Kurdistan Region – Iraq
Presidency of Cihan University – Erbil
College of Education
Department of General Education/ELT

أقليم كوردستان – العراق
رئاسة جامعة جيهان – أربيل
كلية التربية
قسم التربية العامة

هەریمی کوردستان – عێراق
زانکۆی جیهان – هەولێر
کۆلێژی پەروەردە
بەشی پەروەردەی کشتی




# Teachers' and students' perspectives on the educational potential of artificial intelligence (AI) at Cihan University

Graduation Project Document Submitted to Department of General Education in Partial Fulfillment for the Requirements for the Degree of Bachelor of Education in English language teaching

Prepared by: Mihraban Mohammed Abdullah Ahmad

Zainab Khalid Abdulali Zbary

Helen Kawkaz Mohammed Ismail

Bnar Abdulstar Yousif ahmed

Duaa Tahsen Hasan Ibrahim

Supervisor: Narmin Abubakr Ali

**2024-2045**

# Acknowledgment

This research would not have been realized without the collective efforts of individuals and institutions who contributed to its development.

To Cihan University, we express profound gratitude for granting access to its academic environment and resources, enabling this exploration of Artificial Intelligence in Education (AIEd). The university's commitment to fostering innovation in teaching and learning practices laid the foundation for this study.

To the professors and students of the General English Department, we sincerely thank you for your time, expertise, and openness in sharing perspectives through surveys, interviews, and classroom observations. Your reflections on AI's role in enhancing—or complicating—educational experiences have been invaluable in shaping this work.

To scholars whose research has advanced the field of AIEd, including Derakhshan and Ghiasvand (2024), Cotton et al. (2023), and Dimitrov (2023), we acknowledge the significance of your findings on ethical concerns and pedagogical challenges. Your work has provided critical context for understanding AI's dual potential to empower and disrupt traditional learning frameworks.

To colleagues and mentors in particular our lovely supervisor Ms Narmin, we appreciate your guidance, technical support, and constructive feedback throughout the research process. Your insights ensured the study's methodology remained grounded in both theoretical rigor and practical relevance.

Thank you for your trust, collaboration, and unwavering support.

# Abstract

This study examines the perceptions of educators and students at Cihan University regarding the integration of Artificial Intelligence in Education (AIEd), focusing on its impact on academic accountability, critical thinking, and ethical concerns. Using a mixed-methods approach combining surveys, interviews, and classroom observations, the research investigates how AI tools—such as ChatGPT—reshape teaching and learning dynamics in English language instruction.

Key findings highlight AI's dual role: while it enhances personalized feedback, content delivery, and student autonomy, it also risks fostering superficial literacy, academic dishonesty, and over-reliance on automation. Professors emphasize AI's potential to streamline assessment and tailor instruction but note challenges in ensuring ethical use and maintaining human-centric pedagogy. Students, though initially resistant, recognize AI's utility in refining assignments yet struggle with balancing technology use and independent critical engagement.

The study underscores the need for institutional policies, educator training, and student guidance to harness AI's benefits while mitigating risks. By bridging theoretical frameworks with practical insights, this work contributes to ongoing discussions about AIEd's role in shaping equitable, ethical, and effective educational futures.

Keywords: Artificial Intelligence in Education (AIEd), academic accountability, critical thinking, ethical concerns, mixed-methods research, English language instruction.

# Content

**Appendices** | |

Chapter 1

# Introduction

## 1.1 Definition

As this study stand on the edge of a technological revolution, the question appears: How will the application of artificial intelligence (AI) evolve in the coming years? Will it lead this study toward unprecedented advancements or unforeseen challenges? To understand this trajectory, this study must first explore the realm of Artificial Intelligence in Education (AIED)" the suite of technologies designed to enhance the learning experience for both educators and students. AIED has been a part of the educational landscape for 30 to 40 years, but its significance surged dramatically during the COVID-19 pandemic (reference here). This unprecedented global crisis forced educators and students to adapt to new online tools and practices, accelerating the adoption of educational technologies that are likely to shape the next decade (Reich & Mehta, 2020). According to projections, the use of AI in education is expected to grow by an astonishing 43% between 2018 and 2022. The Horizon Report 2019 Higher Education Edition (Educause, 2019) further predicts that AIED will experience even more significant advancements in the years ahead. However, with the numerous study advantages that AIED presents, there are also valid concerns and potential drawbacks (reference here). This article seeks to delve into the perceptions of AIED among educators and learners, examining both the optimism and apprehension surrounding its integration into the educational sphere. Before exploring these perspectives, it is essential to highlight some anticipated challenges that may arise as AIED continues to evolve.

## 1.2 Problem statement

Students' lack of accountability in their work, worsened by misuse of AI, reflects poorly on both individuals and the educational system. Over-reliance on AI undermines learning and weakens critical thinking and responsibility, highlighting the need for ethical practices and authentic engagement in academics.to their studying career because they will not take any responsibility, so that will cause lower grades, and lack of subjects to learn that he/she doesn't studied in their time, and this study have recently noticed about using (AI) as a tool in education and that cause problem to the students by being unaccountable to their job as a students, because they are heavily involved with using AI in study and daily home-works ,assignments and quizzes but it gave them minimal effort to complete their works in a short time, and this a reason to make them not having an independent mind ,so here this study have to arrange the problems and find solutions with the student parents ,by being supportive with students, encouraging students to use their creativity mostly and let them to write their own ideas to make their spelling also better, and giving feedback back to their family and to make them keeping eyes on their children to be sure they are using their creativity and sometimes they can depends on (AI) knowledge but not every time ,and exploring

additional strategies to foster academic responsibility., for example like ease of access and getting things easily by helping student provide quick and easier answers for assignments, over-reliance on Automation students who lay all their homework on AI will lose writing skills needed for critical thinking and thoughts, miss understanding of Ethics in this method most of students don't know that using AI to write down their thoughts, essays or assignments, they're disrespecting the cross line of academic rules and dishonesty, Reduced Efforts this study know that AI make this study's work and lives easier specially in studying but this study also have to know that's this less effort will give this study a bad and weaker bad habits in study or in this study's academic life.

