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Faculty of Graduate Studies
Department of Social Sciences
Master Program in Translation**



**Reliability of Artificial Intelligence in Translating Arabic
Language and English Language Legal Texts**

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**This Thesis Was Submitted in Partial Fulfillment of the
Requirements for the Master Degree in Translation.**

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Thesis Approval

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Declaration

I declare that, except where explicit reference is made to the contribution of others, this thesis is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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Dedication

I dedicate this work to my beloved parents, whose love, care, and prayers have made this journey possible. To my wonderful brothers, Yazan and Yamen, and my little sister, Seba, whose presence in my life helps me to achieve success. I also dedicate this dissertation to my favorite uncle, Mohanad. Thank you all for always being there for me, for the strength you provide, and for your compassionate support.

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Reliability of Artificial Intelligence in Translating Arabic Language and English Language Legal Texts

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Abstract

This study investigated AI reliability in Arabic-English legal translation from students' perceptions at Arab American University. The researcher used the mixed-method approach and collected data through questionnaires and interviews. The study sample included 63 students (23 English majors and 40 Law majors) who are enrolled in legal translation and terminology courses. Additionally, the semi-structured interviews were conducted with four instructors from the English department. The results showed that using AI as a reliable alternative to human translators came with an arithmetic mean of 2.73 and a low score. In addition, the limitations for AI in translating Arabic language and English came with an arithmetic mean of 3.60 and a medium score. Regarding the benefits of AI, it came with an arithmetic mean of 3.77 and a medium score. Furthermore, the four instructors agreed that AI could not completely replace a human translator to ensure the accuracy and integrity of legal translation. Some of the participants believed that AI could not translate cultural differences and struggled to handle tone. Other participants stressed the importance of not fully relying on AI as technical text and the need to adhere to ethical decisions and comprehensive understanding. Based on the results of the study, the researcher suggests some recommendations, such as the necessity of human intervention besides AI tools to achieve accuracy and avoid ethical plagiarism and creating training workshops and educational curricula for target audiences, such as students, translators, researchers, and corporations.

Keywords: Reliability, Artificial Intelligence, Legal Translation, Machine Translation, Human Translation.

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List of Definitions of Abbreviations

Abbreviations	Title
ADMs	Automated Decision-Making System
AI	Artificial Intelligence
LLMs	Large Language Models
MT	Machine Translation
NE	Near-Equivalence
NMT	Neural Machine Translation
NoE	NON-Equivalence
PN	Partial-Equivalence
RBMT	Rule Based Machine Translation
TMTPEQ	Trades Studio Machine Translation Post- Editing Questionnaire
TRI	Technology Readiness Index

Chapter One: Introduction

1.1 Introduction

In the past several years, using artificial intelligence (AI) in legal translation has proved helpful, both from a time and effort perspective. This is because, compared to human translators, AI can produce similar translations for relatively straightforward translation tasks for various languages much quicker than a human ever could. The field of AI is arguably the fastest-advancing field to ever exist in modern history. This can be apparent when the number of new AI models are being developed and released by major tech companies, such as Google, Anthropic, and OpenAI, every day. These new models show promising results for legal translations, demonstrating noticeable improvements compared to their predecessors (Al-Khatib, 2024).

However, AI still faces major challenges in producing accurate legal translations between English and Arabic. In fact, it is quite challenging for AI systems to consider the cultural differences and specific legal nuances that are generally hard to emulate from one language to another while keeping the translation accurate. Delegating certain legal translation tasks, especially major ones, to AI can be catastrophic and unintelligible. This is because AI still does not have domain-specific knowledge that an experienced human translator possesses, who might be able to avoid major consequences tied to translational discrepancy (Kanglang, 2021).

AI has proven itself to be a powerful tool in translation in various fields. The translation process involves the transfer of the language text from the source to the target while preserving the original and functional meaning. Formal equivalence is essential in legal translation as it preserves legal terminology's precision, wording, and accuracy. In addition, it helps prevent misinterpretation and preserve the legal force of documents (Moneus & Saharis, 2024). The rendition of meaning implies maintaining the pragmatic function of the source text (Hatim & Mason, 1997, p. 7). The communicative function of a text implies the cause for which it is written; in other words, the aim of writing a text should be attained in the translation.

John McCarthy introduced the term AI in 1956 (Rajaraman, 2014). Since then, AI has been trending in various fields. Recently, AI has been used in different fields of translation. For example, it is now being used in medical settings, international trade, and translation education (Daghamin & Daghamin, 2025; Mehandru et al., 2022; Brynjolfsson et al., 2019; Kanglang, 2021). AI translation applications are being used extensively worldwide. For example, Google Translate is an AI translation tool used by 600 million users worldwide (Kreger et al., 2019). This huge number of users shows the importance of AI as a source of information that can aid humans.

Al-Khatib (2024) studied AI from a religious perspective and discussed the considerations with Muslims on AI becoming a threat to stable Islamic beliefs. However, others do not share the same view. They believe it will strengthen their faith in Allah's miraculous creation of humans. There is a trust issue going on between humans and AI. Further, the trust issue that encounters AI as a reliable translation source is still under investigation. Bouguesmia (2020, p. 101) asserted that translator educators accept using AI in "minor translation needs" and have a friendly tendency to incorporate AI in translators' training.

Moreover, previous work completed by He (2021, p. 1) stated in his study that the development of technology has posed challenges to teaching. The previous translation teaching mode can no longer cultivate students into professionals or meet students' needs for further study. Therefore, it is urgent to adjust the English translation teaching mode in universities to adapt to the technological environment.

Furthermore, Moneus and Saharis' (2024) studied AI validity. In their study, a contrast has been made between human translation and AI translation of Arabic into English texts. The study found that human translators got higher marks in accuracy, competency, content, and language, while AI got a higher point in style. Brazauskaitė-Zubavičienė et al. (2024) found the English language as a source of Lithuania and concluded that a reliable translation requires an intelligent translator, editor, and intelligent translation tool. This is to say that the appropriate and beneficial use of AI is still vague. The researchers suggest that humans and AI cannot be highly reliable alone.

Wang (2023) conducted a contrastive study between human and AI translations of business texts, news reports, and literary works considering English and Chinese. The study shows that humans performed better than AI in fidelity and language

expressions. On the other hand, AI showed better results in terms of language style. Such studies confirm the need for further investigation into AI translation. Also, it can be noticed that a variety of findings according to language pairs and text type affirms the need for a more specific investigation of AI translation.

In a study conducted by Moneus and Sahari (2024), "there remains a need for more comprehensive studies that delve into the nuanced complexities of legal language and the capabilities of AI with respect to accurately capturing such subtleties." The researchers also emphasized the importance of accuracy and translating legal texts as part of their context rather than as linguistic items transferred from the source language to the target language. The study of AI translation is still far from sufficiently investigated. This thesis aims to fill the gap in using AI as a reliable tool in translating Arabic and English legal texts in Palestine.

1.2 Study Problem

The study aims to investigate AI's reliability in translating Arabic and English legal texts. There is a lack of sufficient evidence to support the claim that AI is reliable in translating legal text from Arabic to English and vice versa, which is causing worries for legal translating students learning to work with these languages. One of the ways we can compare the effectiveness of using AI in legal translation is to compare their generated translations to those produced by real, experienced translators in this field. In this study, the researcher aims to find valuable information regarding the possibility of delegating certain translation tasks to AI or working with humans altogether.

However, this might not be possible right now because, as Li and Chen (2022, p. 43) stated, "the gap still exists between the quality of machine translation and human translation."

The lack of research on this matter, specifically the legal translation between Arabic and English, is a major reason and motive for further investigating this field of AI's abilities.

This study also looks into how AI can even be integrated into such legal work, to begin with, analyzing matters such as speed, accuracy, and cost-effectiveness. This way, after the weaknesses and strengths of using AI have been identified and established, it

becomes easier for protocols and systems to outline how to use AI in legal translation tasks for Arabic and English. The researcher also aims to gather valuable information to help researchers build new AI models that are better suited to work with the specific cultural specifics and legal systems of different countries.

1.3 Study Objectives

This thesis aims to achieve the following objectives:

1. To investigate AI's ability and reliability in translating legal texts from Arabic and English languages.
2. To suggest a practical study of specific AI tools to translate Palestinian legal texts.
3. To find the limitations that AI encounters in translating legal text.
4. To provide the translators with some tips on how to benefit from AI according to the reliability and limitations of AI translation.
5. To compare the reliability of AI tools as an alternative to humans between BA English and Law students and English academics at Arab American University.

1.4 Study Questions

This thesis poses some questions, which are divided into two parts:

Main Question

- To what extent can AI translation serve as a reliable alternative for human translators considering legal text translation from the Arabic and English languages from students' and academics' points of view.

Sub Questions

1. What are AI's limitations in translating Arabic and English legal texts?
2. How can translators benefit from AI in translating legal texts in Arabic and English?

3. Are there any significant differences between the reliability of different AI translators in translating Arabic and English legal texts?
4. Are there any statistically significant differences between BA English and Law students' perspectives on AI translators?
5. What is the professional future in the light of AI and legal translation from the students' point of view?
6. Do students prefer the human translation of legal texts, ChatGPT, or Google Translate?

1.5 Study Hypotheses

1. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the academic specialization variable.
2. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the academic year variable.
3. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the GPA variable.

1.6 Study Significance

Theoretical Significance: This study participates in the ever-growing research literature regarding AI's ability to translate legal text. It focuses on Arabic and English translations. Since legal translation is one of those fields that requires very accurate quality of work, otherwise, the consequences will be prevalent, making it a compelling choice to use as a benchmark for AI's capabilities.

One of the areas the researcher will focus on in this study is the extent to which AI can translate complex language pairs rich in cultural, legal, and linguistic

significance accurately and reliably without generating anything that might bring about consequences. After assessing AI's abilities, the results might aid the development of AI models that better cater to these cultural nuances and fit the demanding tasks for legal translation, especially for complex language pairs like Arabic and English.

Practical Significance: It is hoped that this study will benefit students and their teachers, translators working in specific legal translation between Arabic and English, and even organizations specializing in this field. The significance of the study emerges from its nature as a practical study that examines the complex legal text translation by AI.

Therefore, the study contributes to understanding AI's ability to replace human translators and its reliability as an authentic source of translation, which will have further implications on organizing the relationship between human translators and AI translators. Investigating AI reliability would allow us to know the limitations of using AI in translating legal texts, which would lead other translators to know how and when to use AI in translating legal texts and achieve the utmost benefits from AI without having translation errors.

This thesis can improve AI translation practices, especially in the legal domain. The data that the researchers will come up with, which relates to the accuracy and reliability of using AI in the legal translation field, will aid in understanding and predicting the future of the use of AI, more specifically, integrating it into tasks traditionally only humans could complete. It can also provide valuable insights into how current translators can benefit from such revolutionary technology and how large translation organizations can benefit from cutting costs and boosting productivity. Moreover, this study will benefit undergraduates, graduates, translators, and teachers, whether English or legal majors.

1.7 Definition of Terms

As a lexical definition: AI as a term, the interest of this study is not in discussing AI from a technical point of view; rather, it aims to broaden the understanding of AI's relation with humans. Wang (2023) claimed that there is an interaction between professional translators and AI as it constitutes an assistant for

translators.

However, the idea of assessing is still vague; in other words, other issues arise considering the human use of AI. The ability of AI to replace the researcher means carrying out the same task with the same efficiency. Humans are still the judge of this possibility, and the research still proves humans' superiority over AI in translation. However, to have the utmost benefits from AI and produce a high-quality translation it requires closely identifying AI's failings.

The operational definition for the purpose of the study refers to AI as an important field of computer, which aims to develop various systems and programs that can simulate human capabilities, such as analysis, thinking, and learning. The main rule of AI is the use of algorithms in order to develop its ability to recognize images, create videos, and write texts in different languages.

AI programs such as Google Translate and ChatGPT 3 and 4 were used in this study.

As a lexical definition: According to Williams (2009, p. 5), reliability in translation can be defined as "the extent to which an evaluation produces the same results when administered repeatedly to the same population under the same conditions." In other words, a translation is reliable if multiple evaluators say so. For AI, the reliability of AI translation can be reliable when there are multiple agreements on the quality of the product and the translation in the target language. The quality of the translation products has many criteria to address. In this study, we leave the decision of quality, thus reliability, to a group of readers to provide answers.

The operational definition for the purpose of the study refers to reliability, which is defined as the fact that we obtain the same result after a certain period has passed since we obtained the first result, and it is under the same conditions. The reliability of AI in translation includes obtaining accurate, predictable results and error-free and correct translation.

As a lexical definition: According to Hansani & Ubhayawardhana (2023, p. 168) legal translation can be defined as "the translation of documents related to the regulations of legal relationships." Legal text translation can be regarded as one of the most complicated processes. First of all, the legal system in each country. Such

diversity becomes even more challenging considering the specialized encyclopedic terms that cannot be replaced, euphemized, or exaggerated.

The operational definition for the purpose of the study refers to legal translation as a complex process because it is related to regulations related to legal relations, and legal translation consists of converting documents from one language to another while maintaining the correct and accurate meaning of the language. It is one of the most complex translations because it requires understanding the legal system and the correct language.

1.8 Study Limitations

Time limits: This study was conducted in the summer semester of 2023-2024, with limited data collection and analysis depth.

Spatial limits: This study was conducted at the Arab American University.

Human limits: Only students of the Department of English and Law with bachelor's degrees and academics at the Arab American University.

Objective limits: AI's reliability in translating Arabic and English legal texts.

1.9 Thesis Structure

This thesis is divided into five main chapters:

Chapter One includes the introduction and some main concepts. This chapter provides an outline of the main basics that the thesis stands upon when investigating AI translation for legal text. Moreover, this chapter defines some of the concepts and maps the relations between them.

Chapter Two reviews related literature on AI translation of legal text.

Chapter Three includes methodology.

Chapter Four includes the results.

Chapter Five includes discussions, conclusions, and recommendations.

Chapter Two: Literature Review

2.1 Introduction

In the last couple of years, the field of AI has made incredible advancements and has been enabled to be incorporated into different fields, including the field of legal translation. This study looks into the challenges, benefits, and ethical considerations of using AI to translate legal text from Arabic to English, as well as the other way around.

In addition, exploring key definitions of a wide range of keywords, including translation framework, machine learning, neural networks, and clarifying the theory used. This study aims to give a clear idea of using this new revolutionary technology to enhance legal text's translation process and allow people from different cultures to communicate effectively.

2.2 Theoretical Framework

2.2.1 What is the Translation Framework?

The theoretical framework focuses on translation theory, particularly the concept of formal equivalence. Formal equivalence focuses on the preservation of the language after its translation and clear understanding, as this is important with legal translation. Accuracy and fidelity to the source text are necessary to preserve the legal text and avoid ambiguity (Munday, 2016).

With regard to legal translation using AI, formal equivalence plays a key role in evaluating the way AI tools handle legal texts. Nevertheless, AI translation models can prioritize dynamic equivalence in other fields such as literary texts, as they are aimed at readability and natural fluency.

2.2.2 The Concept of Machine Translation

Translation by AI, specifically translating legal text between Arabic and English, is the process in which computers do the work that supposedly only humans can do. There have been multiple advancements in the field of AI, transforming the translation

process from simply following a rule-based algorithm to using a complex neural network to aid the translation process and provide a more accurate translation (Wang et al., 2022).

Machine translation, a subset of AI, has also seen incredible advancements over the past century. The process of machine translation has moved from translation from the source language to the target language based on dictionaries written by bilinguals and a list of rules, also known as rule-based machine translation (RBMT), to a more advanced and complex method involving complex statistical algorithms employing the neural network to produce incredibly accurate translations, a process commonly referred to as neural machine translation (NMT) (Wang et al., 2022).

NMT takes a completely different approach to translation; it maps the source language into complex semantic representations, using attention mechanisms to produce an accurate translation. This new approach to translation produced incredible results by providing the ability to translate between pairs of languages that are usually seen as complex, such as Arabic and English (Wang et al., 2022).

In the case of legal translation, AI not only has to deal with the text itself being translated, but it also has to pay attention to the complex terminology and context being used in the text. Legal machine translation requires a deep understanding not only of the languages themselves but also of the legal systems and the legal terminology with the right context and abiding by the conventional flow of information in any legal document (Wang et al., 2022).

Although artificial translation isn't yet fully optimized for these requirements, the continuous development of AI may allow for quick, effective, and efficient translation in the legal domain in the future (Wang et al., 2022).

In recent years, machine translation has improved a lot due to the development of technology in this field. Machine translation tools can do basic translation tasks quite well. However, there are concerns about how accurate they are with culturally rich literary texts. In this regard, a recent study completed by Mouza (2024) explored the translation challenges and compared human and machine approaches in translation. The study found that there are several challenges with AI translation when translating culture-specific terms. The researcher argued that translating cultural terms needs a cultural understanding of the text.

Another study by Al-Kaabi et al. (2024) conducted to compare and contrast between google translation, human translation, and AI translation. They revealed that AI translation is not as accurate as human translation. They concluded that simply knowing vocabulary is not enough to deliver meaning to the reader.

Translators need cultural background to understand the intended meaning of the text or writer. They added that the human translation was better, and their accuracy was more accurate in the context. The human translator was able to find equivalent expressions that preserved both meaning and cultural significance. On the other hand, machine translations had many difficulties with rhetorical devices, idioms, and subtle cultural nuances that require contextual understanding beyond literal meaning. These machines produced translations that missed the cultural implications or connotations.

Interestingly, the study found differences between the machine translation tools as well. ChatGPT was better at incorporating cultural elements than Google Translate. This is to say that the recent development of AI translation is making good progress in these complex translation challenges, even if they have not yet reached human-level performance. The study concluded that human translators are better and still preferred by people for high-quality translation of literary works, particularly when preserving cultural significance is important.

The researchers conclude that AI is in the process of improving in the field of translation. However, sometimes, it is challenging to translate specific terms because human translators show better results and are able to offer a deep cultural translation. It is possible to conclude that AI translation has limitations in dealing with culturally rich texts that contain metaphors, symbolism, and culture. These struggles are usually found when no direct equivalents exist in the target language.

