux écrits. Néanmoins, des préoccupations persistent quant à leur influence sur l'originalité et l'intégrité académique,

soulignant l'importance d'un équilibre délicat entre innovation technologique et normes universitaires. Cette étude a exploré la capacité de l'IA à améliorer la qualité des thèses, évalué les perceptions des étudiants et des enseignants, et mesuré son impact sur la productivité de la recherche et la créativité. En utilisant une approche méthodologique mixte, les données ont été recueillies via des enquêtes auprès d'étudiants et des entretiens avec des professeurs. Les résultats ont révélé que l'assistance par l'IA augmentait la productivité de la recherche et améliorait la clarté des écrits, les étudiants appréciant la simplification des processus complexes. Cependant, beaucoup ont exprimé des inquiétudes concernant les risques de plagiat involontaire, tandis que les enseignants ont noté que si les travaux assistés par l'IA paraissaient plus polis, ils manquaient souvent de profondeur et d'originalité. Globalement, les résultats soulignent le rôle de l'IA comme outil complémentaire plutôt que substitut à la contribution humaine, en insistant sur la nécessité de formations ciblées et de normes éthiques pour atténuer les risques tels que la dépendance excessive. Les recherches futures devraient se concentrer sur les implications à long terme pour la pensée critique, les variations disciplinaires dans l'adoption de l'IA, et le développement d'outils préservant l'intégrité académique tout en encourageant l'innovation.

Endnotes

LMS (Learning Management System)

A digital platform (e.g., Moodle, Canvas) used to deliver, track, and manage educational courses. First developed in the late 1990s, LMS allows instructors to share materials, assign tasks, and facilitate discussions online. In this study, it enables blended learning by hosting course resources and supporting teacher-student collaboration.

SPSS (Statistical Package for the Social Sciences)

A software suite for statistical analysis created by Norman H. Nie and C. Hadlai Hull at Stanford University in 1968. Researchers use it to process survey data, run statistical tests (like regression or ANOVA), and visualize results. Master's students employ SPSS to analyze quantitative research data for their dissertations.

DENDRAL

An early expert system (1965) developed by Edward Feigenbaum at Stanford University. It pioneered AI-driven chemical analysis by interpreting mass spectrometry data to identify molecular structures. This project marked a foundational milestone in rule-based AI systems, referenced in the thesis as part of AI's historical evolution.

AI-TPACK (Artificial Intelligence–Technological Pedagogical Content Knowledge)

A framework introduced by Ning and colleagues in 2024, adapting Mishra and Koehler's 2006 TPACK model. It guides ethical AI integration in education by balancing three knowledge domains: subject expertise (content), teaching methods (pedagogy), and AI tools (technology). The study applies this to evaluate how supervisors can ethically incorporate AI in dissertation guidance.

NLP (Natural Language Processing)

An AI subfield focused on enabling computers to understand, interpret, and generate human language. Techniques include grammar checking (as in Grammarly) and text summarization (used by tools like ChatGPT). The research notes NLP's role in aiding non-native English speakers during thesis writing while cautioning about originality risks.