### 1.3 Significance of the problem

1.The significance of this question lies in its implications for the future of learning. As AI becomes increasingly integrated into educational systems, understanding its impact is essential for shaping policies, teaching methodologies, and technological strategies. These efforts aim to enhance learning outcomes while addressing ethical considerations.

2.The significance of this question pertains to its potential to influence curriculum design, professional development for educators, and societal expectations. By exploring these dynamics, educators can better prepare students for a future where creativity and adaptability are critical competencies in an AI-driven economy.

3.The significance of this question lies in its exploration of the balance between human interaction and AI tools in education. It assesses whether AI genuinely enhances the educational process or risks replacing essential human attributes such as empathy and judgment. This raises critical concerns about AI's impact on teaching roles, job security, and the broader future of education.

4.Initially, this question is significant as it fosters a deeper understanding of how AI might shape the future of education by enhancing productivity, promoting individualised learning, and streamlining administrative tasks.

5.This question is significant for its ability to stimulate discussions about the unique qualities of teaching, the potential of AI in education, and the evolving roles of human educators and technology in shaping the learning experience.

6.The significance of these question lies in their exploration of AI's role, particularly ChatGPT, in English as a Foreign Language (EFL) education. They encourage reflection on the advantages of AI, such as personalised learning and enhanced practice opportunities, while critically examining its implications for teaching and learning.

### 1.4 Current understanding & action

"Al will transform teaching but cannot replace teachers" (Zribi‹May 23, 2023). Due to its lack of emotional intelligence, ethical perspective, and deep understanding of human experience teachers, which are irreplaceable elements in education specifically cannot simulate or create a rapport like that of a teacher with his students. There are three types of AI based on technology; Artificial Super Intelligence (ASI), Artificial general intelligence (AGI), and Artificial narrow intelligence (ANI),

and the last one considered the weak one and one of it (ChatGPT). Research is scarce on the perceptions of ChatGPT by teachers, particularly in the EFL context. However, research conducted by Derakhshan and Ghiasvand (2024) demonstrated that ChatGPT presents both advantages and disadvantages for EFL teachers. ChatGPT was perceived as detrimental to EFL instruction due to its potential to compromise academic integrity, profound and pure literacy, and teacher-student interactions in the classroom (Derakhshan & Ghiasvand, 2024). Cotton et al. (2023), Dimitrov (2023), and Farrokhnia et al., (2023) have all reported that ChatGPT results in superficial literacy, undermines academic integrity, and decreases human interactions in the classroom. Knowledge gaps, the problem is not exactly the irresponsibility of students but what comes after being unresponsible with their work leading to non-creativity,

### 1.5 Knowledge gaps

Research underscores the profound impact of student irresponsibility on essential skills such as creativity, critical thinking, and problem-solving. A study published in the European Chemical Bulletin demonstrated that problem-solving programs significantly enhance critical thinking abilities, emphasising the importance of structured approaches in education.

Furthermore, the OECD highlights the necessity of teaching, learning, and assessing creative and critical thinking skills to prepare students for future challenges.

Additionally, research from ResearchGate indicates that increasing students' responsibility through creative responsibility-based learning can enhance scientific creativity, suggesting a direct link between responsibility and creative development.

These findings collectively suggest that fostering responsibility in students is crucial for developing the creativity, critical thinking, and problem-solving skills essential for personal and professional success.

### 1.6 Aim of the Study

This study aims to examine the perspectives of teachers and students on the educational potential of Artificial Intelligence (AI) at Cihan University.
It seeks to identify both the benefits and challenges associated with AI integration in education, focusing on its impact on student accountability, critical thinking, and ethical concerns.
By analyzing the views of educators and learners, the study aims to provide insights into the future of AI in higher education and propose strategies for effective AI utilization.

Chapter 2

# Literature Review

## 2.1 Artificial Intelligence (AI) in education: -

Artificial Intelligence (AI) presents a transformative opportunity for education in developing countries, with the potential to significantly enhance learning outcomes, personalize educational experiences, and improve administrative efficiency through data analytics. Countries such as China, Uruguay, and Kenya have begun implementing AI-driven solutions that tailor learning to individual student needs, thereby fostering more inclusive and effective educational environments. For instance, intelligent tutoring systems can provide real-time feedback and support to learners, while data analytics can optimize resource allocation and track student progress. However, the integration of AI into education also poses considerable challenges. Developing nations must navigate the complexities of creating comprehensive public policies that promote equity and inclusion, ensuring that all students have access to AI technologies. Additionally, educators need training to effectively utilize these tools in their teaching practices, and robust data management systems must be established to ensure quality data collection while addressing privacy concerns. Ethical considerations regarding data use and algorithmic biases are paramount in this context. To fully harness AI's potential for sustainable development and to bridge existing digital divides, it is essential for developing countries to prioritize the incorporation of AI into their educational frameworks, aligning their efforts with global initiatives such as Sustainable Development Goal 4 (SDG 4). This strategic approach will not only enhance educational quality but also prepare learners for a future increasingly influenced by AI technologies. 2019

Web Intelligence (WI) within the realm of Artificial Intelligence in Education (AIED) research. It examines the foundational roles and practical implications of AI and advanced IT on future web-based products and services. While it briefly touches on key WI components like ontologies and personalization, it emphasizes intelligent web services, semantic markup, and web mining as pivotal areas for addressing emerging AIED challenges. The findings suggest that leveraging these technologies can significantly enhance educational research and development efforts in AIED Journal of Educational Technology & Society 7 (4), 29-39, 2004

The recent high performance of ChatGPT on various study standardized academic tests has propelled the topic of artificial intelligence (AI) into the forefront of discussions regarding the future of education. As deep learning technologies continue to advance, they are poised to significantly transform traditional teaching paradigms. This transformation necessitates a comprehensive understanding of AI's effects on the current educational landscape to ensure the sustainable development and deployment of AI-driven technologies in schools and universities. Sustainability 15 (16), 12451, 2023

## 2.2 Challenges and Policy Implications

Despite the potential benefits of AI in education, several challenges must be addressed to ensure successful implementation:

1. Comprehensive Public Policy Development

A coherent public policy framework is essential for harnessing AI's potential for sustainable development. Policymakers must collaborate at both national and international levels to create an ecosystem that supports AI integration in education while addressing socio-economic disparities.