2.2.3 Neural Machine Translation

In the context of legal translation, especially between the languages Arabic and English, a subset of AI called neural machine translation (NMT) is often used. This new mechanism has shown incredible results, allowing for an accurate translation from the source language to the target language effectively by utilizing the large neural network instead of the previously adopted statistical analysis, which marks an

outstanding achievement in machine translation. NMT can translate text because of the incredible many texts it has been trained on (from both the target and the source languages), including legal text (Stahlberg, 2020).

NMT can work more with fine grammatical details and complicated structures in both the source and target languages. It is also best suited for context-based translation, which enables a more accurate and consistent translation, especially in the legal domain. NMT can also be fine-tuned to work more effectively with legal text specifically, a feature other types of machine translation lack (Stahlberg, 2020).

However, a lack of detail and precision is still required in legal texts and documents, which NMT cannot yet fully guarantee. The way neural networks operate, it is not easy to keep track of the decisions made in the translation process, which might not work in favor of legal translation, where it is very important to maintain transparency. Future research is working on solving this problem, allowing it to better explain its decisions, which is especially helpful for legal translation (Stahlberg, 2020).

2.2.4 Legal Translation

In 2020, legal translation has evolved significantly, reflecting changes in technology and globalization. Translators are increasingly using the technology today to enhance the quality of their translations. Studies examined the influence of translators' personal experiences on translation outcomes. These studies found that they are unsatisfactory since all legal translators are completely unbiased in their translation jobs. The impact of such translators is great, and some of them don't realize this issue (Al-Tarawneh, 2024).

Any country's legal system and text directly mirror the level of its culture and development because such texts indicate the complexity of the political and social state of the country. For the native speakers in the UK, understanding legal texts related to justice documents in police caution may be difficult if translated or interpreted incorrectly because it contains old, uncommon, and particular terminology that may be hard to understand (Al-Tarawneh, 2024).

Modern-day globalization and the increase in population have made the demand for legal translators go through the roof. Lately, the importance of the legal translation role has been getting criticism, and its value is slowly diminishing, which may affect

academic honesty and impact the final quality of the translation (Al-Tarawneh, 2024).

Although scientific research suggests that these translators must be trained on practical tasks they will do in the real world. Upcoming legal translators are not being trained enough, which needs to be changed (Al-Tarawneh, 2024).

2.2.5 Challenges of Legal Translation

Legal translation has evolved significantly, reflecting changes in technology and globalization. Over the past couple of decades, global trade and interactions with other countries and cultures have remarkably increased. These nations and trading entities need a way to effectively and accurately communicate with their recipients, a process that may be facilitated by later use, which is why their demand over the past couple of decades has also increased.

Trade contracts and laws must be translated accurately by legal translators, as well as for instant translation in the court to be provided to improve the communication process, especially between very large entities such as the United States and the European Union and United Nations, since they share crucial trade contracts and legal practices (Zhao, 2023).

One of the challenges that legal translators face (and continue to face today) is the difference in legal systems in different countries. For example, legal translators are employed for communication between Arab countries whose law system is largely composed of Islam Shari'ah and teaching, and English countries that are so-called democratic require much energy to get right. It is more than just translating words and phrases but rather the legal translator needs to have a deep understanding of the target and source languages and also their legal systems, as well as the context-specific terminology each country uses for their legal documents, which include old and rarely used words and phrases in the day to day life (Zhao, 2023).

The results indicate a vast difference between the translation generated from neural and statistical machine translators in their effectiveness for the translation of legal matters, with both of the technologies struggling to keep up with the context-specific nuances in the legal documents, which may lead to misunderstandings, or worse yet, cause the translation not to make any sense (Zhao, 2023).

Although legal translations didn't exist until 1979, when international trade became more popular, it still struggles to stay up to par with the technological advancements that may affect legal translation developments in AI. Research indicates that it is a place for knowledge gaps yet to be explored (Zhao, 2023).

2.2.6 AI Applications in the Field of Legal Translation

Some major translation corporations have started using AI for certain translation tasks. This is because translating with machine translators is a lot better for the cost, quality, and time. This alone should spark a campaign to understand the capabilities of AI, including the extent to which we can use it and its legal translation capabilities. The research highlights the differences between human and AI translation for legal documents, which are then rated for AI's reliability in the specific legal translation domain.

After understanding these results, researchers aim to develop a clearer vision of how AI can be used in future translation tasks, especially in the legal field (Moneus & Sahari, 2024). Previous research added that human translators usually perform better when translating from Arabic into English. However, AI translate, such as Google Translate and AI, has some difficulties and limitations. They cannot understand all cultural terms. The authors believed that AI translates software and human translators to complete each other (Mouza et al. 2025; Chu, 2023; Costa-Juss et al., 2016).

AI has been making great advancements, notably in integrating into professional fields, including translation and legal translation. This could greatly impact the future of legal translation, changing how large corporations interact and communicate in law firms and courts. AI has made significant strides in developing a more accurate AI model that produces quality responses in legal translation (Moneus & Sahari, 2024).

AI has become a significant tool in the context of legal translation. With advancements in machine translation technologies, including Google Translator, Bing Translator, Microsoft Translator, Syzran Translate, and Amazon Translate, the process of translating legal documents has evolved. On the other hand, machine translation is known for its incomparable extremely fast speeds of translation compared to humans, perfect for today's world where the speed of getting tasks done is more crucial than

ever (Moneus & Sahari, 2024).

Nowadays, machine translation by AI is widely available for anyone with an internet connection, and the process of getting translated (including legal text) has drastically differed from the past. The modern way of translation (using AI) is compared to traditional translation methods, focusing on weighing each method's advantages and disadvantages. Researchers tasked both experienced human translators and machine translators with translating various legal texts (Al-Romany & Kadhim, 2024).

They then compared the translation provided by each one on many criterion points, including the quality of the translations produced, efficiency, and effectiveness. To achieve this, the BLEU framework was used to objectively compare the translations made by both human and machine translators. The primary aim is to compare the accuracy of the human and AI translations, especially in Arabic and English. Focusing primarily on the Arabic and English languages is important in today's world since the trade between Arab countries and the West is increasing, and trade always requires some form of legal work (Al-Romany & Kadhim, 2024).

AI is increasingly being explored as a tool for legally translating capabilities, limitations, and bias. AI can complete specific translation tasks with remarkable speed and accuracy, making it a promising resource for the future of translation in the legal domain (Al-Romany & Kadhim, 2024).

Integrating AI in international legal settings could also impact decision-making processes in international courts, such as whether they should start relying more on AI or stick to traditional human translators. However, AI translation cannot be as accurate as human translation in terms of capabilities, highlighting some weaknesses and providing solutions that make it more reliable, especially in legal translation (Al-Romany & Kadhim, 2024).

2.2.7 The Morality of Using AI Tools for Legal Translation and Measuring the Bias and Neutrality Rate

The rapid evolution of large language models (LLMs) in the past couple of decades has caused a lot of people to be interested in the matter, especially because these LLMs can greatly impact a person's life for the better by accelerating their productivity, taking care of tedious tasks, and learning a new skill without the hassle of searching through the internet. However, LLMs can be described as double-edged sword because while they may be helpful, they certainly can be used for unintended use cases and tasks they may not be qualified yet to do, such as interacting with legal documents in a way that may involve AI to be answering certain questions in legal documents, which has spiked concern (Tomalin et al., 2021).

Recent research (Khan, 2025) indicated that language models can understand and write text like humans. Well-known companies like Google, OpenAI, Anthropic, Meta AI, and others made these programs in 2023 and were available for users worldwide. The basic idea of this software is that they learn from reading huge amounts of text from books, websites, and articles. After learning from all this text, they can understand what the user asks them to translate or write. Then, they write back to the user in a way that makes sense and predict what words should come next in a sentence.

These language models can also find the best word choice to offer users what they need. They can translate texts from one language to another in a way that serves their needs. Some famous examples are ChatGPT (made by OpenAI), LaMDA (made by Google), and PaLM (which has 540 billion parts that help it work well).

There are also challenges regarding the limitations of AI tools in legal contexts. For instance, relying on AI for tasks, like writing contracts, since these LLMs are known to hallucinate and generate inaccurate information may lead to future legal consequences. However, there are certain useful use cases for AI in the legal domain, such as lowering the cost, increasing efficiency, and reducing the time needed to complete tasks such as helping self-represented people in legal court matters such as validating their claims and filing court documents (Tomalin et al., 2021).

Some people claim that certain LLMs are tailored specifically for legal matters and that they are completely safe and accurate, but this is wrong. Most of these AI tools are actually general LLMs that have been fine-tuned on these legal matters,

which is misleading. Some LLMs are trained specifically on legal documents but are hardly accessible to the average person (since these LLMs are closed sources). They are only accessible by large companies and corporations, which threatens transparency and wide-scale accessibility (Tomalin et al., 2021).

However, minimizing the risks of using AI tools in the legal sectors while at the same time making access to AI easier for tasks it can properly complete can be achieved by developing open source LLMs trained specifically on legal documents, as this will help improve the overall transparency as well as helping to improve the quality of legal tasks that an average person will inevitably face (Tomalin et al., 2021).

Since the development of AI is accelerating at an extremely fast rate, governments' regulations aren't yet on par, which may allow certain crimes to occur, such as impersonation. Because of this, governments are being urged to accelerate the regulatory work and catch up with AI before it becomes too late. The LLM focuses on generating of such unbiased and accurate text, which can be achieved by training the model on high-quality data. This LLM is analyzed by a benchmark that gauges the LLM bias, checks the validity of the generated content, and measures the accuracy of legal reasoning (Tomalin et al., 2021).

2.2.8 Ethical and Preventive Legal Technology

The massive advancements of AI in the past couple of decades including how the field of AI has managed to move from basic expert systems to mind-blowing technologies such as machine learning and large language models. Since AI was first founded in 1949, there have been continuous efforts to try to incorporate this life-changing technology within the legal system for tasks such as legal reasoning and proactive legal measures (Stathis & Herik, 2024).

A popular example of the preventive law concept in action is using legal strategies to prevent financial loss (as Aristotle Onassis puts it). This shows that even in the olden times, preventive measures were used in legal matters, which is a base for how we interpret preventive legal technology today (Stathis & Herik, 2024).

This incorporation of AI technologies, such as machine translation into preventive legal technology, aims to change the legal approaches from reactive to preventive. This has huge implications for how legal services will be presented in the

future, which will mainly affect large corporations and the judicial system. There are serious ethical concerns that may come about with the interaction with AI, especially in legal applications. This can be addressed by improving the trustworthiness and transparency of preventive legal technology (Stathis & Herik, 2024).

One of the objectives to be achieved is to develop AI systems, including machine translators and large language models, that may contribute to more transparency in the legal field, which in turn makes it a popular choice because it would increase the effectiveness within the legal domain. With the accelerated development of AI regulations, these AI tools are used within a domain like law (Stathis & Herik, 2024).

As advancements in the technological field, and especially in the AI field, continue to take place, automated decision-making (ADM), which AI powers, is now possible and widespread in our society. However, as with every groundbreaking discovery, there will always be some people who do not find it helpful, or worse yet, maybe even harmful to their status quo. Public perception of this emerging technology varies greatly, influenced by their personal experiences and level of culture (Stathis & Herik, 2024).

Stathis and Herik (2024) added that ADMs have become increasingly prevalent in three main fields: media, healthcare, and the justice system. There is a mixture of optimism and concern among the people regarding letting AI conduct such high-stakes tasks like decision-making. Many people who were asked about ADMs' effect on society felt unsure or mixed about it. Some thought it was good, some thought it was bad, and others weren't sure.

While 40% of the total participants conveyed optimism in how useful these AI systems are, there was a clear difference of opinion on whether ADMs are actually fair and just, with only half of the participants thinking that it is actually fair. However, the majority of participants (about two-thirds of them) thought that actually letting ADMs make decisions in their AI world might be a source of problems and chaos (Stathis & Herik, 2024).

While it is clear that a large proportion of the participants see that the use of ADMs might be useful in the future, the same positive perception of the general public can't be found when it comes to actually implementing ADMs in the real world because of the possible errors it might make, which can cause great implications, even

if it was accidental. However, when these participants were asked to analyze the decisions made by ADMs and other human decision-makers, most of the participants thought that the decisions made by ADMs were on track with those made by real humans, if not even more just and fair.

This shows that seeing AI models such as ADMs work in action in a specific context can greatly alter the personal perception of ADMs, making them think that using AI in specific scenarios is fair and reasonable (Stathis & Herik, 2024).

The personal experiences of participants affect their perception of ADMs. For instance, participants who were relatively older than the rest held negative views and perceptions of ADMs. This shows that the difference of opinions between generations regarding the use of AI in the real world, more notably, ADMs, is wildly different, and the difference of opinions seems to be only becoming a greeting as time goes on.

Another factor affecting the opinions adopted of AI and ADMs seems to be gender. Though this is more subtle than the age difference, female participants seem to be more pessimistic about the capabilities and justice of ADMs, while males seem to be looking at the brighter side of things and see ADMs as useful in the future. Both men and women have different opinions about how helpful ADM systems are (Stathis & Herik, 2024).

This interesting finding needs to be investigated with further studies because it might affect how AI and ADMs are made and used in ways that cater to both genders' specific general concerns and preferences. Researchers have found that the more educated a person is and familiar with certain fields, such as AI, the more positive they tend to be about ADMs (Stathis & Herik, 2024).

Participants who underwent higher education degrees tend to view ADMs as beneficial, and participants with backgrounds in fields like AI, algorithm-related fields, and programming not only viewed the use of ADMs as useful but also thought that they can be fair and just. This highlights how a deeper understanding of the underlying technology behind ADM contributes to more positive perceptions, with many individuals supporting their use in real life decision-making. However, even those with extensive educational back grounds were concerned about the possible risks due to an error (Araujo et al., 2020).

Researchers also analyzed how self-aware participants of their privacy online contributed to their opinion of ADMs. As expected, those who were more paranoid about their activity online and their privacy strongly opposed the use of ADMs; they had negative perceptions of anything AI-related in the decision-making process. This shows that ADM developers should consider people's online privacy if they want people to have a good perception of ADMs and AI systems. Those participants who were confident in their abilities to hide themselves online to be completely anonymous had a positive perception of ADMs more than those who could not hide themselves online (Araujo et al., 2020).

This interesting link between the individual's confidence in their ability to control their digital information online and their attitudes towards decision-making systems that AI powers makes it obvious that individuals have a constant battle between their empowerment and whether they accept ADMs or not (Araujo et al., 2020).

Researchers also analyzed those participants with strong moral beliefs and their tendencies towards accepting the use of ADMs. For example, those who strongly believed in financial equality had rather positive perceptions of the general use of AI in the decision-making process, as they thought ADMs were more useful and fairer than humans in this field.

This is not surprising since humans tend to have a bias in certain matters, and they subconsciously try to promote their adopted ideology, which ADMs and AI systems, in general, do not have, which is why some people prefer them for the decision-making process over humans (Araujo et al., 2020).

ADMs can be used in a variety of domains, including media, healthcare, and justice. This study also aims to compare people's perceptions of these different domains and how comfortable they are with accepting the use of ADMs to make decisions. Researchers were right that different scenarios would have different levels of comfort among the participants on whether they view the use of ADMs as appropriate or whether they view it as a tragedy waiting to happen (Araujo et al., 2020).

Participants were presented with both high-and low-impact decisions for themselves and different people, and by collecting their answers, researchers had a strong idea of the specifics of having humans or AI in the decision-making process. This method emphasizes the need to tailor ADM systems to specific fields, as public opinion can greatly differ based on the types of decisions made and their potential outcomes (Araujo et al., 2020).

One interesting aspect of the ADM systems is the examination of the socio-technical nature of ADM systems. These technologies are embedded in wider social, institutional, and organizational structures. This perspective highlights that a more accurate general understanding of the use of AI in the decision-making process considers not only the technical aspects of algorithms and AI but also the social, cultural, and ethical sides (Stathis & Herik, 2024).

In this context, the discussion of AI-assisted decision-making highlights the complexities and opportunities it presents across different sectors of society. The findings emphasize the need for a clear and flexible definition of AI specifically for legal translation. Unlike the wider use in policy-making, AI in legal translation requires careful consideration of its accuracy, cultural significance, and the need for subsequent human editing to ensure quality.

The different perceptions revealed a suggestion that there is still much work to be done to build public trust and address concerns about the fairness, benefits, and potential risks of AI-enabled decision-making. The influence of factors such as age, gender, education level, and training are important to consider (Stathis & Herik, 2024).

Additionally, the importance of privacy in public perception of the use of AI systems like ADMs to make decisions places even more emphasis on the fact that we need strong privacy measures and transparent processes when developing and using AI systems. This should be considered in the future when AI is going to be much higher than now (Stathis & Herik, 2024).

Discussions like this highlight the mixed opinions people have regarding the use of ADMs, which is becoming increasingly common in our daily lives. This perspective contributes to a deeper understanding of the advantages and challenges of developing AI models meant for real decision-making. With the rise of AI lately, it comes as no surprise that a lot of people are impressed by its magic-like abilities, like answering

whatever questions are on someone's mind, helping with their academic work, and even translating accurately with a high quality (Stathis & Herik, 2024)

However, AI has also raised concerns about matters like transparency and explainability. Since AI is used to make decisions in serious high-stakes matters such as approving loans and identifying criminals, it has become imperative to fully understand how AI works, especially in ensuring reliable levels of transparency and explainability (Stathis & Herik, 2024).

A study conducted not too long ago by Balasubramaniam et al. (2023) defined what transparency and explainability are in the first place and then explored the extent to which these large AI corporations align their models to comply with transparency, explainability, and ethical standards happened in two main phases.

Transparency and Explainability of AI Systems

2.1.1 The first phase focused on examining the ethical guidelines from 16 organizations for several domains, including but not limited to the public sector. The results indicated that every single one of the 16 organizations valued transparency and claimed that explainability is one of the main components that they focus on. As a result, the developers made a model to identify explainability needs and a template for defining explainability requirements. The tools required to examine the explainability and transparency were derived from a conference paper (Balasubramaniam et al., 2023).

Studies such as Pym (2010) and Koskinen (2000) examined how translators' personal backgrounds, experiences, and cultural understanding can influence translation outcomes.