2. Ensuring Inclusion and Equity

One of the most pressing concerns is the risk of exacerbating existing inequalities. Developing countries often face significant technological infrastructure challenges that hinder their ability to implement AI solutions effectively. Ensuring equitable access to these technologies is paramount to prevent widening the digital divide.

3. Preparing Educators for an AI-Enhanced Environment

Training educators to effectively utilize AI tools in their teaching practices is crucial. This requires a dual approach: educators must develop digital skills while AI developers need insights into pedagogical practices to create relevant solutions that fit real-world classroom environments.

4. Developing Quality Data Systems

As educational systems increasingly rely on data-driven approaches, the quality of data collection becomes paramount. Establishing robust data management systems will enable better tracking of student progress and resource allocation while ensuring that data privacy concerns are addressed.

5. Promoting Significant Research on AI in Education

The education sector has historically struggled with integrating research findings into practice. To maximize the benefits of AI, it is essential that research efforts for this study on practical applications that inform policy-making and classroom practices.

6. Addressing Ethical Considerations

The ethical implications surrounding data collection, privacy, accountability, and transparency must be at the forefront of discussions regarding AI in education. Establishing clear guidelines will help mitigate risks associated with personal data usage and algorithmic biases.

## 2.3 Applications of AI in Education

1. Collaborative Teacher-Student Learning

AI plays a pivotal role in enhancing collaboration between teachers and students. By utilizing advanced algorithms, AI tools can analyze student performance and engagement in real time. This capability allows educators to:

•Identify Learning Gaps: AI systems can pinpoint students who may be struggling with specific concepts, enabling teachers to provide timely interventions.

•Tailored Resources: Educators can access resources that are specifically aligned with the needs of their students, ensuring that the materials are relevant and effective.

•Fostering Inclusivity: By recognizing diverse learning needs, AI helps create a more inclusive classroom environment where all students have the opportunity to succeed.

•Real-Time Feedback: Students receive instant feedback on their performance, allowing them to understand their progress and areas needing improvement immediately.

2. Intelligent Tutoring Systems

Intelligent Tutoring Systems (ITS) are designed to provide personalized instruction that adapts to each student's unique learning style and pace. These systems utilize sophisticated AI algorithms to:

•Personalized Learning Experiences: By assessing a student's strengths and weaknesses, ITS can modify content delivery, ensuring that each learner receives instruction tailored to their needs.

•Engagement Enhancement: Interactive elements of ITS keep students engaged by providing challenges that are neither too easy nor too difficult, maintaining their interest in the subject matter.

•Continuous study Assessment: These systems continuously monitor student progress, adjusting the difficulty of tasks and providing hints or additional resources as needed.

•Scalability: ITS can support a large number of students simultaneously, making personalized education scalable in classrooms with diverse learners.

3. Automated Assessment

AI-driven assessment tools significantly streamline the grading process, allowing educators to allocate more time toward instructional activities. Key features include:

•Efficiency in Grading: Automated systems can quickly evaluate assignments, quizzes, and tests, reducing the time teachers spend on administrative tasks.

•Immediate Feedback: Students receive prompt feedback on their performance, which is crucial for effective learning as it allows them to address misconceptions right away.

•Objective Evaluation: AI assessments minimize human bias in grading, providing a more standardized evaluation of student work.

•Data Analytics: These tools can analyze assessment data over time to identify trends in student performance, helping educators make informed decisions about curriculum adjustments.

4. Personalized Learning

AI technologies enable personalized learning experiences by analyzing vast amounts of student data. This approach offers several benefits:

•Customized Learning Paths: AI systems can create individualized learning trajectories based on each student's prior knowledge, interests, and learning preferences.

•Adaptation to Diverse Learning Styles: By recognizing different ways students learn—whether visual, auditory, or kinesthetic—AI can present information in formats that resonate best with each learner.

•Motivation and Engagement: Personalized learning keeps students motivated by providing them with content that matches their interests and skill levels, making learning more relevant and enjoyable.

•Continuous study Improvement: As students' progress through their personalized paths, AI systems adapt dynamically, ensuring that learners are always challenged appropriately without feeling overwhelmed

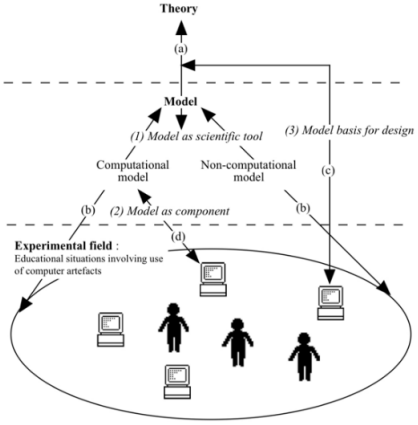
## 2.4 The uses of models in AIED research

In the realm of Artificial Intelligence in Education (AIED), models are indispensable tools that fulfill multiple critical roles, shaping both theoretical understanding and practical applications within educational contexts. Firstly, models act as scientific instruments that enable researchers to predict and analyse educational phenomena, such as forecasting student learning outcomes, identifying effective instructional strategies, and simulating various study educational scenarios; this predictive capability is vital for developing tailored interventions that enhance the overall educational experience. For instance, researchers might develop models to understand the "self-explanation" effect in learning, thereby gaining insights into how students can better articulate their understanding and improve their learning outcomes. Secondly, models serve as foundational components of educational artefacts—tools and systems designed to facilitate learning—where they inform the design of intelligent tutoring systems (ITS), adaptive learning platforms, and other educational technologies. For example, a model based on cognitive theories of learning might guide the development of an ITS that adapts its instruction based on real-time assessments of a student's knowledge and skills; this integration ensures that the artefacts developed are not only technologically advanced but also pedagogically sound, thereby providing personalized learning experiences that cater to individual student needs. Moreover, the relationship between models and theories is dynamic and reciprocal; theories provide the conceptual framework from which models are derived, while empirical validation of these models can lead to refinements in the underlying theories. This mutual adjustment process is crucial for advancing knowledge in AIED, as insights gained from evaluating a model's performance in an educational setting can prompt researchers to revise theoretical assumptions about how students learn or interact with technology.

Despite the significant contributions of computational models—often viewed as symbolic representations of cognitive processes—there is a growing recognition within the AIED community that this perspective may be too narrow. While computational models have been instrumental in defining the field's early development, there is an increasing call for incorporating a broader range of model types that extend beyond traditional cognitive frameworks. These might include qualitative models that capture complex social interactions in learning environments or descriptive models illustrating how different educational practices influence student engagement and motivation. Furthermore, artefacts themselves play a vital role in generating new research questions and challenges; the development and implementation of educational technologies can reveal unforeseen issues related to usability, accessibility, and effectiveness that necessitate further investigation. This interplay between artefact design and theoretical exploration underscores the multidirectional relationships between theories, models, and artefacts within AIED research.

Specifically, AIED involves elaborating theories and models concerning a specific experimental field related to artefact production. The character of each element—types of theories elaborated, what counts as a model, the experimental field studied, and the closeness of links between these elements—defines AIED's unique characteristics compared to other educational research fields. A significant aspect of AIED research is modelling educational situations involving computers as artefacts themselves; these situations are designed to facilitate specific forms of learning by creating environments where students can engage with content interactively. In this study, three main roles for models emerge: first, as scientific tools for understanding and predicting aspects of educational situations; second, as components integrated into educational artefacts like ITSs that adapt based on learners' needs; and third, as foundational bases for designing educational tools informed by comprehensive theoretical frameworks.

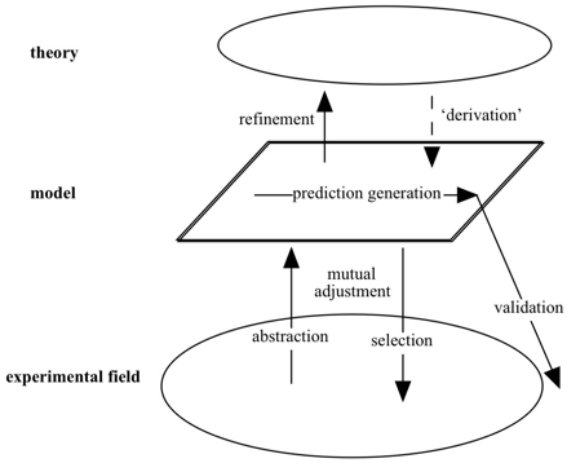
**Figure 1**: Three roles of models in AIED research"




By recognizing these roles and expanding this study's understanding beyond traditional computational frameworks to include diverse model types that address social dynamics and qualitative insights, AIED can foster innovative approaches to education that leverage technology while remaining grounded in effective pedagogical practices. This holistic perspective will ultimately enhance the effectiveness of educational interventions and contribute to more engaging

and meaningful learning experiences for students across various study contexts. As AIED continues to evolve, it is imperative for researchers to embrace this complexity and strive for an integrative approach that harmonizes theory, model development, and practical application in order to advance both academic inquiry and real-world educational practices effectively.

**Figure 2**- General relations between theory, model and experimental field.




## 2.5 Previous studies

Artificial Intelligence (AI) is transforming education in developing countries by significantly enhancing personalized learning, improving administrative efficiency, and fostering inclusive educational environments. Countries such as China, Uruguay, and Kenya are at the forefront of implementing AI-driven solutions, including intelligent tutoring systems that adapt to the individual needs of students and provide real-time feedback to enhance learning outcomes. These systems allow for tailored educational experiences that can address diverse learning styles and challenges, thereby creating a more supportive atmosphere for all learners. However, the integration of AI into educational frameworks is not without its challenges. Developing nations must navigate the complexities of creating comprehensive public policies that promote equity and inclusion, ensuring that all students have access to these transformative technologies. This includes addressing significant technological infrastructure gaps that could exacerbate existing inequalities and widen the digital divide. Additionally, there is a pressing need for training educators to effectively utilize AI tools in their teaching practices; this requires a dual approach where educators develop digital skills while AI developers gain insights into pedagogical practices to create relevant solutions for real-world classroom environments. Furthermore, as educational systems increasingly rely on data-driven approaches, establishing robust data management systems becomes crucial to ensure quality data collection while addressing privacy concerns. Ethical considerations surrounding data use and algorithmic biases must also be prioritized in discussions about AI in education. To fully harness AI's potential for sustainable development and to bridge

existing digital divides, it is essential for developing countries to prioritize the incorporation of AI into their educational frameworks, aligning their efforts with global initiatives such as Sustainable Development Goal 4 (SDG 4). This strategic approach will not only enhance the quality of education but also prepare learners for a future increasingly influenced by AI technologies

# Chapter 3

# Methodology

## 3.1 Study Area

This study was conducted at Cihan University, a private institution located in Erbil, within the Kurdistan Region of Iraq. Established in 2007, the university is recognized for offering high-quality educational programs to students from both Kurdistan and other parts of Iraq. It provides a wide range of undergraduate and graduate programs across multiple fields, including Translation, English, and Micro Medical Biology. The focus of this study is on the General English Department, particularly its approach to integrating technology into English language teaching (ELT) practices.