The word "unbiased" indicates that legal translators should not discuss their personal experiences or opinions to influence the translation. Legal translation requires a high level of objectivity, so the translator must adhere to the accuracy and integrity of legal texts. Bias in legal translation is likely to distort the intended meaning of the translation, which will lead to serious legal consequences. Therefore, legal translators should be impartial, focusing only on conveying the exact meaning of the original text in a legally sound and neutral manner.

2.1.2 The second phase of this study focused on rating and analyzing the effectiveness of the model and template through practical means by attending a workshop focusing on the recruiting game. This approach lets the researchers understand organizations' views regarding transparency and explainability, and it also provides a clear method for practitioners to define and implement the requirements in AI systems (Balasubramaniam et al., 2023).

The practical application of transparency and explainability by Balasubramaniam et al, (2023) in AI has become a critical focus as these systems play an increasingly prominent role in real-world decision-making. People are concerned about the hard-to-understand nature of AI systems in general, which may be a threat to ethics, transparency, and explainability.

Those people emphasized the importance of developing some ethical guidelines to clarify that they strongly want transparency and explainability. Ethical requirements are usually defined as elements taken from well-known ethical principles, and it is very important to address the ethical concerns arising from AI in its early phases.

The findings of Balasubramaniam's (2023) study contribute significantly to the field by offering practical tools and insights for improving how AI systems are designed and assessed for transparency and explainability. It bridges the gap between high-level ethical guidelines and the practical implementation of these principles in AI development.

The structured methodology presented by researchers (2023) provides an organized system to outline the steps of incorporating transparency and explainability within AI systems. The results shed light on how difficult it is to acquire transparency and explainability within the AI system, but they are still essential to build trust and ensure that AI use continues to be ethical, which can be quite difficult to achieve in reality, but still possible nonetheless. In order to better point out the challenges of ensuring transparency and explainability within AI systems, a model and template were developed that guides people in better-defining explainability requirements.

It is essential to address ethical requirements in the early stages of the development of AI systems instead of dealing with transparency and explainability later in the process of AI development. This strategy minimizes the likelihood of ethical dilemmas arising later in development, reducing concerns for corporations and

individuals if unforeseen issues occur. As the AI system, in all of its forms, is more widely used than at any prior point in history, the need to have these large language models comply with transparency and explainability standards is likewise more important than at any prior point in history (Balasubramaniam et al., 2023).

According to Balasubramaniam et al. (2023) study, transparency, which is usually defined as a requirement that isn't functional, has an impact on the overall trustworthiness and privacy of AI in general, but it still lacks proper definitions and mechanisms. Explainability, an element closely related to transparency, is a one-functional requirement that impacts understandability and trustworthiness. It is well-known that improving explainability may negatively impact efficiency and accuracy, which is a challenge of improving explainability.

The use of AI in the workplace has been analyzed in three main ways: delegating tasks, machine tending, and maximizing human skills across five key categories of meaningful work, which include both elements that are specific to the job: task variety and autonomy, and the borders aspects, which include the personal growth of workers and social connections. Organizations seeking to safely navigate the AI-driven world of today have to place emphasis on the importance of meaningful work in an era where virtually any common task can be completed with the help of AI (Bankins & Formosa, 2023).

The practical strategies emphasize the need for future exploration to ensure AI integration positively impacts jobs (Bankins & Formosa, 2023) after employing a certain framework for the purpose of analyzing the impact that AI has on meaningful work, the results show, with high probability, what the potential outcomes are. If simple and repetitive tasks can be delegated to AI instead of humans, this will save a large proportion of workers' time, which can be used to do more tasks that AI might not be fit yet to perfect or find their purpose within the world and what their value brings to the table, which helps to recharge them with energy and gives them the hope to continue working meaningfully.

However, in the case that AI becomes fit for tasks that require more expertise and skills from humans, this will massively cause the workers' state of mind to be a wreck because then they will have a sense of value to the work they do if it can simply be replaced with an AI system, which in turns causes their work to be less meaningful and passionately done (Bankins & Formosa, 2023).

The most common forms of "machine tending" jobs that come as a result of the deployment of AI are: "managing the machine" and "minding the machine." At first glance, the similarity in the naming may give the idea to the average person that they do the same thing, but in reality, they are quite different. The first form of machine-tending jobs can create new job opportunities to improve the workers' skills and responsibilities, whereas the second form may risk decreasing the quality of job experiences because of the low-skill tasks that are all over the place.

However, AI does not always have to be portrayed as an evil invention that steals jobs from aspiring humans because AI systems can make it easier for humans to complete meaningful work if certain AI models are developed properly in the future (Bankins & Formosa, 2023).

AI can both increase and decrease worker independence, depending on how it is used. Although AI may free the workers from doing such mundane and repetitive tasks and make their autonomy better, it can also restrict the independence they feel by removing engaging work and giving workers the sense that AI has the power to do anything and that the workers are useless (Bankins & Formosa, 2023).

Additionally, concerns arise regarding AI's potential misuse for surveillance and manipulation, which could harm workers' sense of independence and self-esteem. These effects emphasize the fact that the consideration of meaningful work is important as a crucial ethical factor when deciding how to use AI (Bankins & Formosa, 2023). AI's impact on meaningful work has many ethical implications, which are further explored using the AI 4 People framework, which includes principles like helping others, avoiding harm, respecting autonomy, fairness, and explainability. This analysis uncovers that there might be contradictions between these principles and how AI operates today.

For example, while AI may benefit certain workers doing certain tasks (supporting beneficence), it may cause other workers' employment contracts to be terminated since their work can already be done by AI more efficiently and quickly. This may indicate that AI is unfair, as it may make the jobs of some people easier, and, at the same time, take over the jobs of other professionals in different fields (Bankins & Formosa, 2023).

For instance, those workers with a high-demand skill that requires a lot of skills and experience may find AI helpful because it makes certain tasks easier to complete, whereas AI replaces less-skilled workers since it can easily do what they do, which diminishes their self-esteem and sense of meaningful work. Since the current way AI operates can be described as a "black box," ethical concerns arise as a result because workers feel less competent and unable to understand their work and explain it in ways that make sense (Bankins & Formosa, 2023).

The integration of AI into the workplace raises important ethical considerations that organizations must address. It is crucial to assess whether the adoption of AI enhances or diminishes employees' sense of purpose and fulfillment in their roles. However, integrating AI into the workplace means that workers would free more of their time to focus on tasks that AI cannot do, while at the same time providing work opportunities to new workers have significant benefits in making workers feel as though their work is meaningful (Bankins & Formosa, 2023).

However, integrating AI into the workplace carries the risk of diminishing the sense of meaningful work for employees, which could impact job satisfaction and performance. Striking the right balance between utilizing AI's capabilities and maintaining a fulfilling and meaningful work experience is a complex challenge. Ensuring that AI enhances rather than replaces the human element of work is essential for its successful implementation (Bankins & Formosa, 2023).

2.2.9 Qatar is Developing its Technologies... Experts and Academics: Technological Media are Causing a Boom in Translations

Recently, machine translation has appeared thanks to technology and AI. The Qatar Computing Research Institute and Hamad bin Khalifa University have worked on the development of translation systems such as "Shaheen," which are based on neural network algorithms and deep learning. This has contributed to a remarkable development in translation related to different languages, especially between Arabic and English. Despite this, human translation has not yet lost its importance or status, and this shows that human creativity is irreplaceable (Al-Quds, 2023, March 7).

2.2.10 AI between Adoption and Patience

According to Aqel (2024), one of the biggest challenges and questions facing humans today is the issue of AI. Some believe that it is a source of anxiety and failure; others believe that it causes positive opportunities for them. AI provides huge opportunities for various fields, especially scientific research and education.

But it illustrates many of the fears and anxieties involved in its impact on society.

Firstly, AI gives way to new horizons in education. This leads to the development of the quality of the educational process by providing tools and materials for students and researchers. In addition, it helps students access information more quickly, and its role in the development of study materials and the design of various and diverse tests also improves writing skills. Secondly, AI helps teachers and researchers by giving them tools to help them in the educational process and reduce administrative burdens. It can be used in the preparation of various courses and tests. These developments have a role in helping students to participate more in the educational process (Aqel, 2024).

However, there are many concerns related to the impact of AI on the educational process and social interaction. Some believe the heavy reliance on AI reduces the teacher's role and importance, which negatively affects social values and interaction between students and teachers. As for the labor market, there are many questions related to the impact of AI on various jobs. Some research has confirmed that advanced technology will cause the disappearance of some traditional professions and the emergence of different professions that need new skills.

According to the World Economic Forum, from 2020-2050, it is likely that during these years, the world market will suffer the loss of almost 85 million jobs due to the development of AI and the emergence of new programs to keep pace with current developments. Hence, the role of organizations in adapting to various transformations and keeping pace with constant changes comes by training employees based on the skills of the 21st century (Aqel, 2024).

Aqel (2024) stated that although AI offers enormous potential for education and research, it raises various ethical questions, such as, "What is the ability of AI to deal with emotional and philosophical issues?" Even an outstanding person, when making

complex decisions, needs creativity and critical thinking, and these need to develop an ethical charter in order to use AI responsibly, especially when used in the educational process and employment. Future challenges are the importance of developing educational curricula to focus on critical thinking.

2.2.11 The Future of Legal Translation under AI

Legal translation has become highly dependent on AI technologies, especially with this huge development, such as neural machine translation and natural language processing. This technology provides great opportunities to complete legal translation quickly and efficiently, leading to reduced costs and increased international contracts. However, even now, AI faces significant challenges in legal translation, such as accuracy, understanding of the legal context, and compliance with cultural and legislative differences between different legal systems (Zitouni et al., 2024).

In the future, legal translation is expected to be based on the "hybrid translation" model, where AI is combined with human intervention to ensure the quality of translated texts. Thus, the role of a legal translator will remain primary in reviewing and correcting translations produced by AI, especially when dealing with accurate interpretations of legal terms or when dealing with complex international contracts and agreements (Dickins et al., 2017).

It is possible that AI technologies will develop and include more advanced tools that help to better understand legal contexts, such as deep learning and implicit meaning analysis, which have a role in reducing errors and increasing the level of accuracy. In addition, laws and legislation will have a key role in regulating the use of AI in legal translation, which will lead to the development of standards and controls to ensure legal compliance and high quality in translation (Zitouni et al., 2024).

2.3 The Theory Applied in the Research

2.3.1 Technology Readiness Index Theory

Whether a legal translator chooses to use AI in their work or not closely ties to technological readiness theories depends on personal and technological factors. A person's tendency to adopt new technologies that come out everyday depends on many

factors, ranging from their optimism and excitement that advocate for using these technologies to negative factors such as paranoia that could compromise safety. This is generally gauged by the technology readiness index theory (TRI) (Parasuraman, 2000).

However, legal translators are expected to refrain from adopting such technologies on a massive scale for several factors, including the dire need for human expertise and fields such as linguistic literacy, historical context, and cultural nuances that are extremely important for an accurate translation. With that said, translators are still, in fact, able to get a piece of this pie by delegating certain simple and time-consuming tasks that AI is proven to accomplish correctly, and that can be achieved by using tools such as Neural Machine Translation or advanced LLMs such as O1-Preview, Claude 3.5 Sonnet, and many others (Parasuraman, 2000).

When viewing TRI theory from a technological perspective, it basically analyses how advanced a tool is, such as translation tools in this case. In other words, the more complex a new technology is, the less likely it is to be adopted by translators. TRI evaluations also concluded that current AI models are potent and accurate in translating simple text that requires no deep historical or contextual insight, and it performs worse when there is. However, the TRI evaluation system can be critiqued in that it does not consider AI's growth, which is all over the place (Parasuraman, 2000).

In other words, Parasuraman (2000) considered that AI doesn't grow predictably and linearly. Rather, so many new models and AI tools come out daily, continually shocking us and raising our expectations. This lack in accuracy can be accounted for by adopting the Chain Linked Model, which provides constant feedback that can stay on track with the unprecedented acceleration in AI development.

What current-day AI models can do and what is expected of them in the legal translation field is still far-fetched, and there is a relatively long way to go before meeting the demands and expectations. This is because legal translation is so intricate and easily manipulated by minute nuances that using AI doesn't seem like a very smart idea to produce an accurate translation. This completely matches the "Valley of Death" concept in the context of technological advancement.

It basically states that the valley of death is the gap that AI has to overcome in order to meet demands and satisfy expectations, and in this case, the valley of death is still deep because AI has a long way to go before generating translations like those

produced by experienced human legal translators (Parasuraman, 2000).

In order to accelerate the development of AI models such that their translations are more nuanced and human-like, there are two goals to be achieved: The first is the general improvement of AI models, and the second is for models to be fine-tuned specifically for legal text. This way, legal translators are more comfortable delegating some of their tasks to AI, which cuts costs and accelerates the time it takes for accurate translation to be produced (Parasuraman, 2000).

2.4 Related Studies

A previous study completed by Zitouni et al. (2024) conducted research aimed at discovering how accurate and efficient the translations produced by Trade were. The Trades Studio was used to translate legal documents between Arabic and English. 15 Saudi translation students participated in the study, in which the post-translation behavior was analyzed. The legal documents (which were extracted from the book titled "The Reliable Guide for Legal Translation," which was authored by Adel Azzam Saqf El-Hait in 2012) they were assigned included legal words and phrases specific to Saudi Arabia and Islamic teachings rated mid-level difficulty.

Researchers took a mixed method approach to examine the practices of these students after translation by using the Trades Studio Machine Translation Post-Editing Questionnaire (TMTPEQ), which enabled the researchers to easily analyze the collected data both quantitatively and qualitatively. Results showed difficulty accurately translating certain legal terms and phrases, especially when forming complex sentences featuring sensitive information (Zitouni et al., 2024).

Qualitative analysis proved to be especially helpful when studying post-translational data to ensure accurate interpretation of linguistic, cultural, and specialized legal content. The participants of this study were enrolled in a master's degree in translation; their post-translation tasks were focused on improving the morphological, syntactic, lexical, and linguistic aspects of their translation. These students were then urged to develop ways to improve the translation quality, focusing on elegance and efficiency (Zitouni et al., 2024).

After analysis, it has been concluded that 80% of all students completed their assigned tasks correctly, which highlights their ability to improve the quality of the

translations produced by Trados Studio. Some of these strategies include the most common strategy was literal translation, accounting for 13% of all strategies, followed by rephrasing certain parts of the text (10%) and explanation (8.4%) (Zitouni et al., 2024).

Some of the strategies used least included borrowing, transposition, and modulation. Results also show that literal translation usually requires rephrasing certain parts of the text and explaining terms and phrases to convey an accurate meaning to the target language (English), especially when dealing with linguistic, cultural, and Islamic complexities found within Saudi legal documents, which could be more accurately translated if the translators abided by the post-translation tasks and conducted necessary checks (Zitouni et al., 2024).

A study by Moneus and Sahari (2024) organized a study exploring the evolution of AI and how it affects machine translation, intending to study AI's capability in translation without the need for human intervention. As machine translation services such as Amazon Translate, DeepL, and Google Translate begin to prevail alongside existing useful tools for translation such as Trados and MemoQ, translation is now easier than ever.

Innovations in this field, including large language models like ChatGPT, are now able to generate responses very similar to how a human would respond, which places more controversy on the topic of whether AI could ever compete, if not excel, when compared with human translation, especially in certain fields of translation, like legal translation (Moneus & Sahari, 2024).

Another target of the study was to compare the translation generated by AI to the translation produced by a human translator, especially legal documents, to answer the question: "Will AI ever produce more accurate translations in the legal field than humans?" In addition to that, researchers studied how the demand for translators would change in the future, now that AI is at anybody's fingertips, and to examine whether current legal translators would start using machine translation to translate their legal documents (Moneus & Sahari, 2024).

In addition, to tackle these questions, researchers selected certain legal documents to be translated by both human translators and AI; the translations were then compared and analyzed. The aim of the analysis is to discover which areas humans excel over AI, and vice versa, and which specific tasks could be more fit for

either humans or AI. This qualitative study strictly followed a nine-step approach, with the main steps being correcting, rating, and analyzing translations. 10 experienced human translators went against three AI models to translate six documents with unidentified sources (Moneus & Sahari, 2024).

Three certified translation instructors then examined and analyzed translations from both sides. After statistical analysis, researchers noted that human translators consistently performed better than AI. On average, humans had better scores in both Arabic and English translations (as a target language). This shows that human translators are not replaceable by AI and that the gap between human translators and AI is still vastly open, but the extremely fast evolution of AI in the past couple of years may tempt us to think that AI will soon surpass human abilities in translations, and only time will tell that (Moneus & Sahari, 2024).

Al-Romany Kadhim (2024) organized a study exploring AI affects machine translation, especially focusing on how human intervention is needed. In the past few years, popular translation services such as Google Translate, Amazon Translate, Microsoft Translate, Bing Translate, and Systran Translate have received massive aid from AI to improve their capabilities and accuracy, especially when used with CAD programs.

The main objective of this study is to compare the translations generated by AI and those produced by humans on legal matters to answer the frequently asked question: "Has AI surpassed human capabilities when it comes to skills such as translating?" The AI boom has left many people around the world worried about whether such innovations will replace human translators, which would be a disaster for them since translating might be their source of living, but others argue that running AI-supported machine translators are much more cost-effective, and may be better than humans at certain tasks (Al-Romany & Kadhim, 2024).

Researchers selected local and international legal documents, which were then given to three experienced translators and three machine translators to translate. With the help of existing literature on the topic, researchers were able to analyze the translations produced and rate their accuracy using the BLEU score method and identify both sides' strengths and weaknesses. It was then revealed that human translation was far superior to machine translation, consistently producing more accurate and relevant translations; this clearly shows that humans are still required to

produce accurate legal translations (Al-Romany & Kadhim, 2024).

Although translations generated by AI are far more cost and time-efficient, it still faced difficulties when dealing with certain legal terminology and conveying certain cultural nuances that may hold significant meaning. This led to an AI score of 90.5 compared to a 95.5 score for human translators. At the time of conducting this study, AI doesn't seem to have caught up yet to human-level translation, which led researchers to believe that human translators will remain essential to translate legal documents accurately, but with the rapid evolution of AI in the past couple of years, things may change (Al-Romany & Kadhim, 2024).