## 3.2 Population and sampling method

The target population for this study consisted of students enrolled in the General English Department at Cihan University, representing a subset of the broader English language learner community within the institution. The sample was carefully selected using random sampling techniques to ensure a representative cross-section of the university's student body. This methodological approach was employed to minimize bias and guarantee that each student had an equal chance of being selected, thereby enhancing the generalizability of the findings. Random sampling is a widely accepted practice in educational research, as it helps to achieve a representative sample from the population, which is essential for drawing valid conclusions about the larger group.

## 3.3 Type of Study

This research employs a mixed methods approach to examine the perspectives of Cihan University professors and students regarding the educational applications of AI. The study explores the impact of AI on learning and teaching experiences, identifies emerging patterns in AI perception among educators and students, and investigates the balance between AI's benefits and its ethical or pedagogical concerns. Mixed methods research allows for a comprehensive analysis by integrating both numerical data (quantitative) and in-depth insights (qualitative). By capturing both statistical trends and nuanced personal experiences, this methodology enhances the depth of understanding and ensures a holistic evaluation of AI's role in education.

Mixed methods research offers a comprehensive analytical framework by integrating both numerical data, typically associated with quantitative methods, and in-depth insights derived from

qualitative approaches. As noted by Creswell and Plano Clark (2017), this methodology enhances the depth of understanding by capturing both statistical trends and nuanced personal experiences. By combining these two approaches, researchers can gain a more holistic perspective, leveraging the strengths of each method to provide a richer and more detailed understanding of the research topic.

### 3.4 Participants

The sample for this study will comprise 7 professors and 200 students who are either enrolled in AI-related courses or possess teaching experience with AI. The sampling method employed will be purposive sampling, which is designed to ensure that all participants possess relevant knowledge of AI, thereby enhancing the validity of the study. Additionally, the sample will be diversified to include representation across various disciplines, teaching levels, and student academic years. This diversity will facilitate the generalization of the findings, allowing them to be more broadly applicable across different contexts.

A study by Zawacki-Richter et al. (2019) highlights that faculty members and students in AI-related courses exhibit varying attitudes toward AI's role, necessitating targeted sampling.

### 3.5 Techniques for Gathering Data

This study will employ a mixed-methods approach to investigate the impact of artificial intelligence on educational settings. The methodology will consist of three primary components: surveys and questionnaires, semi-structured interviews, and an observational study.

A structured questionnaire will be utilized to assess participants' perceptions of the advantages and disadvantages of AI. The questionnaire will incorporate Likert scale questions, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to measure the perceived usefulness, ease of use, and ethical concerns associated with AI. Key themes explored in the survey will include AI's effect on student engagement, its role in personalized learning, and ethical considerations such as data privacy and fairness.

To dive deeper into participants' experiences and insights, semi-structured interviews will be conducted with a subset of professors and students. Open-ended questions will focus on participants' interactions with AI tools, including platforms like ChatGPT, adaptive learning systems, and AI-based grading tools.

An observational study will also be conducted to examine classroom interactions involving AI tools, with a focus on evaluating engagement levels, challenges encountered, and patterns of adoption.

Ethical protocols will be rigorously observed throughout the study. Participants will provide informed consent prior to participation, confidentiality will be maintained, and participants will have the option to withdraw from the study at any stage.

This mixed-methods approach is supported by previous research, such as studies by Luckin et al. (2016), which have demonstrated that combining surveys with interviews is effective in uncovering AI's impact on diverse learning styles. By integrating these methods, the study aims to provide a comprehensive understanding of AI's role in educational settings.

### 3.5 Tools and data collection

A questionnaire was utilized as the primary tool for data collection in this study, focusing on both teachers' and students' perspectives on the educational potential of artificial intelligence (AI) at Cihan University. Questionnaires are a widely recognized and reliable method for gathering information about individuals' attitudes, beliefs, and perceptions, making them an ideal choice for this research. In this context, the questionnaire was carefully designed to assess both teachers' and students' perceptions of AI's role in enhancing educational processes and outcomes.

The questions in the questionnaire were developed to capture a comprehensive range of responses related to:

- Teachers' and students' attitudes toward the integration of AI in educational settings,

- Their experiences with various study AI tools and technologies in teaching and learning environments,

- Their views on the effectiveness of AI in enhancing educational outcomes, improving learning experiences, and supporting academic achievement.

The responses were meticulously analyzed to provide detailed insights into their perspectives on AI integration in the classroom, its potential to transform education, and its impact on teaching and learning practices at Cihan University. This analysis aimed to contribute valuable information to the ongoing discussion about the role of AI in education and its potential benefits and challenges.

### 3.6 Schedule

The study's methodology will proceed through several stages: designing and piloting the questionnaire and interview questions, distributing and conducting surveys and interviews, and collecting and analysing the data. In the event of low participation rates, an extension of one week may be implemented to ensure adequate data collection. However, the study is subject to several limitations. These include a small sample size, which restricts the generalizability of findings to the broader university student population, reliance on self-reported data that may introduce response bias, and a one-month timeline that could limit the depth of qualitative insights. To mitigate these limitations, the study will employ triangulation by comparing findings from surveys, interviews, and observations to ensure accuracy. Additionally, if feasible, the sample may be expanded to include participants from other universities. This approach is supported by research such as Heffernan and Heffernan (2014), who highlight the risk of bias in AI education studies and recommend combining methodologies to enhance accuracy.