With that being said, researchers also expressed concern on how over-relying of AI can play a major role in deteriorating human translation skills, which can be studied further in the future by focusing on AI capabilities and whether they will ever surpass human-level translation (Al-Romany & Kadhim, 2024).

(Prieto Ramos, 2024) organized a study exploring the evolution of multi-componential models of translation competence, which is imperative to educate upcoming legal translators and forming curriculums. As AI is becoming more involved in machine translation, these models should be modified to stay current with current conventions and practices. This study also explores how to enhance these models in order to be fit for legal translation, which is broader than only institutional translation. This was done by collecting a lot of data from a variety of sources, including meetings/interviews, books of translation, and modern-day job descriptions.

Four hundred seventy-four translation specialists from more than 24 translation organizations reviewed this newly edited model. Although some of these translators held opposing points of view on some matters, the review took place anyway. Researchers stress the importance of modifying the competence of models to be more on par with the feedback from the reviewers, especially for legal text. There was not a variety of data sources for this study, including analyzing documents, job descriptions, scientific studies, interviews, and consulting experts in the field (Prieto Ramos, 2024).

This data clearly outlined the skills translation organizations seek in a translator, including knowing how to use AI to complement their work. Researchers also stressed the importance of abiding by these models and tools to produce a more accurate translation, which could also be achieved by using certain methods such as being

familiar with the specific terminology means communicating, reviewing and proofreading, especially for translations involving machines and AI. Results also show that the skills sought after by translators have not changed significantly over the years, albeit nowadays familiarity with AI tools can help translators be more efficient and accurate (Prieto Ramos, 2024).

(Rahim, 2024) organized a study exploring the ever-increasing demand for machine translation (MT) in translating legal documents, especially in the languages Arabic and English, and analyzing how adequate Google Translate is as an alternative to human translators specializing in the legal field. To achieve this, researchers used Google Translate, a free and widely available service on the internet, to translate six legal documents from English to Arabic. The translations generated were analyzed for lexical and syntactic accuracy, and Google Translate was assessed to determine how well it is able to keep up with the complex legal terminology present in the legal documents and their complex sentence structures.

Results show that Google Translate can provide quick and convenient translations, but most of the time, the accuracy of these translations is inferior to that of real human translators. Especially when working with complex legal terminology and correct lexical structure because humans who have studied legal translation and specialized in the field have a deeper understanding of such tricky concepts. In addition, coupled with their experience in the field, they can outperform AI by a large margin; such concepts include linguistic problem considerations such as polysemy, homonymy, legal doublets, as well as adverbs. In addition to that, certain issues relating to the syntax of the sentences were found (Rahim, 2024).

A recent study by Alkatheery (2023) conducted research in which he set out to examine the quality of machine translation, more specifically, translating Arabic legal text to English via Google Translate. After analyzing the outputs of Google Translate, the researcher managed to uncover the type of errors and mistakes made when translating such a genre of text, which begs the question, is using Google Translate to translate legal text appropriately? To answer this question, researchers selected five legal documents used in Saudi Arabia, and then the output of Google Translate was compared to that of a human translator.

After analysis, it was clear that the translations produced by Google Translate had a handful of errors, including lexical, syntactic, and register-related errors. The

majority of errors produced (43.4%) were caused by lexical issues, which sheds light on Google Translate's inability to accurately translate certain words and phrases. However, Google Translate seems to have redeemed itself because only 1.7% of errors were due to language omissions. 25% of all the errors produced were to do with the syntax. The legal register is a very important category for translating legal documents accurately; it allows accurate translations of certain legal terms, pronouns, and other commonly used phrases (Rashed Alkatheery, 2023).

Google Translate seems to struggle here, as it accounted for 30.2% of all errors. Researchers admit that Google Translate can be good enough to transmit general ideas, but it may struggle when translating certain complicated legal words and phrases, highlighting the importance of human supervision of the text produced. They concluded that while Google Translate can be a helpful tool in legal text translation, human supervision is essential to ensure an accurate translation, enabled by their experience in the legal translation sector (Rashed Alkatheery, 2023).

(Al-Awawdeh & Al-Shamayleh, 2023) conducted a study exploring the critical role of translation in helping people who speak different languages to communicate, especially in the legal field. Translating legal documents has always been difficult because the translator has to account for certain cultural nuances and legal practices and try to facilitate a way to convey the same meaning in the target language accurately.

Any small mistakes in the legal field might have great implications and consequences, which is precisely the reason most translators find it difficult to specialize in legal translation. This study aims to uncover barriers that stand in the way of translators and come up with solutions to them.

In order to discover these barriers, researchers analyzed the complexities comprehensively, employing a descriptive approach and qualitative methods. This helped them to identify the main three difficulties faced by legal translators, especially for translators translating English text to Arabic (whose legal systems are vastly different), which include finding translators that fit, unfamiliarity with the legal system that the English adopt, and conveying certain legal nuances to the target language (Al-Awawdeh & Al-Shamayleh, 2023).

In order to tackle these issues, researchers suggested several solutions, including the use of certain digital programs to identify the common legal nuances in order to be prepared for the future in the case that the translators come across it again, as well as translating descriptively, while abiding the theme of translation, with a clear goal in mind the nuances and the legal systems of both the source and the target languages (Al-Awawdeh & Al-Shamayleh, 2023).

Another goal of this study was to put forth certain strategies to improve the legal translations from English to Arabic, stressing the importance of linguistic and cultural familiarity, as well as the difference between legal systems, and maintaining accurate translations of certain details within the text. If the translator manages to follow these rules, they will be able to produce much more accurate translations while avoiding consequences and implications in case a previous mistake could have occurred (Al-Awawdeh & Al-Shamayleh, 2023).

A study was conducted by Khoshafah (2023) to analyze the effectiveness of ChatGPT 3.5 as a tool of communication between different cultures worldwide, enabled by its renowned ability to translate between Arabic and English. The number of people who use AI (like ChatGPT 3.5) daily for translation is increasing daily. It has become imperative for a study to be conducted examining the accuracy of the translations produced by ChatGPT 3.5 in a variety of types of texts, including but not limited to historical, literary, media, legal, and scientific texts, and directly comparing such translations by the translation of experienced real human beings in the field.

Although it is well-known that ChatGPT provides rather accurate translations of straightforward texts, this study uncovers that ChatGPT may struggle when dealing with matters requiring a very deep understanding of the matter, such as cultural or legal documents, including familiarity with relevant terminology. While ChatGPT is able to provide accurate translations to some extent, it is still seen as unwise to completely rely on them for translating crucial documents such as medical reports, legal documents, scientific studies, and literary works without any sort of human supervision and intervention (Khoshafah, 2023).

This is necessary to ensure an accurate translation that caters to the subtle cultural nuances and specific terminology that may significantly impact the meaning of the sentences. The data collected for this study was taken from various sources, including books and internet sources, to cover the different types of content.

After prompting ChatGPT and providing it with the necessary text, the generated translations were then compared to human translations made by those with experience in their respective fields. Results show that while the translations generated by ChatGPT conveyed the general meaning of the text, they still incurred errors, especially when related to a deep understanding and insight of a certain topic (such as religious and legal matters) (Khoshafah, 2023).

A rich knowledge of its context was also required for an accurate translation, and this is the part where experienced human translators performed better and provided better translations than those generated by ChatGPT. ChatGPT's translations were mostly accurate in the media field, although subtle changes may be required to enhance the translations generated, especially when choosing the right terminology in the right places. The translations generated were significantly improved after the feedback of real human translators (Khoshafah, 2023).

He concluded that people should use ChatGPT with caution, especially when translating sensitive matters such as legal, scientific, and literary documents, and that the supervision of real human translators is crucial to maintaining an accurate translation. ChatGPT indeed makes it a lot easier for people of different cultures to communicate and interact with each other; it is not worth the risk of using ChatGPT to translate sensitive documents, which may incur errors, rendering the translation not to make sense (Khoshafah, 2023).

(Jabak, 2019) a study aimed to change the fact that there is limited research on Google Translator's ability to translate texts, especially between Arabic and English. Employing qualitative methods, researchers aimed to place a score (using an error analysis framework) on the translations generated by Google Translate by comparing them to the translations present in the book authored by Dickins, Hervey, and Higgins in 2017 titled "Thinking Arabic Translation," which is also where the data for this study was collected.

The researchers (Dickins et al., 2017) ensured that the sentences extracted from this book comprehensively cover all domains related to translations (especially from Arabic to English and vice versa), including linguistic, cultural, and stylistic matters. Certain Arabic texts from this book were placed into Google Translate to generate

translations. The analysis included checking for any mistakes in the translations generated, whether lexical or syntactic errors, which can affect the meaning of the sentence significantly and as it turns out, results from the error analysis framework confirmed that this is the case; many of the sentences included such mistakes that may compromise the sentences from making sense (Jabak, 2019).

Researchers then categorized these errors into four main categories: lexical, syntactic, cultural, and contextual, which helped to shed light on the difficulties faced by Google Translate when it is tasked to convey Arabic texts into English, especially those Arabic text inclusive of complex cultural, contextual and legal elements (Jabak, 2019).

They concluded that Google Translate on its own isn't a reliable tool for Arabic-English translations, placing emphasis on how important it is for humans to take part in the translation process by eliminating linguistic mistakes and ensuring accurate translations that account for cultural and contextual nuances, that can significantly alter the meaning of sentences. Furthermore, researchers think it is important for more studies to be conducted on the matter to either confirm or challenge the results found in this study and to analyze all translation tools used for this language pair, not just Google Translate.

This study sheds light on the shortcomings of Google Translate in being able to convey an accurate meaning from one language to another, in this case, Arabic and English, especially those sentences that are culturally and contextually rich. Although Google Translate is free to use, convenient, and extremely fast, its mistakes make it unreliable and a source of misinformation and inaccuracies, highlighting the need for human translators to convey an accurate meaning.

The study sheds light on how such shortcomings may significantly impact the accuracy and quality of legal translations, making Google Translate a less appealing candidate for such tasks. The study applied Šarčević's (2000) framework of functional equivalence, in which the translations were categorized into Near-equivalence (NE), Partial equivalence (PE), and Non-equivalence (NoE) in order to rate the accuracy of the translations. Hamdia Hassan's book titled "Al Makassar in Legal Translation": A Practical Journey into the World of Legal Translation. It was handy for collecting the necessary data to conduct this analysis.

When comparing the output of Google Translate with the professionally translated versions, it was clear that Google Translate faces difficulties in translating complex legal sentences accurately, which, more often than not, simply gives a literal translation rather than that which makes sense. The repeating mistakes, particularly when translating certain complex legal terminology present with its complex sentence structure, have led to translations that were poor quality, especially for important legal documents.

Researchers concluded that Google Translate should be used with caution, especially in the legal field, and stressed the importance of human translators being present to supervise and ensure high quality and accuracy. Google Translate can work with straightforward translations. However, it struggles with more complex legal text, often scoring "good" instead of excellent.

2.5 Comments on Previous Studies

The field of AI has been advancing at an unprecedented rate, judging by this trend. Some of the insights and conclusions of these studies could likely be misleading and outdated as newer and more capable AI models are being developed every day. In addition, to prevent this from happening, constant studies should be done focusing on the latest AI developments and capabilities.

Data from several studies has been collected in this framework, but empirical data on AI and legal translation between Arabic and English may still be limited. More wide-scale studies must account for this lack of data, and this way, researchers could be more confident with their findings and conclusions because it is based on concrete and plentiful amounts of data. Countless corporations are developing AI models with wildly variable use cases, performance, and output quality.

In addition, when researchers analyze the capabilities of AI for legal translation, hundreds if not thousands of different models have their own strengths and weaknesses, and it is quite difficult to analyze every single one of them, including their individual strengths and weaknesses.

This framework focused on the general AI capabilities, which is not comprehensive, and the conclusions may not be reliable or accurate. Since this framework focuses on the Arabic and English language pair, it is important to note that

this framework might not apply to all language pairs. This is because every language pair needs to be processed by AI in a very different way because of many factors, including how close the languages are to each other where the language originates from this legal system's history of the countries speaking these languages.

The findings may not be generalized to the language pairs, as each one of them has its own challenges. It also comes as no surprise that humans, especially those specializing in the field of translation, may be biased in their studies and unfair when comparing human and AI translations. This is because it is not pleasant or fulfilling to have the idea that AI could do their work much quicker, with equal if not better quality, and with a cost close to nothing, which is always what the large translation corporations prefer. This may lead to translators losing their jobs, which is why they strive to portray AI as an inferior translation tool compared to humans.

At the time of writing this framework, there were certain laws and ethical values that surrounded the use of AI systems, which may change in the future, creating the need for new studies to be conducted on the matter to stay up to date with the latest laws and legislations regarding the use of AI.

The researcher believes that the current study differs from previous ones because it focused on the reliability term as a specific aspect and used ChatGPT-4, the newest version, and none of the previous studies have used it.

Chapter Three: Methodology

3.1 Introduction

In this chapter, the researcher highlighted the methodology used in the study, instruments and instruments validity and reliability, population, sample, data collection, data analysis, and ethical considerations.

3.2 Methodology

The current study was conducted using the mixed approach, which combined quantitative and qualitative approaches. This approach is appropriate for achieving the aims and answering the study's main questions (Abu Hamda et al., 2021). Abu Hamda added, "Quantitative and qualitative methods are the engine behind evidence-based outcomes." Therefore, a mixed study method is adopted. A mixed approach study was conducted using a questionnaire and semi-structured interviews to assess the reliability of AI in translating legal texts in Arabic and English.

3.3 Instruments of the Study

3.3.1 The First Instrument: Questionnaire

The researcher developed a questionnaire entitled "reliability of AI in translating Arabic language and English language legal text" based on the literature reviews. The questionnaire consists of three parts: the first part consists of demographic characteristics, and the second part consists of six-fifths related to the reliability of AI in translating Arabic and English legal texts.

The first fifth is about AI as a reliable alternative for translators and human beings. This fifth consists of five paragraphs, the second fifth is about the disadvantages of AI in the translation of legal texts, this fifth consists of five paragraphs, the third fifth is about the advantages of AI for translators, the fourth fifth is about the differences between AI translation tools, this fifth consists of five paragraphs, the five fifth is about the differences in opinions between English language

students and Law students, this fifth consists of five paragraphs, and the last fifth is about the professional future in the light of AI and legal translation, this fifth consists of five paragraphs. The third part of the questionnaire consists of a set of multiple-choice paragraphs related to the legal translation of each paragraph, and each paragraph contains three translation options: human translation, Google translation, and AI translation. The paragraphs have been adopted from the book *The Reliable Guide to Legal Translation* (Al-Hait, 2012). The system that has been followed is the five-point Likert Scale. It included (Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree).

3.3.2 The Second Instrument: Interview

Participants can freely answer in a semi-structured interview. The semi-structured interview combines two types of structured interviews: predefined questions and the non-structured interview, which allows the interviewee to answer them more freely and gives the experimenter a wider format for asking questions and interacting with the participant. Ruslin et al. (2022) stated that one of the advantages of semi-structured interviews is that they are flexible because their questions are open and interactive and allow the researcher to get lost in the important decorations that he can access through the answers of the actors.

It also features depth, which helps the researcher to obtain multiple types of information because the researcher can continue asking interview questions based on the participant's answers. A set of open and unrestricted questions was designed to ensure the collection of comprehensive and detailed data from professors and lecturers.

3.4 Instruments Validity

3.4.1 Questionnaire Validity

The tool was presented to three juries from Arab American University, one from Al-Quds Open University-Nablus, and one from International Islamic University-Malaysia (IIUM). The researcher considered the comments the competent juries gave after the questionnaire was presented to them.

Based on the opinion of the first jury, the following was amended:

For example, the title should be "Reliability of AI in Translating Arabic Language and English Language Legal Texts." The second jury also agreed with him in amending the title's wording.

And change the word "dispute" in the sentence "I noticed a dispute between Law and English students regarding the accuracy of AI-generated translations" to "I noticed a difference between Law and English students regarding the accuracy of AI-generated translations."

Based on the comments of the second jury, the following paragraphs have been redrafted:

1. "AI has the capability to understand complex legal terminology crucial for the accuracy of the translation" to "AI can understand complex legal terminology crucial for the accuracy of the translation."

2. "You think Law students agree with this claim compared to English language students?" to "Do you think Law students agree with this claim compared to English language students?"

3. "There is no doubt that AI and automation will take on certain roles, but you think that it will compensate for this by creating more jobs " to "There is no doubt that AI and automation will take on certain roles, and AI may compensate for this by creating more jobs."

Based on the comments of the third jury, the following paragraphs have been redrafted:

1. Replace second-person pronouns with the first.

2. "You have a specific AI model in mind that you think is more suited for legal translations due to its relatively high reliability" to, "I think that there are AI models or tools which can give better legal translations due to its relatively high reliability."

3. "You see AI affecting your occupation significantly in the future" to "I think that AI has the potential to affect my future career."

4. "There should be more investment put into the development and research of AI and its applications to improve the efficiency of the work done" to "I am in favor of investing in the development of AI and its applications to improve the efficiency of the translation process."

The fourth jury considered that the questionnaire was quite good and does not need to be amended.

The fifth jury changed the words "benefits" to "advantages" and "limitations" to "disadvantages."

3.4.2 Interview Validity

The tool was presented to three juries from Arab American University, one from Al-Quds Open University-Jenin, and one from International Islamic University-Malaysia (IIUM). The researcher considered the comments the competent juries gave after the interview questions were presented to them.

Jury 1: All questions are good, but he suggested arranging the questions from the specific (AI effects in legal translation) to the general (AI effects in translation).

Jury 2: Said there is no problem with the questions.

Jury 3: She suggested for improvement of specific questions:

1. Question No. 6: Suggested rephrasing from "Is it possible for teachers and professors to utilize AI for a better academic experience for their students? And if so, how?" to: "Can teachers and professors use AI to enhance the academic experience of their students? If so, how?"

2. New Question: Suggested to add the following question:

"Do you believe AI can replace human translators in the legal translation field? Why or why not?"

Jury 4: The questions are well-constructed and achieve the objective of the study.

Jury 5: He suggested paraphrasing the questions to be more directly related to the study's title. He commented on including the term "reliability" in some of the questions to strengthen the connection to the study's objective.

3.5 Instruments Reliability

3.5.1 Questionnaire Reliability

The instrument's reliability was calculated independently using Cronbach's alpha coefficient to find the overall alpha coefficient.

The Reliability of the First Instrument: Questionnaire

Cronbach's Alpha	Items
.71	40

3.5.2 Interview Reliability

The interviews were repeated with the same professors and lecturers after a short period, and their number reached four professors and lecturers. This repetition enables the researcher to get somewhat similar results, indicating the interview questions' reliability.

3.6 Study Population

The population of the study consisted of all BA English language students (translation branch) in the third and fourth year for those who take the legal translation course as a compulsory course and BA Law students for those who take the legal terminology course as a compulsory course, at Arab American University-Palestine.

3.7 Study Sample

The study sample was a convenience sample, including all the students who took the legal translation and legal terminology courses. The sample size was 63 students (23 English students and 40 law students).

3.8 Data Collection

The questionnaire and interviews were built to collect preliminary data from students at Arab American University in the BA English language department and the BA law department and professors and lecturers from the English department at the Arab American University. Approval was obtained from the Arab American University to distribute the questionnaire to students. It was distributed face-to-face, in addition to electronic distribution, and then the questionnaire was filled out, collected, and prepared for analysis.

3.9 Data Analysis

The SPSS program was used for data analysis. Data analysis included the descriptive and analytical sides, where the descriptive results answered questions related to demographic data and responses to satisfaction scale items in frequencies and percentages. In addition, it included a description of the satisfaction scale, subscales, means, and standard deviations. While analyzing the qualitative data (the interviews), the researcher built a frame and way to analyze them by comparing the interviewees' similarities and differences.

3.10 Ethical Considerations

Ethical approval has been granted by the Arab American University IRB (Appendix 109), which was followed by approval to start data collection from the faculty of law and English department at Arab American University, which allowed the start of data collection from the targeted students. For BA English department and BA law faculty students, data collection began with the provision of an informed written consent form that was printed on the first page of the questionnaire and consisted of an explanation of the objectives of the study.

As well as the components of the questionnaire, the expected time to answer it, the part on ensuring anonymity and confidentiality of the data collected since no names or contact information were collected, and the confidentiality of the data was maintained in sealed envelopes until the data analysis began.

The researcher and her supervisor were the only ones reviewing the data, while the data analyst blindly analyzed it. The informed consent also included a statement informing the student that he/she could withdraw from the study without having to declare any reason. In addition, the ethical approval by the Arab American University (IRB) also included the permission to conduct semi-structured interviews with four professors and lecturers from the English department at the Arab American University.

Chapter Four: Results

4.1 Introduction

This chapter provides a detailed analysis of the research questions using SPSS and writing the findings of instruments, questionnaires to (English and Law students) and the interview with English language instructors at Arab American University.

4.2 Instruments Analysis

4.2.1 Analysis of the First Instrument: The Questionnaire

The questionnaire of this research consists of three parts: The first part is demographic data, the second part is Likert Scale-5 titled reliability of AI in translating Arabic and English language legal texts, and the third part is multiple choice sentences.

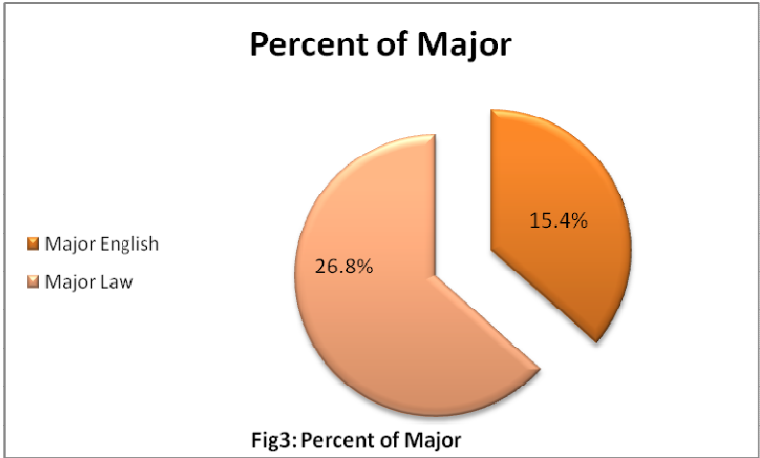
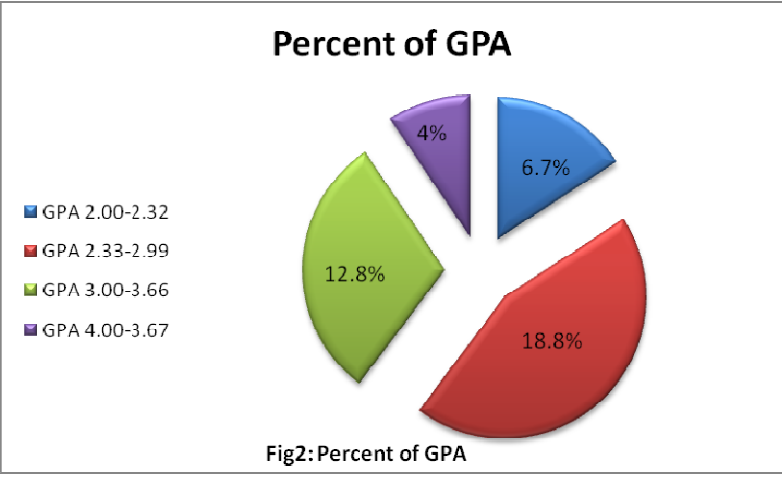
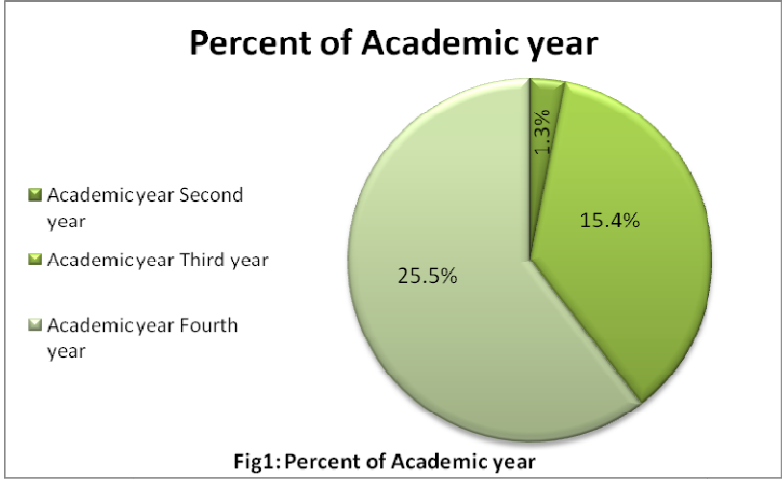
The First Section of the Questionnaire

This section consists of demographic data, such as academic year, major, and GPA, related to English and Law students at Arab American University, represented by frequency and percentage columns in the table.

In this section, the charts were used to represent the percentage column results.

Table (4.1): Demographic Data

Demographic	Variables	Frequency	Percentage
Academic year	Second year	2	1.3
	Third year	23	15.4
	Fourth year	38	25.5
Major	English	23	15.4
	Law	40	26.8
GPA	1.67-1.99	0	0
	2.00-2.32	10	6.7
	2.33-2.99	28	18.8
	3.00-3.66	19	12.8
	3.67-4.00	6	4.0



The Second Section of the Questionnaire

This section contains six questions in six separate tables, each containing five sentences. All Tables in this section are followed by the grades adopted for results interpretation, represented by arithmetic mean.

In this section, the charts represented the percentage column results.

Table (4.2): Grades adopted for result interpretation

Grades	Arithmetic mean
1-2	Very Low
2.1- 3	Low
3.1- 4	Medium
4.1- 5	Excellent

Questions of the Second Section of the Questionnaire

1. To what extent can AI translation serve as a reliable alternative for human translators considering legal text translation from the Arabic language and English language?

To answer this question, mean (M), standard deviations (SDs), percentages (P), and degree (D) of AI as a reliable alternative to human translators have been used.

The degree column in the tables represents the grade of the arithmetic mean.

Table (4.3): means (M), standard deviations (SD), percentages (P), and degree (D) for AI as a reliable alternative to human translators

AI as a Reliable Alternative to Human Translators	Mean	Std. Deviation	Percentage	Degree
I expect translations of legal documents produced by AI to be accurate.	2.97	.861	59.4	Low
Relying on AI entirely for legal translation without human intervention is reasonable.	2.06	1.045	41.2	Low
AI can understand complex legal terminology, which is crucial for the accuracy of the translation.	2.65	1.080	53	Low

AI could replace human translators in the translation of legal documents.	2.60	1.129	52	Low
I prefer to use AI when translating large legal texts.	3.38	.958	67.6	Medium
Total	2.73	1.015	54.6	Low

Table (4.3) shows that using AI as a reliable alternative to human translators came with an arithmetic mean of 2.73 and a low score. This indicates that human translators have a low reliance on AI translation. Relying on AI entirely for legal translation without human intervention is reasonable, receiving an arithmetic mean of 2.06 with a low degree. I prefer to use AI when translating large legal texts, receiving the highest and average calculation, which reached 3.38 with a medium score.

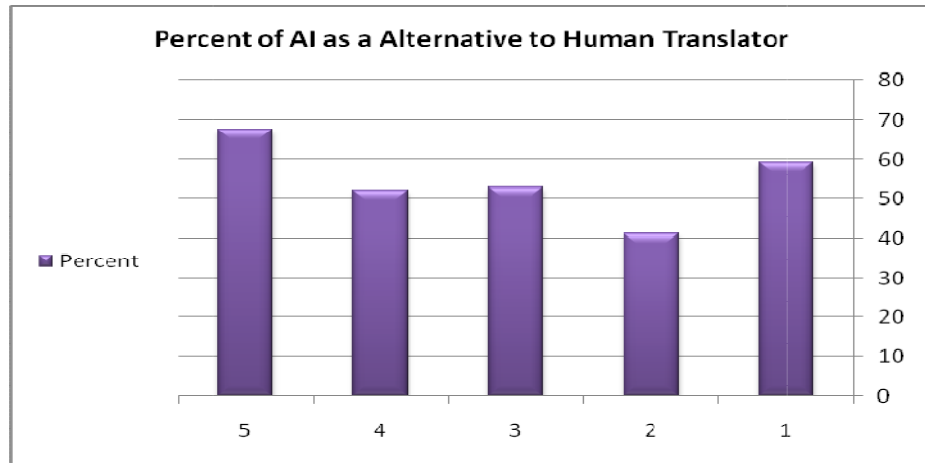


Fig (4.4): Shows the percentage for AI as a reliable alternative to human translators.

2. What are AI's limitations in translating Arabic and English language legal texts?

To answer this question, mean (M), standard deviations (SDs), percentages (P), and degree (D) of limitations for AI have been used.

Table (4.4): means (M), standard deviations (SD), percentages (P), and degree (D) for limitations for AI

Disadvantages for AI	Mean	Std. Deviation	Percentage	Degree
AI faces difficulty in accurately translating specific legal terminology.	3.49	.896	69.8	Medium
I notice legal translations produced by AI lack cultural elements.	3.48	.998	69.6	Medium
Legal translations produced by AI require extensive proofreading by humans.	3.86	.737	77.2	Medium
I think that AI is unable to translate legal terminology accurately.	3.54	.997	70.8	Medium
Using AI when translating legal texts accounts for a lack of accuracy.	3.67	.916	73.4	Medium
Total	3.60	.908	72	Medium

Table (4.4) shows that the limitations for AI in translating Arabic and English languages came with an arithmetic mean of 3.60 and a medium score. This indicates that translators face moderate limitations when relying on AI to translate legal texts. I notice legal translations produced by AI lack cultural elements, receiving an arithmetic mean of 3.48 with a medium degree. Legal translations produced by AI require extensive proofreading by humans, receiving the highest, and the average calculation reached 3.86 with a medium score.

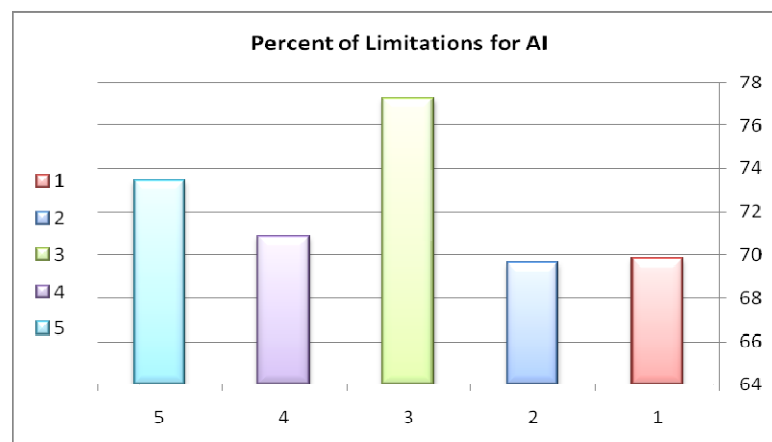


Fig (4.5): Shows the percentage of limitations for AI.

3. How can translators benefit from AI in translating legal texts in Arabic and English ?

To answer this question, mean (M), standard deviations (SDs), percentages (P), and degree (D) of benefits from AI.

Table (4.5): means (M), standard deviations (SD), percentages (P), and degree (D) for benefits of AI

Advantages from AI	Mean	Std. Deviation	Percentage	Degree
AI helps human translators accelerate the process of legal translation.	3.90	.734	78	Medium
Human legal translators are allowed to use AI to draft a translation of a legal text to save time and effort.	3.92	.921	78.4	Medium
AI saves human translators valuable time and effort and reduces stress in large translation projects.	3.90	.712	78	Medium
AI helps in improving the quality of translations produced by humans.	3.19	.895	63.8	Medium
AI aids humans in translating legal texts.	3.94	.669	78.8	Medium
Total	3.77	.786	75.4	Medium

Table (4.5) shows that the benefits of AI in translating Arabic language and English language legal texts came with an arithmetic mean of 3.77 and a medium score. This indicates that translators have confirmed that the benefit of translating legal texts using AI is average. AI helps in improving the quality of translations produced by humans, receiving an arithmetic mean of 3.19 with a medium degree. AI aids humans in translating legal texts, receiving the highest, and the average calculation reached 3.94 with a medium score.

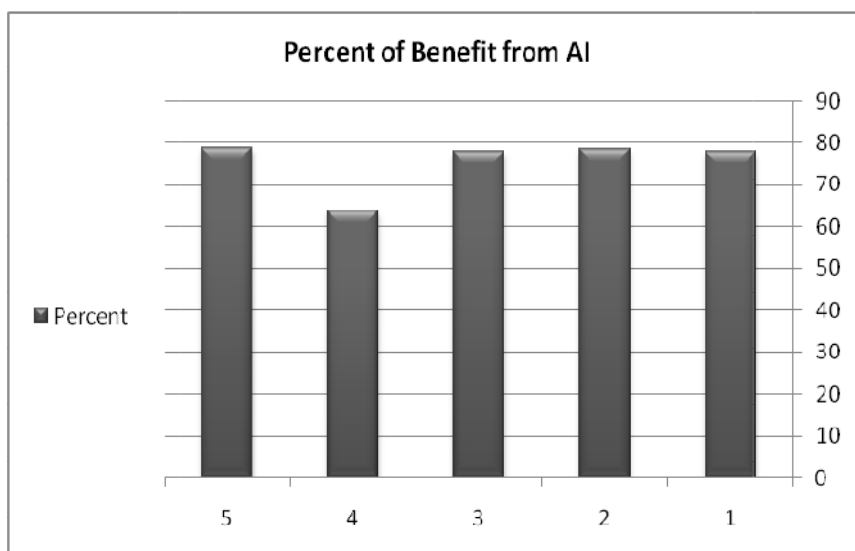


Fig (4.6): Shows the percentage of benefits from AI

4. Are there any significant differences between different AI translators' reliability in translating Arabic and English legal texts?

To answer this question, the mean (M), standard deviations (SDs), percentages (P), and degree (D) of differences between different AI translators' reliability.

Table (4.6): means (M), standard deviations (SD), percentages (P), and degree (D) for differences between different AI translators' reliability

Differences Between Different AI Translators' Reliability	Mean	Std. Deviation	Percentage	Degree
I noticed a large gap in quality between the various AI translation tools.	3.59	.891	71.8	Medium
I think that the different AI models have varying strengths and weaknesses when dealing with specific legal translation tasks.	4.03	.671	80.6	Excellent
I have had an unpleasant experience using certain AI models for translating legal texts accurately.	3.25	1.107	65	Medium

I believe that AI models have varying levels of accurate interpretation and comprehension of certain legal terminology.	3.79	.722	75.8	Medium
I think that there are AI models or tools which can give better legal translations due to its relatively high reliability.	3.78	.792	75.6	Medium
Total	3.68	.836	73.6	Medium

Table (4.6) shows that the differences between different AI translators' reliability came with an arithmetic mean of 3.68 and a medium score. This shows that the percentage of differences between the AI translators was obvious. I have had an unpleasant experience using certain AI models for translating legal texts accurately, receiving an arithmetic mean of 3.25 with a medium degree. I think that the different AI models have varying strengths and weaknesses when dealing with specific legal translation tasks, receiving the highest, and the average calculation reached 4.03 with an excellent score.