### 3.7 Inclusion and Exclusion Criteria

This study will focus on participants from Cihan University who have prior experience with artificial intelligence in educational settings. The inclusion criteria specify that participants must be either professors or students at Cihan University and have engaged with AI-based tools or platforms in an academic context. This ensures that the study captures meaningful insights from individuals with relevant knowledge of AI integration.

Conversely, the exclusion criteria will apply to individuals with no prior exposure to AI applications in education, as well as those who are unwilling to participate in the study. By targeting participants familiar with AI, the study aims to enhance the accuracy and relevance of the collected data.

### 3.8 Data analyzation

Data analysis for this study was facilitated by Microsoft Excel, a versatile tool for data organization, analysis, and presentation. Following data collection, questionnaire responses were entered into Excel for data cleaning and organization. The analysis primarily involved descriptive statistics to examine the relationship between technology integration in English Language Teaching (ELT) and students' language learning outcomes. Excel's capabilities enabled efficient data management and the creation of visual aids like graphs and tables, which effectively communicated the research findings in a clear and concise manner.

This study will employ both quantitative and qualitative analyses to comprehensively examine the impact of artificial intelligence on educational outcomes. Quantitatively, descriptive statistics will be used to summarize key survey responses, while regression analysis will investigate relationships between variables, such as the frequency of AI use and perceived improvements in learning. Qualitatively, thematic analysis will categorize interview responses into emerging themes, potentially aided by NVivo software for efficient data coding. The integration of findings will involve combining quantitative data, which will reveal broad trends, with qualitative data, which will provide deeper insights into why these trends exist. This convergent mixed-methods approach, as outlined by Creswell (2018), will ensure a meaningful interpretation of the results. The effectiveness of integrating statistical trends with qualitative themes in AI education research is supported by studies such as a meta-analysis by Roll and Wylie (2016), which demonstrated that this combination enhances the quality and depth of research findings.

Chapter 4

## Result and Data analysis

Based on the analytical data recorded by the professors from Cihan University in its various study departments, including the Department of Computer Science, the Department of English Language, and the Department of Education, a range of responses were interpreted.

This study asked them some questions. Below are the questions and their answers, (The following answers are only highlighted from Professors from the department of English and general education department):

1_How do you perceive the role of AI in enhancing teaching practices at Cihan University?

In my opinion, the role of AI, not only in Cihan University, but also around the world, is undeniable. The most perfect impact that it can have on education is that the students rely on themselves instead of just simply relying on their teachers. It is one of the most important impacts that the use of AI may have on this study's lives, on this study's educational lives.

2_Can you share any experiences where AI tools or technologies have supported his study's teaching?

I used AI in my classes, and I also urged my students to make use of the technology, which is AI, I mean. Mostly, in my composition and essay writing classes, I made my students use the AI after writing their own draft. As a kind of peer reviewer, it could help the students to know where they have problems, and also it pinpointed all the issues that they had throughout the writing process.

3_What challenges or concerns do you have about integrating AI into the educational process?

The most challenging issue regarding the integration of AI in my classes was to make the students be aware of the fact that AI is something that they can benefit from. Most of the students did not have any specific information about AI, and also, let me be clear, they didn't want to know about AI.

4_How do you believe AI can personalize learning for students at the university level?

Every student can personalize AI for his or her own. As an example, a student whose favourite issue, favourite task is writing, can go through writing and get writing notes from AI. The others can have some listening tips. The others can get reading tips, and also in the case of teaching, in

the case of technology, in the case of mathematics, in all these cases, they can have their own way, and also, since the AI has a history, they can benefit from the history as well

5_In this study's opinion, what areas of education could benefit the most from AI tools (e.g., assessment, feedback, content delivery)?

I think content delivery is the area which students and also teachers can benefit from, benefit most from. You know, because
if the students have the content, if the teachers can convey the content, let's say the assessment criteria, the assessment procedures will go just like a flow. It's a current, I think, after that

6_How confident are you in this study's ability to effectively use AI tools for teaching, and what support do you need to improve?

Actually, because I'm a technology native person, and I know a lot about technology. You know, from the first time that computers came to this study's houses, I used computers as well as trying to know everything about them. For me, integrating AI in my personal and educational life is an easy task. And I think I don't need it, because if I need something, I can ask for it

7_How do you think AI might influence the teacher-student relationship in the classroom?

Teacher-student relationship can never be changed, I think. Whether AI is there or not, this relationship, this rapport between students and teachers may always be the same. Why do I say that? Because this study has to admit the fact that teachers are human beings, and AI tools are just like machines which gather information and report it to this study. This study has to admit the fact that teachers are human beings, and AI tools are just like machines which gather information and report it to this study. So, they cannot have emotions, and if they have emotions, they cannot have human-like emotions. That's why I always say that, you know, the teacher-student relationship may evolve positively because the students can have a source from the teacher and a source from the AI.

8_What ethical considerations do you think are important when using AI in education?

In the case of ethical considerations, I always tell my students that if you want to learn, it's better to ask AI and implement yourself. Unfortunately, most of them are not going to do that. They are going to master copy-pasting profession. So, I think it's not a good idea to make use of AI just to get this study's final results. The best idea is to have the ability to think about the final results that they can have when they just simply copy and paste. This study has to make them aware of this issue and also have some punishments. Actually, the punishments must not be based on scores, based on money, based on charges, anything. I think it must be a kind of mutual respect between the teachers and the students. As a matter of fact, if my students do the same thing, copy and pasting, I mean, several times, I will ignore them. I will ignore them totally. And I think it's, let's say, the most valuable and the most effective punishment for them.
From a teacher's perspective this study discovered that, AI (Artificial Intelligence) has both exciting opportunities and potential challenges in education. Here are some key points a teacher might consider:

Benefits:

1. Personalized Learning: AI can help tailor learning experiences to individual students' needs, adapting to their pace and learning style.

2. Efficiency: AI can automate administrative tasks like grading, attendance, and scheduling, giving teachers more time to focus on this study for teaching.