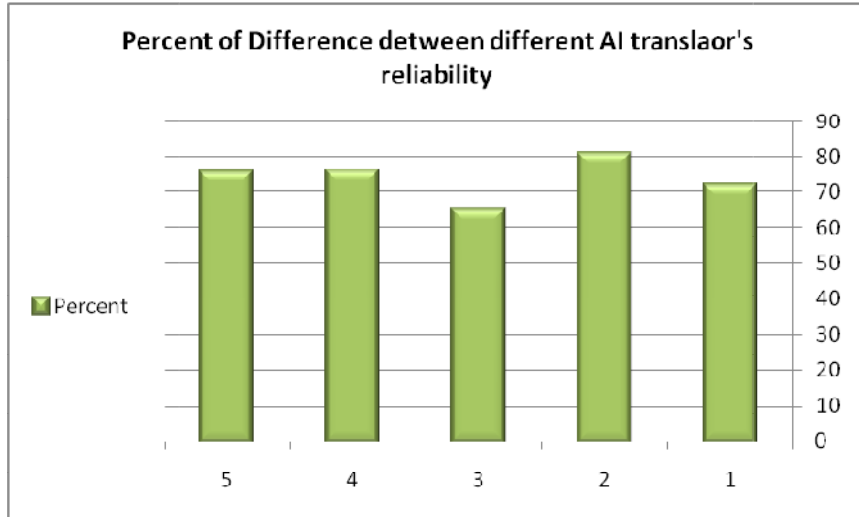


Fig (4.7): Shows the percentage of differences between different AI translators' reliability.

5. Are there any statistically significant differences between BA English students and Law students' perspectives on AI translators?

To answer this question, mean (M), standard deviations (SDs), percentages (P), and degree (D) of differences in opinions between English and Law students.

Table (4.7): means (M), standard deviations (SD), percentages (P), and degree (D) for differences in opinions between English and Law students

Differences in Opinions Between English and Law Students	Mean	Std. Deviation	Percentage	Degree
"Legal translations produced by humans are more reliable and trustworthy when compared to AI." Do you think Law students agree with this claim compared to English language students?	4.05	.812	81	Excellent
English language students hold the view that the quality of translations produced by AI in the legal field is identical to other genres of text.	2.89	1.018	57.8	Low
I noticed a difference between Law and English students regarding the accuracy of translations generated by AI.	3.73	.827	74.6	Medium
Law students tend to be more cautious when using AI tools to translate legal texts compared to English students.	3.51	1.230	70.2	Medium
I realized that there is a significant gap between the views held by English and Law students regarding the reliability of using AI for translating legal texts.	3.71	.888	74.2	Medium
Total	3.57	.955	71.4	Medium

Table (4.7) shows that the differences in opinions between English and Law Students came with an arithmetic mean of 3.57 and a medium score. This shows that the divergence of opinions between the two disciplines is obvious. English language students believe that the quality of translations produced by AI in the legal field is identical to other text genres, receiving an arithmetic mean of 2.89 with a low degree. "Legal translations produced by humans are more reliable and trustworthy when compared to AI." Do you think Law students agree with this claim compared to English language students? Receiving the highest and the average calculation reached 4.05 with an excellent score.

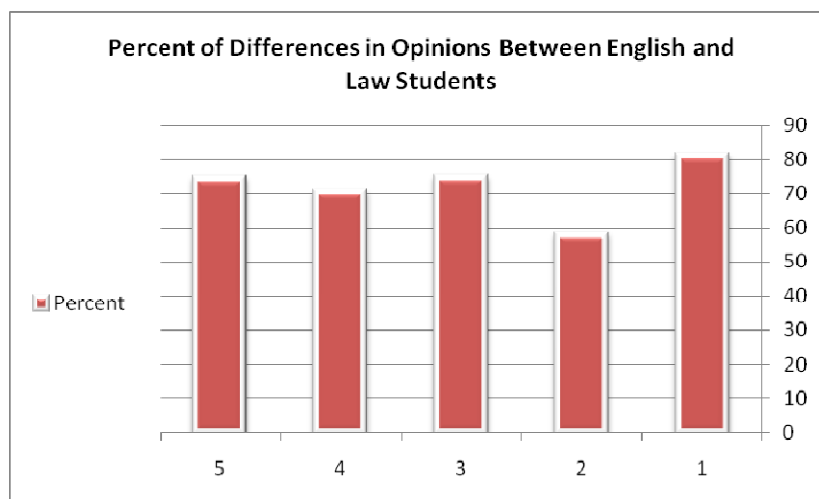


Fig (4.8): Shows the percentage of differences in opinions between English and Law students

6. What is the professional future in the light of AI and legal translation from the students' point of view?

To answer this question, mean (M), standard deviations (SDs), percentages (P), and degree (D) of the future of careers in light of AI and legal translation.

Table (4.8): means (M), standard deviations (SD), percentages (P), and degree (D) for the future of careers in light of AI and legal translation

The Future of Careers in Light of AI and Legal Translation	Mean	Std. Deviation	Percentage	Degree
I think that AI has the potential to affect my future career.	3.60	1.040	72	Medium
I think I'm well-equipped with the necessary skills crucial for staying up to date with technological advancements in my future career as a translator.	3.33	.741	66.6	Medium
Undoubtedly, AI and automation will take over certain roles, and AI may make up for this by creating more job opportunities.	3.73	.827	74.6	Medium
I think the current workplace tries its best to utilize AI for certain tasks.	3.38	.831	67.6	Medium

I am in favor of investing in the development of AI and its applications to improve the efficiency of the translation process.	3.89	.935	77.8	Medium
Total	3.58	.874	71.6	Medium

Table (4.8) shows that the future of careers in the light of AI and legal translation from the students came with an arithmetic mean of 3.58 and a medium score. This indicates that AI has a future career in legal translation. I think I'm well-equipped with the necessary skills crucial for staying up to date with the technological advancement in my future career as a translator, receiving an arithmetic mean of 3.33 with a medium degree. I favor investing in the development of AI and its applications to improve the efficiency of the translation process, receiving the highest average calculation, which reached 3.89 with a medium score.

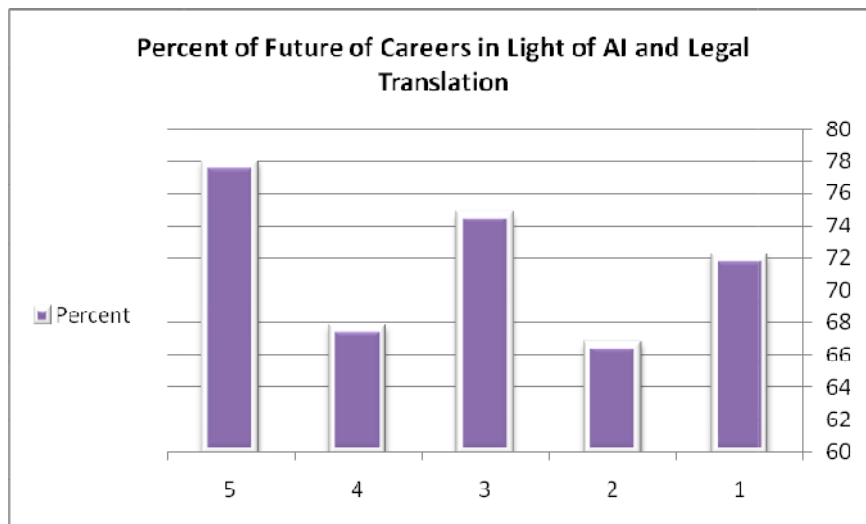


Fig (4.9): Shows the percentage of future careers in light of AI and legal translation.

Hypotheses

1. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of AI in translating legal texts between Arabic and English due to the academic specialization variable.

To test this hypothesis, use the T-test test.

Table (4.9): Shows the results of the T-test for the academic specialization variable

	F	Sig	T	df
Equal variances assumed	.225	.637	-2.500-	61
Equal variances not assumed.			-2.612-	52.238

Table (4.9) shows that there are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the academic specialization variable, the Sig value in T-test was 0.637 (greater than 0.05).

2. There are no statistically significant differences at ($a \geq 0.05$) among students in the reliability of AI in translating legal texts between Arabic and English due to the academic year variable.

To test this hypothesis, use the one-way ANOVA test.

Table (4.10): Shows the results of the One-way ANOVA test for the academic year variable

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	225.222	2	112.611	1.725	.187
Within Groups	3917.857	60	65.298		
Total	4143.079	62			

Table (4.10) shows that the Sig value was 0.187 (greater than 0.05), which means that there were no significant differences between students based on the academic year variable.

3. Due to the GPA variable, there are no statistically significant differences ($\alpha \geq 0.05$) among students in the reliability of AI in translating legal texts between Arabic and English.

To test this hypothesis, use the one-way ANOVA test.

Table (4.11): Shows the results of the one-way ANOVA test for the GPA variable

	Sum of Squares	df	Mean Square	F	Sig
Between Groups	306.860	3	102.287	1.573	.205
Within Groups	3836.220	59	65.021		
Total	4143.079	62			

Table (4.11) shows that the Sig value was 0.205 (greater than 0.05), which means that there were no significant differences between students based on the GPA variable.

The Third Section of the Questionnaire

This section is a multiple-choice table titled the main question: "Do students prefer human translation of legal texts, ChatGPT, or Google Translate?" consists of 10 paragraphs, each consisting of three translated sentence options using legal translation tools, such as human translation, ChatGPT, and Google Translate, represented by frequency and percentage columns in the table.

The Question:

Do students prefer the human translation of legal texts, ChatGPT, or Google Translate?

Table (4.12) Shows the type of preferred legal translation tool

#	Type of translation	Frequency	Percentage
His debt was reduced considerably.	Human Translation	8	5.4
	ChatGPT	32	21.5
	Google Translate	23	15.4
There was a 10% deduction in price and cost.	Human Translation	19	12.8
	ChatGPT	29	19.5
	Google Translate	15	10.1
The court passed its judgment in the case present before it.	Human Translation	9	6.0
	ChatGPT	31	20.8
	Google Translate	23	15.4
After only two hours of deliberations, the jurors reached a verdict.	Human Translation	14	9.4
	ChatGPT	25	16.8
	Google Translate	24	16.1
This contract's preamble is considered an integral part	Human Translation	11	7.4
	ChatGPT	30	20.1

and shall be read along with it as one unit.	Google Translate	22	14.8
The second party shall pay all expenses for the car, such as fuel, parking, and traffic fines.	Human Translation	18	12.1
	ChatGPT	27	18.1
	Google Translate	18	12.1
Upon the request of the first party, the second party shall pay the necessary fees and expenses to acquire his rights.	Human Translation	17	11.4
	ChatGPT	30	20.1
	Google Translate	16	10.7
The lessee may not use the leased flat in a way that violates Shari'a, law, morals, or public order.	Human Translation	11	7.4
	ChatGPT	22	14.8
	Google Translate	30	20.1
Except where a fire or other emergency exists, the lessor may not enter the premises without the lessee's approval.	Human Translation	18	12.1
	ChatGPT	26	17.4
	Google Translate	19	12.8
The second party shall not authorize any other lawyer/ attorney during the validity of this term.	Human Translation	20	13.4
	ChatGPT	31	20.8

	Google Translate	12	8.1
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The results show that students' reliance on translation using ChatGPT is the first option. The percentages ranged from 14.8% to 21.5%. Then, Google Translate, where the percentages ranged from 8.1% to 20.1%. In last place are human translations, with a percentage ranging from 5.4% to 13.4%.

4.2.2 Analysis of the Second Instrument: The Interviews

This instrument consists of five questions and has been administered to four English language academics from Arab American University regarding the reliability of AI in translating Arabic language and English language legal texts.

Interviews Questions

1. How does AI contribute to the reliability of the legal translation industry? In your opinion, what percentage of students rely on AI in their studies?

Table (4.13): Shows the answers of academics to the first question

Name	Answers
Participant 1	Well, I think AI is very important in translation generally because many students rely on AI. According to the percentage, many students use AI in their studies because it's available, cheap, practical, and dynamic.
Participant 2	Well, I would say yes and no. Yes, AI could be good for terminology because there are a lot of terms in legal translation to set. No, for putting the words in sentences and connecting with each other. Additionally, I think too many students depend on AI in their studies.
Participant 3	Yes, there are some, but not 100%. It could be from 60%-70% maximum. This is because most of these terms are technical. According to students, I think a high percentage of them depend on AI.

Participant 4	It guides them in consistency and speed in legal translation as it reduces their mistakes. Students rely on AI tools for finding terms in the second language drafting, with about 50%-80% incorporating AI in their studies.
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The four academics agreed that "AI owns a role in legal translation both in defining terminology and improving speed and consistency."The first and third participants agreed, "AI has various benefits, but it cannot completely replace humans." The fourth and second participants agreed "on the limited reliance on AI in the formulation of sentences and the interconnection of texts."

As for the percentage of students relying on AI, the first and second participants agreed that "a large percentage of students rely on AI, "while Participant 4 estimates that the percentage of students ranges between 50%-80% as they use it to help them formulate and search for terms. As for the third participant, he estimates that the percentage ranges between 60% and 70%.

2. What are the challenges of using AI in legal translation, specifically when translating between Arabic and English?

Table (4.14): Shows the answers of academics to the second question

Name	Answers
Participant 1	The subject depends on the outcome produced by AI. For example, one word may change the whole meaning; if you do that; you will sound less reliable, unprofessional, and can't have a true copy of the original text.
Participant 2	When it comes to legal translation, sometimes you have to translate in a context of life and death, especially in court proceedings as you know like trials, so when you come to this, any mistake could be a failure. And I think in a specific context, AI technology is not the right way to take. Another challenge that may be faced by students in university while using AI is the way they use it to make the text look natural, but they fail because the language produced by AI is rigid.

Participant 3	Any text is not 100% technical, which means it is technical. So, whenever we have literature here, challenges come. Moreover, the challenges of AI or machine translation won't be able to translate anything other than specialized terminology.
Participant 4	It sometimes has some difficulties in context legal terminology and often fails to capture specific cultural, taboo, or legal meanings.

The four academics agreed "that AI faces difficulties in providing accurate legal translations, particularly with regard to context and terminology." They disagreed that first and second participants "considered that the percentage of error in legal translation is likely to cause consequences affecting professional life and death." While the third and fourth participants "agreed that the challenges are caused by the inability of AI in dealing with literary or cultural texts."

3. What are the moral values that AI users must abide by while using it in legal translation to ensure the reliability of their work / study?

Table (4.15): Shows the answers of academics to the third question

Name	Answers
Participant 1	I think it's related to ethics. If you are not ethical in translating specifically legal texts; then it's a problematic issue because at the end you might fall into a category. I mean to be unethical translator without ethics or reliabilities is a problem and you might lose your reputation. Thereafter, if I'm not trust of legal translator as a client, he/she will get caught at the end of the day because people will realize you are not efficiently probable for this mission. Briefly, it all comes down to trust.
Participant 2	Well, I would say whatever you take from AI technologies, you have to document this as external sources you have cited. For example, if you are taken from ChatGPT or Google Gemini, you must say I'm taken from it. Moreover, according to Google Translate, I don't think it is a good way to translate such demanding legal texts because it doesn't have enough power for this process.

Participant 3	We have to have a translator's intervention (human beings). Regardless, we can't depend on AI even in legal translation.
Participant 4	Users should make sure that there is accuracy, confidentiality, and transparency. They should avoid complete reliance on AI for sensitive legal decisions and verify all the products of translation to confirm trusted products of translation.

The four academics agreed on "the importance of human intervention in order to verify the quality of translation, as well as the need for accuracy and transparency in dealing with legal texts." The first participant stressed "the need to adhere to the ethical side and trust," while the second participant stressed "the need to document sources as an ethical practice," and the fourth participant "focused on confidentiality and verification to ensure the final product."

4. Do you believe AI can replace human translators in the legal translation field? Why or why not?

Table (4.16): Shows the answers of academics to the fourth question

Name	Answers
Participant 1	No, I don't think that AI can replace human translators in any way because cultural nuances, for example, may be up-and-down and can't be translated by depending only on AI or translation machines. As a result, human intervention is a must besides AI.
Participant 2	I don't think that AI technologies will replace human beings because AI can sometimes deal with linguistic aspects but can't deal with some human sides (non-linguistic aspects). For example, AI can't deal with the tone, register with the language, and attitude of the writer or speaker.
Participant 3	There is no way. Because the text produced by AI is not 100% technical in legal translation, so, I think we can depend on it partially but of course not completely as the only main tool.

Participant 4	It can assist but cannot completely replace human translators due to the need for comprehensive understanding and ethical decision-making of legal context.
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The four academics agreed that "AI cannot completely replace a human translator, in addition to the importance of human intervention to ensure accuracy and integrity of legal translation." They disagreed that Participant 1 emphasized the "inability of AI to translate cultural differences." The second participant emphasized the "inability to handle tone and register," while the third participant stressed "the importance of not fully relying on AI as technical texts." The fourth participant stressed "the need to adhere to ethical decisions and comprehensive understanding."

5. Can teachers and professors use AI to enhance their students' academic experience? If so, how?

Table (4.17): Shows the answers of academics to the fifth question

Name	Answers
Participant 1	Well, I think so. For example, in writing skills courses for essays, you can use AI apps like ChatGPT to write a first draft or final draft or even translate. AI could also be effective supplementary material for students to improve their writing, imagination, and choices. So, I think it's an effective tool teachers use in the classroom.
Participant 2	Yes, that's true. Educators can always use AI technology to enhance their processes. For example, if ChatGPT gives you a text you are not satisfied with, you can ask it to elaborate, rephrase, rewrite, clarify, and illustrate the sentences again. Thus, I think AI is a helpful tool for teachers in this regard.
Participant 3	To some extent, yes, because It is fast, but other than that, no, you cannot depend on it at all.
Participant 4	Professors can use it for grading assistance sometimes and to enhance research tools, which makes learning more interactive and efficient.

The four academics agreed that "the use of AI can be used to improve students' academic experience but in varying proportions. In addition, it can be an auxiliary tool for the student and not the main one." The first and second participants agreed that "AI can be used to improve writing and expression skills."

The third and fourth participants differed in their degree of reliability; the third participant believed "it can be used in part because of its speed, not a reliable alternative." The fourth participant focused "on the importance of using it to correct mistakes and make the educational process more efficient."

As for focusing on specific areas, the first participant stressed that "the use of AI improves writing and translation," and the second participant emphasized "its role in rewriting texts and clarity."

Chapter Five: Discussion

5.1 Introduction

In this fifth chapter, the researcher will review and discuss the results obtained through the research and formulate the recommendations resulting from these findings. This chapter represents the final step in the research, where the data and conclusions reached are interpreted, and practical guidance is provided for future policies and practices in the studied field.

The discussion of the results revolves around data analysis and understanding what has been achieved, including clarifying the relationships, trends, and contradictions discovered. Additionally, the importance of the results in the context of the study and the factors that may have influenced them will be discussed.

Subsequently, practical recommendations will be formulated to guide future policies and practices. These recommendations are based on the actual results of the research, with an explanation of how they can be applied and the potential benefits they can bring to the field.

5.2 Discussion

5.2.1 The First Section of the Questionnaire

The demographic data in Table (4.1) provides insights into the participants' academic year, major, and GPA distribution. The researcher observed that the majority of participants are in the fourth academic year with a rate of (25.5%), followed by the third academic year with a rate of (15.4%) and the second academic year with a rate of (1.3%). Regarding the major, Law students constitute the largest portion with a rate of (26.8%), while English students represent (15.4%) of the sample.

Regarding GPA, the first range falls within 3.67-4.00 (4.0%), the second range falls within 3.00-3.66 (12.8%), the third range falls within 2.33-2.99 (18.8%), while the fourth range falls within 2.00- 2.32 (6.7%). The researcher believes that this distribution reflects a diverse academic performance, with a concentration of fourth-academic-year Law students familiar with AI technology tools in translating legal texts.

5.2.2 The Second Section of the Questionnaire

1- To what extent can AI translation serve as a reliable alternative for human translators considering legal text translation from the Arabic language and English language?

The results in Table (4.3) showed a low rating regarding the reliance on translation through AI as a reliable alternative for human translators in translating legal texts.

The percentage of students who agree on this point is 54.6% of the total number of students, and this indicates that there is doubt about the tendency of students to rely on AI completely, possibly because legal texts need high accuracy and correct translation of terms and laws.

However, a large number of students showed that they use AI in legal translation to a large extent, reaching a percentage of 67.6%, but their full reliance on it in legal translation was low at 41.2%. This may be because there is considerable doubt about the ability of AI to provide accurate and reliable legal translation without human oversight.

In addition, AI faces challenges in dealing with complex legal terminology, as the percentage reached 53%. This percentage indicates that AI still lacks the ability to realize different legal terms and has difficulty dealing with the various contexts that affect the text of legal translation.

The idea of replacing human translators with AI also had a low percentage of 52%, which confirms the students' opinions that AI cannot replace human translators, especially in fields that require translation according to specific terminology.

The researcher believes that AI is considered an adjunct to human translators and can contribute to improving the efficiency of human translators, especially in the processing of large texts or in complex legal terminology, as it helps reduce the time and effort needed by human translators.

However, students stressed that it could not be fully relied upon in the translation of legal texts due to its complexity and the great accuracy it requires, which indicates the need to develop AI techniques in order to develop efficiency and accuracy with the need for a human translator, as it is essential to ensure the quality of legal translation.

The current study is similar to previous studies in that AI challenges dealing with

complex legal terminology and the ability to accurately understand contexts.

This is agreed upon by the study (Zitouni et al., 2024), the study (Al-Romany & Kadhim, 2024), which showed challenges in legal translation accurately, and (Moneus & Sahari, 2024) study which confirmed that human translation surpasses AI in accuracy and legal translation.

However, the current study showed that translators' reliance on AI as a substitute for translation is low, which contrasts with the study by Prieto Ramos (2024) that confirmed AI can be an effective tool in improving the legal translation.

2- What are the limitations of AI in translating Arabic and English legal texts?

The results in Table (4.4) showed that the percentage of limitations faced by human translators regarding the use of AI in legal translation reached 72%, which indicates that human translators face significant challenges. As they face challenges related to the difficulty of AI dealing with legal translation at a rate of 69.8%, this may be due to the nature of legal translation that needs accuracy and specific terminology that other contexts cannot replace.

In addition, students confirmed that it lacks cultural sensitivity and contextual elements, with a rate of 69.6%. Possibly because each country has its own law, the translation of legal texts must take into account the country's cultural elements.

Students emphasized the need for an intensive review of the translations generated by AI because AI cannot yet produce legal translation texts completely without human intervention, as it needs constant revision. In addition to its inability to translate legal terms with 70.8% accuracy, this is because legal texts contain complex phrases and specific definitions that cannot be altered with different terms. The errors produced by AI in legal translation can lead to misinterpretation of laws and contracts, which can have significant consequences.

AI is one of the important tools in the field of legal education; however, it cannot be used independently. Human translators face moderate and particularly specific constraints regarding accuracy, cultural factors, and how to deal with complex legal terminology.

The researcher believes that AI has many disadvantages that may affect generated legal texts, such as the lack of cultural elements and accuracy. Hence, human

intervention, besides AI, is a must for having precise texts.

Previous studies are related to current studies on AI's challenges in translating legal texts. As Zitouni et al. (2024) reported difficulties in accurately translating legal terms. The study by Moneus and Sahari (2024) and Al-Romany and Kadhim (2024) emphasized the importance of human review to ensure the accuracy of the translation. The results of the current study confirm this.

They differ in focusing on the accuracy of translations, as the study by Rahim (2024) confirmed that Google Translate is less accurate for the human translation of legal texts. The current study shows that AI lacks accuracy in legal translation. The study by Prieto Ramos (2024) and Khoshafah (2023) found that AI contributes to improving legal translation, while the current study confirmed that legal translation using AI still faces challenges.

3- How can translators benefit from AI in translating legal texts from Arabic and English?

The results in Table (4.5) showed that the benefits of using AI in translating legal texts related to Arabic and English reached 75.4%, which indicates that translators emphasize the benefits of using AI in translating legal texts moderately. It helps human translators increase legal translation speed by 78%, which allows tasks to be completed more quickly by saving time and effort. This is what students confirmed: It reduces the time and effort needed by human translators by 78%. In addition, it helps prepare initial drafts related to the texts translated by the AI, which helps translators improve the final legal quality.

Students confirmed that AI helps detect errors made by students, but it cannot work with the same accuracy as a human translator. In addition, it is an effective tool in supporting translators in their work, achieving a rate of 78.8%, regardless of whether it is relied upon for providing suggestions or obtaining a preliminary translation.

The researcher believes that AI provides multiple benefits for legal translators; however, it is considered an assisting tool rather than a substitute for the human translator, which contributes to reducing time and effort, improving work quality,

accelerating the process of legal translation and helps human to produce relatively high accurate legal translated texts, in addition to the importance of human intervention in order to ensure high accuracy and quality.

The current study agrees with the study (Al-Romany & Kadhim, 2024) that human translation outperforms AI translation and reduces time and effort. This allows the translator to focus on the process of improving the quality of the final output.

It differs from the study of Sahari (2024). It focused on AI's ability to translate without human intervention, unlike current studies that confirmed that it cannot be relied upon without human intervention.

4- Are there any significant differences between different AI translators' reliability in translating Arabic and English legal texts?

The results in Table (4.6) confirmed that there are differences between the reliability of machine translators in translating legal texts in Arabic and English, with a rate of 73.6%, which confirms that there are differences between different machine translation tools as 71.8% of the students confirmed that there are large gaps between different machine translation tools, which indicates that some tools are more reliable in legal translation than others. In addition to the students' significant awareness that legal translation using various AI programs has strengths and weaknesses, this indicates that some models need to be developed in order to achieve better legal translation and higher accuracy.

Students confirmed that they encountered many errors in the translations produced by AI, with 65% of their experiences being negative, and the accuracy they achieved varied by 75.8%, as the accuracy depends on the type of model used in translation, as many intelligence translation programs differ in accuracy, reliability, and the errors produced.

Many AI programs used by human translators have higher accuracy than others, so choosing the appropriate tool that best fits the type of legal translation needed is important.

The researcher believes that there are noticeable differences in the various machine translation tools in terms of accuracy, reliability, and quality, and thus, the most appropriate tool should be chosen when an AI translation is needed. So to get a

satisfied and acceptable legal translation, the translator must be intelligent when they choosing the suitable tool.

The current study agrees with the studies by Zitouni et al. (2024) and Moneus and Sahari (2024), which confirmed differences between AI translation tools in terms of accuracy and reliability, especially when translating legal texts. The study by (Al-Romany &Kadhim, 2024) showed that human translation outperforms AI-based translation.

In contrast to the study by Prieto Ramos (2024), this focused on the development of translation models that integrate AI into the translator's work, while studies have focused on the students' experience in using AI as a tool for legal translation.

5- Are there any statistically significant differences between BA English and Law students' perspectives on AI translators?

The results in Table (4.7) showed differences in the opinions of English and Law language students regarding the use of AI in translating legal texts, which reached 71.4%. Since legal translations produced by humans are 81% more reliable than those produced by AI, law students tend to prefer human translations due to their profession's high accuracy, reliability, and nature. As for English language students, they believe that the quality of legal translation obtained from AI is similar to the translation obtained from humans, with a percentage of 57.8%. This indicates that English language students are less concerned with the complexity of texts than Law students.

There is a moderate difference between Law students and English language students at a rate of 74.6%, which indicates that Law students are more sensitive and precise when translating texts. This explains why Law students tend to be more cautious in translating their texts using AI than English language students, with a percentage of 70.2%. The gap in opinions regarding the reliability of AI in legal translation reached 74.2%, indicating a difference in knowledge between expectations.

The researcher believes that the differences between the opinions of English language students and Law students were clear regarding translation using AI. Law students focus entirely on accuracy and reliability compared to English language

students, who place less emphasis on accuracy and reliability. Thus, caution in using fit AI tool is indeed for Law students generally and for those translators who working in courts particularly since their major is sensitive and any minor mistake may lead them to legal accountability at the end of the day.

The current question aligns with the study by Zitouni et al. (2024) and the study by Rahim (2024), where they confirmed the existence of significant difficulties in translating legal texts using AI in terms of accuracy and complexity, which requires human intervention.

It differs in focus from the study of (Prieto Ramos, 2024) as it focused on the possibility of integrating AI as a tool to improve participants' performance, while my study focused on understanding the opinions of Law and English language students regarding legal translation.

6- What is the professional future in the light of AI and legal translation from the students' point of view?

The results in Table (4.8) showed that students recognize the importance of AI in shaping their future careers, with a percentage of 71.6%, as Law students know how AI will impact their careers. 72% of the students recognize that many can transition and rely on legal translation using AI, whether it is to improve the quality of translation or to change work dynamics.

The percentage of students who believe they are fully equipped with the necessary skills for future technological developments is 66.6%. This shows that students emphasize the importance of AI and can adapt to technological developments to a moderate degree. They need training in the use of various tools and technologies, which plays a major role in students' realization that they may lose jobs due to relying on AI in translation or creating new jobs related to AI and legal translation. Students strongly support the development of technology related to the use of AI to improve efficiency and accuracy in legal translation.

The researcher believes that there is a promising future of using AI in some careers. Additionally, students from English and Law faculty are keeping up the developments of technology world. But, there are some concerns about losing their jobs in case the AI revolutionary progress overcomes humans. To avoid this happening, the

researcher advises them to qualify themselves enough in order to be the main controller at jobs.

Previous studies (Zitouni et al., 2024; Moneus & Sahari, 2024) emphasized the importance of human review in order to ensure the accuracy of legal translation. In contrast to the study by (Rahim, 2024) and (Rashed Alkatheery, 2023), the previous studies focused on comparing the accuracy of translations through AI with human translations, but the current study aimed to identify students' views on the impact of AI on their future careers.

Hypotheses

1. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the academic specialization variable.

The results in Table (4.9) indicated that there were no statistically significant differences among students in the reliability of using AI in translating legal texts in Arabic and English according to the variable of academic specialization. The results showed that Law students and Translation students have similar opinions on the reliability of AI in legal translation. The researcher believes that the reason is that students' academic background has nothing to do with influencing their confidence in using AI. This indicates the reason related to the large use of AI tools in different disciplines.

2. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the academic year variable.

The results in Table (4.10) indicated no statistically significant differences in the reliability of the use of AI in translating legal texts in Arabic and English according to the variable of the academic year. Students may have similar perceptions of reliability

because of the widespread use of AI techniques in all fields, including academia. The researcher believes that students face various challenges in translating legal texts regardless of academic level... These challenges are related to the accuracy and terminology of legal translation.

3. There are no statistically significant differences at ($\alpha \geq 0.05$) among students in the reliability of the use of AI in translating legal texts between Arabic and English languages due to the GPA variable.

The results in Table (4.11) indicated that there were no statistically significant differences in the reliability of using AI in translating legal texts in Arabic and English according to the GPA variable. The reason likely is that students have similar perceptions of reliability due to the widespread use of AI technologies in all fields, including academics. The reason may be related to the ease of use and accessibility of AI technologies for all students regardless of their GPA. The researcher believes that this indicates the challenges and advantages of translating legal texts regardless of the educational level.

According to the results, the researcher accepted all null hypotheses in this study because the significance values were greater than 0.05.

5.2.3 The Third Section of the Questionnaire

The Question:

Do students prefer the human translation of legal texts, ChatGPT, or Google Translate?

The results in Table (4.12) showed that students primarily rely on translation using ChatGPT, followed by translation using Google Translate, and finally, human translation. This indicates that the best choice for students is to use ChatGPT to translate their texts legally. The researcher believes the reason is likely the accuracy and speed in task completion and performance compared to human translation. However, Google Translate is still popular among many students, possibly due to its ease of use. The student's opinion towards human translation was lower because it requires more time

and effort.

5.3 Discussion of the Interview Questions

1. How does AI contribute to the reliability of the legal translation industry? In your opinion, what percentage of students rely on AI in their studies?

The four participants in Table (4.13) agreed that AI plays a significant role in legal translation, particularly in defining terms, increasing speed, and ensuring consistency in translation. The first and third participants confirmed that AI has multiple benefits and can serve as an alternative to human translation. The second and fourth participants indicated that reliance on translation using AI remains limited in terms of sentence formulation and linking words and texts.

As for students' reliance on AI, the first and second participants confirmed that a large percentage of students depend on using AI to translate their texts, and the fourth participant confirmed that the percentage ranged between 50%-80% of students using it for text composition and terminology writing. This percentage differs from the one given by the third participant, which ranged between 60% and 70%.

The researcher believes that this indicates that AI is a fundamental tool that students use in their studies due to its flexibility, accuracy, and speed. However, it requires human intervention.

2. What are the challenges of using AI in legal translation, specifically when translating between Arabic and English?

The study results in Table (4.14) showed that all four participants confirmed that AI faces difficulties in accurate legal translation, but their opinions on the challenges and their impact were different. The first and second participants confirmed that the error rate in legal translation related to the use of AI causes consequences that affect the translator's professional life and could lead to life-and-death issues. The third and fourth participants confirmed that the challenges faced by AI cannot handle literary and cultural texts correctly.

The researcher believes that the use of AI in translating legal texts in both Arabic and English faces many challenges, including accuracy and the difficulty of using texts that require cultural or literary translations. AI will likely have difficulty correctly presenting legal terms and structuring sentences in a way consistent with the legal frameworks of Arabic and English. This indicates the necessity of continuous human intervention.

3. What moral values must AI users abide by while using it in legal translation to ensure the reliability of their work / study?

The four participants in Table (4.15) emphasized the necessity of human intervention to ensure the quality of legal translation and achieve a translation linked to accuracy and transparency. The first participant emphasized the necessity of adhering to ethical standards and trust in legal translation.

As for the second participant, they emphasized the necessity of documenting the sources used in AI, which indicates ethical commitment because if that does not happen, it will fall into ethical plagiarism issue, which it means when an individual uses someone else's ideas or texts in a different way to become morally acceptable, but it is still considered a form of plagiarism or when someone paraphrases specific content without mentioning the original references or making minor changes. The fourth participant emphasized the necessity of confidentiality and the need to verify the authenticity of the texts to ensure the final legal translation.

The researcher believes that translators' use of AI in their work requires a high degree of adherence to various ethical values and the necessity of having a human translator verify the information.

4. Do you believe AI can replace human translators in the legal translation field? Why or why not?

The four participants in Table (4.16) agreed that AI cannot completely replace human translators, and human intervention is necessary to ensure accuracy and credibility. The first participant emphasized the existence of differences related to cultural translation, which confirms that the presence of a human translator is essential in using AI for legal translation. The second participant emphasized that AI cannot

handle situations requiring human intervention despite its ability to deal with different linguistic aspects.

The third participant confirmed that legal translation can partially rely on AI, and a human translator should be involved in the translation process. The fourth translator pointed out that AI assists humans in legal translation and does not replace humans completely.

The researcher believes that the role of AI in legal translation is considered a supportive tool rather than a replacement for humans, and the reason lies in the cultural, linguistic, and ethical constraints that require human intervention.

5. Can teachers and professors use AI to enhance their students' academic experience? If so, how?

The four participants in Table (4.17) agreed that the use of AI in the educational process improves their educational experience, but it should be an auxiliary tool for the student, not a primary tool. The first and second participants confirmed that students can use AI to improve their writing skills and ability to express themselves. The first participant confirmed that AI enhances students' writing and translation skills and can be used to write initial and final drafts.

The second participant emphasized its importance in drafting and clarifying texts. The third and fourth participants disagreed on the extent of reliance on AI. The third participant affirmed that it is used partially and not completely, while the fourth participant emphasized its role in correcting errors and facilitating the educational process.

The researcher believes that AI is an effective tool in supporting the educational process; however, it should be used cautiously as a secondary rather than a primary tool due to its role in enhancing students' skills and improving the educational process.

According to the theory used in this study titled "technology readiness index" (TRI), which supports every growing in technology world, it couldn't find a fit AI tool

that is able to translate legal texts culturally, historically and politically correctly yet.

Thus, the results of the current study work as TRI theory does. For example, both confirmed that AI is not qualified enough to translate long legal texts or complex terminology. Another, English and Law students and English academics said that AI programs are still lack to the required technology developments to dealing with nuances of meanings of legal cases and contexts. In addition, despite all ever-growing technological developments today, human translators are and will be the best solution ever.

Finally, the researcher believes that there is no AI tool able to be considered as an only source for translating sensitive documents. On the other hand, the most important benefit of using AI in this field is just for saving time, effort and money.

5.4 Conclusion

The study investigated the role of AI's reliability in legal translation in Arabic and English languages. The results showed that AI technologies play a significant role in improving the process of legal translation. However, various challenges related to accuracy and transparency may be encountered. AI should not be fully relied upon in the legal translation process; rather, it should be considered a secondary tool, with the primary element being the translator, as it saves time and effort for the translator.