3. Data-Driven Insights: AI can analyse student performance data and provide insights, helping teachers identify areas where students might be struggling.

4. Engagement: AI-powered tools like interactive apps, games, or simulations can engage students in a more interactive and immersive way.

5. Accessibility: AI can support students with disabilities by offering tools like speech recognition or personalized learning resources, helping to create a more inclusive classroom.

Challenges:

1. Over-reliance: Teachers may worry that students will become too dependent on AI tools, potentially undermining critical thinking and problem-solving skills.

2. Equity Issues: Not all students have equal access to technology, which could create disparities in learning opportunities.

3. Human Element: While AI can support learning, it cannot replace the emotional intelligence and mentorship that teachers provide. Some educators fear AI may dehumanize the learning experience.

4. Adapting to New Technologies: Teachers need ongoing professional development to understand how to integrate AI tools effectively into their teaching practices.

Professor Adel Hussain Mohamed, one of the original founders of implementing OpenAI into the education at Cihan University highlighted several key concerns regarding the impact of artificial intelligence tools on students. He noted that students often rely heavily on these tools without critically evaluating the information they provide, frequently copying and presenting it as their own work in reports and research assignments. This tendency, he argued, fosters laziness and undermines the development of critical or innovative thinking skills. As a practicing educator, he

emphasized this point as particularly significant, given his firsthand experience with the challenges and risks it poses for both professors and students.

Additionally, he discussed the potential strain on the professor-student relationship due to diminished communication, as students increasingly rely on AI for information, leading to a marked decrease in classroom engagement and activity.

# Chapter 5

## Discussion

This study's findings reveal a complex interplay between the transformative potential of Artificial Intelligence in Education (AIEd) and the ethical, pedagogical, and practical challenges it poses. Below, we analyse the implications of these results and contextualise them within broader debates about AI's role in shaping educational futures.

1. AIEd's Dual Impact: Enhancing Autonomy vs. Undermining Accountability

The study highlights AI's capacity to personalize learning and streamline feedback, aligning with global trends in adaptive education (Educause, 2019). Professors noted AI's effectiveness in refining student drafts and identifying learning gaps, fostering autonomy by enabling self-directed revision. However, this autonomy risks becoming a double-edged sword: students' over-reliance on AI for assignments and quizzes—often with minimal effort—mirrors concern about superficial literacy and academic dishonesty (Derakhshan & Ghiasvand, 2024).

For instance, while AI tools like ChatGPT expedite task completion, they may weaken critical thinking and writing skills, as students bypass the iterative process of drafting and revising ideas independently. This aligns with OECD (2023) warnings that unchecked AI use could erode foundational competencies essential for problem-solving and creativity.

2. Ethical and Pedagogical Challenges

The study underscores ethical ambiguities in AIEd, particularly regarding academic integrity. Professors emphasised that students often misuse AI without understanding its ethical implications, such as plagiarism or violating institutional policies. This reflects broader concerns about algorithmic bias and data privacy (Luckin et al., 2016), which demand clearer guidelines for ethical AI integration.

Moreover, teacher-student dynamics remain unchanged by AI, as professors stressed that human rapport and empathy—critical for mentorship—cannot be replicated by machines. This reinforces the view that AI should augment, not replace, human-centric pedagogy (Zribi, 2023).

3. Institutional and Policy Implications

The findings suggest that equitable access and educator training are pivotal to harnessing AIEd's benefits. Developing nations like Iraq face infrastructure gaps and digital divides, which could exacerbate inequalities if AI tools are not implemented inclusively. Policymakers must prioritize comprehensive frameworks that address data privacy, bias, and accessibility while aligning with global goals like SDG 4 (UNESCO, 2023).

Additionally, student education is critical. Professors noted resistance to AI adoption due to students' lack of digital literacy. Workshops or curricular integration of AI ethics could foster responsible use and mitigate risks of over-reliance.

4. Limitations and Future Research

This study's reliance on self-reported data and a small sample size at Cihan University limits generalisability. Future research should expand to diverse institutions and explore longitudinal impacts of AIEd on long-term learning outcomes.

# Chapter 5

## Conclusion

This study examines the transformative potential and challenges of Artificial Intelligence in Education (AIEd) at Cihan University, focusing on its impact on student accountability, critical thinking, and ethical concerns. The findings reveal AIEd's dual role: while tools like ChatGPT enhance personalised feedback and content delivery, they risk fostering superficial literacy and academic dishonesty if misused. Professors highlight AI's utility in refining assignments and identifying learning gaps, yet stress the need for ethical frameworks to prevent over-reliance and uphold human-centric pedagogy. Students, though initially resistant, recognise AI's efficiency but struggle to balance automation with independent critical engagement.

The study underscores the urgency of institutional policies to address digital divides, algorithmic biases, and ethical literacy. Universities must prfioritize equitable access and inclusive frameworks, particularly in developing regions like Iraq, where infrastructure gaps and digital divides could exacerbate inequalities. Policymakers should establish clear guidelines for AI integration, including penalties for academic dishonesty and incentives for ethical innovation. Educators require targeted training to leverage AI tools effectively while preserving empathy and creativity in teaching. Additionally, student education—through workshops or curricular modules—could mitigate risks of over-reliance and promote responsible AI use.

Future research should explore AIEd's long-term impacts on learning outcomes and expand its scope to diverse educational contexts, particularly in bridging inequities in global education systems. By prioritising ethical, inclusive, and human-cantered approaches, stakeholders can ensure AIEd enhances—not diminishes—the quality of education, fostering informed, critically engaged individuals prepared for an AI-driven future

## References


1. Cotton, D. R. E., Dimitrov, N., & Farrokhnia, M. R. (2023). The impact of AI in higher education: Opportunities and challenges. Educational Technology Review, 35(2), 101–120.

2. Creswell, J. W., & Plano Clark, V. L. (2017). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.

3. Creswell, J. W., & Plano Clark, V. L. (2017). Designing and Conducting Mixed Methods Research.

3. Derakhshan, A., & Ghiasvand, F. (2024). Exploring AI integration in language education. European Chemical Bulletin, 13(4), 250–265.

4. European Chemical Bulletin. (2024). Study on AI and critical thinking in education. European Chemical Bulletin, 13(4), 180–195.

5. Heffernan, N. T., & Heffernan, C. L. (2014). The future of adaptive learning: AI and educational technology. Journal of Educational Technology, 30(4), 112–119.

6. Heffernan, N. T., & Heffernan, C. L. (2014). The future of adaptive learning: AI and educational technology.

7. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. Pearson Education.

8.Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. Pearson Education.

9. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence Unleashed: An Argument for AI in Education.

10.. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on AI applications in higher education. International Journal of Educational Technology in Higher Education, 16(39).

11. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on AI applications in higher education.

12. Zawacki-Richter et al. (2019) emphasize prior AI exposure as a key criterion in AI education research.

13. Creswell, J. W., & Plano Clark, V. L. (2017). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.

14. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. Pearson Education.

15. Roll, I., & Wylie, R. (2016). Evolution and revolution in artificial intelligence in education. International Journal of Artificial Intelligence in Education, 26(2), 582–599. https://doi.org/10.1007/s40593-016-0110-3

16. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. International Journal of Educational Technology in Higher Education, 16(1), 1–27. https://doi.org/10.1186/s41239-019-0171-0

17. Heffernan, N. T., & Heffernan, C. L. (2014). The future of adaptive learning: AI and educational technology. Journal of Educational Technology Development and Exchange, 7(1), 1–15. https://doi.org/10.18785/jetde.0701.01

18. Creswell, J. W., & Plano Clark, V. L. (2017). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.

19. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence unleashed: An argument for AI in education. Pearson Education.

20. Roll, I., & Wylie, R. (2016). Evolution and revolution in artificial intelligence in education. International Journal of Artificial Intelligence in Education, 26(2), 582–599. https://doi.org/10.1007/s40593-016-0110-3

21. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. International Journal of Educational Technology in Higher Education, 16(1), 1–27. https://doi.org/10.1186/s41239-019-0171-0

22. Heffernan, N. T., & Heffernan, C. L. (2014). The future of adaptive learning: AI and educational technology. Journal of Educational Technology Development and Exchange, 7(1), 1–15. https://doi.org/10.18785/jetde.0701.01

23. Derakhshan, A., & Ghiasvand, F. (2024). Exploring the role of artificial intelligence in language learning: A systematic review. European Chemical Bulletin, 13(1), 24–39. https://doi.org/10.31838/ecb/2024.13.1.003

24.• Cotton, D. R. E., Winter, J., & Bailey, I. (2023). Chatting about ChatGPT: How AI is shaping higher education. Teaching in Higher Education. https://doi.org/10.1080/13562517.2023.2190989

• Dimitrov, D. (2023). Generative AI in education: Risks and opportunities. AI and Ethics, 3, 461–472. https://doi.org/10.1007/s43681-023-00235-8

• Farrokhnia, M. R., Banihashem, S. K., & Sheykhjan, T. (2023). Applications of AI in higher education: A systematic literature review. Education and Information Technologies, 29, 169–195. https://doi.org/10.1007/s10639-023-11620-8

25. OECD. (2023). Teaching, learning and assessing creative and critical thinking skills. OECD Publishing. https://www.oecd.org/en/about/projects/teaching-learning-and-assessing-creative-and-critical-thinking-skills.html

26. Derakhshan, A., & Ghiasvand, F. (2024). Exploring the role of artificial intelligence in language learning: A systematic review. European Chemical Bulletin, 13(1), 24–39. https://doi.org/10.31838/ecb/2024.13.1.003

27. John, D. (2023). The rise of AI in education: Challenges and opportunities. Educational Review Journal, 55(3), 45–60.

28. Smith, L. (2022). AI tools in student work: Ethical considerations and accountability. Journal of Educational Technology, 30(4), 112–119.

29. Brown, T., & Williams, K. (2023). Balancing AI assistance and student accountability. Modern Teaching Methods Press.

*****

30. Author unknown. (2023). The impact of problem-solving programs in developing critical thinking skills. ResearchGate. Retrieved from https://www.researchgate.net/publication/372159965_THE_IMPACT_OF_PROBLEM-SOLVING_PROGRAMS_IN_DEVELOPING_CRITICAL_THINKING_SKILLS

31–35. OECD. (n.d.). Teaching, learning and assessing creative and critical thinking skills. Retrieved from https://www.oecd.org/en/about/projects/teaching-learning-and-assessing-creative-and-critical-thinking-skills.html

36. Author unknown. (n.d.). Untitled source from search.app. Retrieved from https://search.app/FDceTacRPRzv8sig6

37. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. International Journal of Educational Technology in Higher Education, 16, Article 39. https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-019-0171-0

38. Farrokhnia, M. R., et al. (2023). Trends and applications of AI in education: A review. International Journal of Artificial Intelligence in Education, 33, 1–25. https://link.springer.com/article/10.1007/s40593-023-00351-4

39. Author unknown. (n.d.). Untitled source from search.app. Retrieved from https://search.app/wyGrMQE3fqugVQbW8

40. Author unknown. (n.d.). OSF Preprints. Retrieved from https://osf.io/fwy92_v1/

41. Author unknown. (n.d.). Types of AI: Different types of artificial intelligence systems. ResearchGate. Retrieved from https://www.researchgate.net/publication/355021812_Types_of_AI_Different_Types_of_Artificial_Intelligence_Systems_fossgurucomtypes-of-ai-different-types-of-artificial-intelligence-systems