Legal translation is a sensitive field, and any mistake could lead to a catastrophe. Therefore, human intervention is a must to have the best version of the translated text. Furthermore, users should follow ethical and preventive rules when using AI tools in translation to avoid legal issues or ethical plagiarism when a researcher or writer takes off people's ideas or writings without referring to them that the text was taken from them. In addition, law students tend to use AI tools with more caution when dealing with legal text compared to English students, because it is considered their main and only major.

Another thing, the results of the study showed that there are some differences between AI's tools itself, such as ChatGPT 3 and 4 generation is the best choice compared to Google Translate due to its relatively high reliability , while Google Translate comes in a second stage with a good rate. According to human translation; it's always the best way whether in legal texts or any other text. Also, English teachers and professors prefer using AI as a secondary tool to enhance the students' academic

experience, provide interactive classroom vibes between students and their teacher, and encourage them studying easily. Hence, using AI is a helpful tool beside human existence to facilitate peoples' live at any field.

5.5 Recommendations

Based on the results of the research, the researcher suggests the following recommendations:

1. It is recommended to emphasize the necessity of human intervention to achieve accuracy and avoid ethical plagiarism.
2. It is suggested that students create training workshops aimed at training translators on how to use AI tools correctly and appropriately for the role of a legal translator.
3. It is advised to curricula designers to integrate AI technology tools into the educational process.
4. It is recommended using AI as a secondary tool for post-editing legal texts.

Recommendations for Future Researchers:

1. Developing post-editing skills to refine AI-generated legal translations is recommended, ensuring accuracy, proper terminology, and cultural relevance.
2. It is advised to do further related research at different universities.
3. It is advised to do more related research with different samples.
4. More research about AI in different fields is advised.

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Appendices

The Questionnaire

الطلبة الكرام

تحية طيبة،

السلام عليكم ورحمة الله تعالى وبركاته،

يسرني أن أضع بين أيديكم هذا الاستبيان الذي يأتي في إطار استكمال متطلبات الرسالة لنيل درجة الماجستير في تخصص الترجمة، بعنوان "موثوقية الذكاء الاصطناعي في ترجمة النصوص القانونية باللغة العربية و اللغة الإنجليزية". ونظراً لأهمية رأيكم في هذا المجال، نطلب منكم تكرمناً الإجابة على أسئلة الاستبيان بدقة، حيث أن دقة النتائج تعتمد بشكل كبير على صحة إجاباتكم. لذا، مشاركتكم ضرورية ورأيكم أساسي لنجاح هذا البحث، علماً بأن جميع إجاباتكم ستستخدم فقط لأغراض البحث العلمي.

- يرجى ملاحظة أن المشاركة في البحث اختيارية.
- مدة تعبئة الاستبيان حوالي ١٠ دقائق.

تفضلوا بقبول فائق الاحترام،

الباحثة: ميس شحادة

Part One: Demographic Data

السنة الدراسية	Academic year		
التخصص	major		
المعدل	GPA	3.67-4.00 3.00-3.66 2.33-2.99 2.00-2.32 1.67-1.99	

Part Two: Reliability of Artificial Intelligence in Translating Arabic Language and English Language Legal Texts.

- Please put a mark (X) in the box indicating your degree of agreement with each of the following statements:

AI as a Reliable Alternative to Human Translators الذكاء الاصطناعي كبديل موثوق للمترجمين البشريين			Strongly agree أوافق بشدة	Agree أوافق	Neutral محايد	Disagree أعارض	Strongly disagree أعارض بشدة
1	I expect translations of legal documents produced by artificial intelligence to be accurate.	أتوقع أن تكون ترجمات الوثائق القانونية التي ينتجها الذكاء الاصطناعي دقيقة.					
2	Relying on artificial intelligence entirely for legal translation without human intervention is reasonable.	يمكن الاعتماد كلياً على الذكاء الاصطناعي في الترجمة القانونية دون تدخل بشري.					
3	Artificial Intelligence can understand complex legal terminology crucial for the accuracy of the translation.	يمكن للذكاء الاصطناعي أن يفهم المصطلحات القانونية المعقدة اللازمة لدقة الترجمة.					

4	Artificial intelligence could replace human translators in the translation of legal documents.	من الممكن أن يحل الذكاء الاصطناعي محل المترجمين البشر في ترجمة الوثائق القانونية.					
5	I prefer to use artificial intelligence when translating large legal texts.	أفضل استخدام الذكاء الاصطناعي عند ترجمة نصوص قانونية طويلة.					

Disadvantages of AI in Translating Legal Texts سلبيات الذكاء الاصطناعي في ترجمة النصوص القانونية		Strongly agree أوافق بشدة	Agree أوافق	Neutral محايد	Disagree أعارض	Strongly disagree أعارض بشدة
1	AI faces difficulty in accurately translating specific legal terminology. يواجه الذكاء الاصطناعي صعوبة في ترجمة المصطلحات القانونية الدقيقة.					

2	I notice legal translations produced by AI lack cultural elements.	ألاحظ أن ترجمات الذكاء الاصطناعي للنصوص القانونية تفتقر إلى العناصر الثقافية.					
3	Legal translations produced by AI require extensive proofreading by humans.	تتطلب ترجمات الذكاء الاصطناعي القانونية مراجعة مكثفة من البشر.					
4	I think that AI is unable to translate legal terminology accurately.	أعتقد أن الذكاء الاصطناعي غير قادر على ترجمة المصطلحات القانونية بدقة.					
5	Using AI when translating legal texts account for a lack of accuracy.	يؤدي استخدام الذكاء الاصطناعي عند ترجمة النصوص القانونية إلى نقص في الدقة.					

Advantages of AI for Translators إيجابيات الذكاء الاصطناعي للمترجمين		Strongly agree أوافق بشدة	Agree أوافق	Neutral محايد	Disagree أعارض	Strongly disagree أعارض بشدة
1	AI helps human translators accelerate the process of legal translation.	يساعد الذكاء الاصطناعي المترجمين البشريين على تسريع عملية الترجمة القانونية.				
2	Human legal translators are allowed to use AI to draft a translation of a legal text to save time and effort.	يسمح للمترجمين القانونيين البشريين باستخدام الذكاء الاصطناعي لإعداد ترجمة أولية للنصوص القانونية لتوفير الوقت والجهد.				

3	AI saves human translators valuable time and effort and reduces stress in large translation projects.	يوفر الذكاء الاصطناعي للمترجمين الوقت والجهد ويخفف من الضغط في المشاريع الكبيرة.					
4	AI helps in improving the quality of translations produced by humans.	يساعد الذكاء الاصطناعي في تحسين جودة الترجمات التي ينتجها البشر.					
5	AI aids humans in translating legal texts.	يمكن للذكاء الاصطناعي مساعدة البشر في ترجمة النصوص القانونية.					

Differences Between AI Translation Tools الفروقات بين أدوات الترجمة بالذكاء الاصطناعي			Strongly agree أوافق بشدة	Agree أوافق	Neutral محايد	Disagree أعارض	Strongly disagree أعارض بشدة
1	I noticed large gaps in quality between the various AI translation tools.	لاحظت فروقات كبيرة في الدقة بين أدوات الترجمة المختلفة بالذكاء الاصطناعي .					
2	I think that the different AI models have varying strengths and weaknesses when dealing with specific legal translation tasks.	أعتقد أن النماذج المختلفة للذكاء الاصطناعي لديها نقاط قوة وضعف مختلفة في التعامل مع الترجمة القانونية.					

3	I have an unpleasant experience using certain AI models for translating legal texts accurately.	لدي تجربة غير سارة مع بعض أدوات الذكاء الاصطناعي في ترجمة النصوص القانونية بدقة.					
4	I believe that AI models have varying levels of accurate interpretation and comprehension of certain legal terminology.	أعتقد أن نماذج الذكاء الاصطناعي لديها مستويات متفاوتة من الفهم الدقيق للمصطلحات القانونية.					
5	I think that there are AI models or tools which can give better legal translations due to its relatively high reliability.	أعتقد أن هناك نماذج أو أدوات للذكاء الاصطناعي من الممكن أن تعطي ترجمات قانونية أفضل نظرا لموثوقيته العالية نسبياً					

The Future of Careers in Light of Artificial Intelligence and Legal Translation المستقبل المهني في ضوء الذكاء الاصطناعي والترجمة القانونية			Strongly agree أوافق بشدة	Agree أوافق	Neutral محايد	Disagree أعارض	Strongly disagree أعارض بشدة
1	I think that AI has the potential to affect my future career.	أعتقد أن الذكاء الاصطناعي لديه القدرة على التأثير الكبير على مهنتي المستقبلية.					
2	I think I'm well - equipped with the necessary skills crucial for staying up-to-date with the technological advancement in my future career as a translator.	أعتقد أنني مجهز بالمهارات اللازمة للتكيف مع التقدم التكنولوجي في مهنتي المستقبلية كمترجم.					

3	There is no doubt that AI and automation will take over certain roles, and AI may make up for this by creating more job opportunities.	لا يوجد شك بأن الذكاء الاصطناعي والأتمتة سيستحوذان على بعض الأدوار، وقد يعوض الذكاء الاصطناعي ذلك من خلال خلق المزيد من فرص العمل.					
4	I think that the current workplace tries the best efforts to utilize AI for certain tasks.	أعتقد أن مكان العمل الحالي يبذل جهداً كافياً لاستخدام الذكاء الاصطناعي لبعض المهام.					
5	I am in favor of investing in the development of AI and its applications to improve the efficiency of the translation process.	أؤيد فكرة الاستثمار أكثر في تطوير الذكاء الاصطناعي وتطبيقاته لتحسين كفاءة عملية الترجمة.					

Part 3: Choose the Correct Translation for each Sentence.

- His debt was reduced considerably.

1. نقص دينه نقصا كبيرا
2. لقد تم تخفيض ديونه بشكل كبير
3. تم تخفيض ديونه بشكل كبير

- There was a 10% deduction in price and cost.

1. كان هناك ١٠% من التخفيض في السعر والتكلفة
2. كان هناك خصم ١٠% في السعر والتكلفة
3. تم إجراء خصم بنسبة ١٠% على السعر والتكلفة

- The court passed its judgment in the case present before it.

1. أصدرت المحكمة قرارها في القضية المعروضة أمامها
2. أصدرت المحكمة حكمها في القضية المعروضة عليها
3. أصدرت المحكمة حكمها في القضية المعروضة أمامها

- After only two hours of deliberations, the jurors reached a verdict.

1. بعد ساعتين فقط من المداولات توصل المحلفون إلى قرار
2. بعد ساعتين فقط من المداولات، توصل المحلفون إلى حكم
3. بعد مداولات استمرت ساعتين فقط، توصل المحلفون إلى حكم

- **The preamble of this contract is considered as an integral part before and shall be read along with it as one unit.**

1. تعتبر مقدمة هذا العقد جزءاً لا يتجزأ منه وتقرأ معه كوحدة واحدة
2. تعتبر مقدمة هذا العقد جزءاً لا يتجزأ منه ويجب قراءتها معه كوحدة واحدة
3. يُعتبر تمهيد هذا العقد جزءاً لا يتجزأ منه، ويجب قراءته جنباً إلى جنب مع باقي العقد كوحدة واحدة

- **The second party shall pay all expenses of the car such as expenses of fuel, parking, and traffic fines.**

1. يلتزم الفريق الثاني بدفع كافة مصاريف السيارة من الوقود والمواقف ومخالفات السيارات
2. يتحمل الطرف الثاني كافة مصاريف السيارة مثل مصاريف الوقود والمواقف والمخالفات المرورية
3. الطرف الثاني سيتحمل جميع نفقات السيارة مثل نفقات الوقود، والركن، والغرامات المرورية

- **Upon the request of the first party, the second party shall pay the necessary fees and expenses to acquire his rights.**

1. يلتزم الفريق الثاني بدفع الرسوم والمصاريف والنفقات، اللازمة لتحصيل حقوقه، بناءً على طلب الفريق الأول
2. بناءً على طلب الطرف الأول، يلتزم الطرف الثاني بدفع الرسوم والمصاريف اللازمة لاكتساب حقوقه
3. بناءً على طلب الطرف الأول، يتعين على الطرف الثاني دفع الرسوم والنفقات اللازمة للحصول على حقوقه

- **The Lessee may not use the leased flat in a way that violates Shari'a, law, morals or public order.**

1. لا يجوز للمستأجر استخدام الشقة المؤجرة بطريقة تخالف الشريعة، أو القانون أو الآداب العامة أو النظام
2. لا يجوز للمستأجر استخدام الشقة المؤجرة بما يخالف الشريعة، أو القانون أو الآداب أو النظام العام
3. لا يجوز للمستأجر استخدام الشقة المؤجرة بطريقة تخالف الشريعة، أو القانون أو الأخلاق أو النظام العام

- **Except where a fire or other emergency exists, the lessor may not enter the premises without the Lessee approval.**

1. لا يجوز للمؤجر أن يدخل المسكن، دون موافقة المستأجر، إلا في حالة وجود حريق أو غيره من الطوارئ
2. باستثناء حالة نشوب حريق أو حالة طوارئ أخرى، لا يجوز للمؤجر دخول المبنى دون موافقة المستأجر
3. باستثناء حالات الحريق أو الطوارئ الأخرى، لا يجوز للمؤجر دخول المبنى دون موافقة المستأجر

- **The Second Party shall not authorize any other lawyer/ attorney during the validity of this term.**

1. يلتزم الفريق الثاني بأن لا يقوم بتوكيل أي محام/ وكيل آخر خلال مدة سريان هذه الاتفاقية
2. لا يجوز للطرف الثاني توكيل أي محام/ محامي آخر خلال مدة سريان هذه المدة
3. لا يجوز للطرف الثاني توكيل أي محام آخر خلال سريان هذه المدة

The Interview

Questions:	Dr. Osama Jarrar	Dr. Nizar Milhem	Dr. Aysar Yaseen	Dr. Mohammed Sabanneh
1. How does Artificial intelligence contribute to the reliability of legal translation industry? In your opinion, what the percentage of students rely on AI in their studies?	Well, I think that Artificial Intelligence is very important in translation generally because many students if not all rely on AI. According to percentage, it is very high percentage of students use AI in their studies because it's available, cheap, practical and dynamic for them.	Well, I would say yes and no. Yes, AI could be good for terminology because there are a lot of terms in legal translation to set. No, for putting the words in sentences and connecting with each other. Additionally, I think too many students depend on AI in their studies.	Yes, there is some but it's not one hundred percent. It could be from 60%-70% maximum. This is because most of these terms are technical. According to students, I think it's a high percentage of them depend on AI.	It guides them in consistency and speed in legal translation as it reduces their mistakes. Students rely on AI tools for finding terms in the second language, drafting, with about 50% - 80% incorporating AI in their studies.

<p>2. What are the challenges of using AI in legal translation, specifically when translating between Arabic and English?</p>	<p>The subject depends on the outcome produced by AI. As you know conclusions for example- one word may change the whole meaning and if you do that; you will sound less reliable, not professional and you can't have a true copy of the original text.</p>	<p>When it comes to legal translation sometimes you have to translate in a context of life and death especially in court proceedings as you know like trials, so when you come to this, any mistake could be a failure. And I think in a specific context AI technology is not the right way to take. Another side, challenges that may be faced by students in university while using AI is the way they use it to make the text looks natural but they fail because the language produced by AI is rigid.</p>	<p>Any text is not 100% technical means it is technical. So, whenever we have like literature here challenges come. Moreover, the challenges of AI or machine translation won't be able to translate anything other than specialized terminology.</p>	<p>It sometimes has some difficulties in context, legal terminology, and often fails to capture specific cultural, taboo or legal meanings.</p>
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<p>3. What are the moral values that AI users must abide by while using it in legal translation to ensure the reliability of their work / study?</p>	<p>I think it's related to ethics. If you are not ethical in translating specifically legal texts; then it's a problematic issue because at the end you might fall into a category. I mean to be unethical translator without ethics or reliabilities is a problem and you might lose your reputation. Thereafter, if I'm not trust of legal translator as a client so he/ she will get a caught at the end of the day because people will realize you are not efficiently probable for this mission. Briefly, it all comes down to trust.</p>	<p>Well, I would say whatever you take from AI technologies, you have to document this as external sources you have cited from for example, if you are taken from ChatGPT or Google Gemini, you have to say I'm taken from it. Moreover, according to Google translation I don't think it is a good way for translating such demanding texts like legal because it doesn't have an enough power for this process.</p>	<p>We have to have translator's intervention (human beings) regardless we can't depend on AI even in legal translation.</p>	<p>Users should make sure that there is accuracy, confidentiality, and transparency, they should avoid complete reliance on AI for sensitive legal decisions and verify all the products of translation to confirm trusted product of translation.</p>
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<p>4. Do you believe AI can replace human translators in the legal translation field? why or why not?</p>	<p>No, I don't think so that AI can replace human translators in any way because cultural nuances for example may be up-and-down and can't be translated by depending only on AI or translation machines. As a result, human intervention is a must beside AI.</p>	<p>I don't think that AI technologies will be replacing human beings, because AI could deal sometimes with linguistics aspects but can't deal with some human sides (non-linguistic aspects) for example, AI can't deal with tone, register with the language and attitude to the writer or speaker.</p>	<p>There is no way. Because the text produced by AI is not 100% technical in legal translation. So, I think we can depend on it partially but of course not completely as the only main tool.</p>	<p>It can assist, but it cannot completely replace human translators due to the need for comprehensive understanding and ethical decision-making of legal context.</p>
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<p>5. Can teachers and professors use AI to enhance the academic experience of their students? If so, how?</p>	<p>Well, I think yes. For example, writing skills courses in writing essays for example you can use AI apps as ChatGPT to write a first draft, final draft or even in translating. Another, AI could be effectively a supplementary material for the students to improve their writings, imaginations and choices. So, I think it's an effective tool used by teachers in the classroom.</p>	<p>Yes, that's true. Educators can always use AI technology to enhance their processes. For example, if ChatGPT gives you a text but you are not satisfied with, so you can ask it to elaborate, rephrase, rewrite clarify and illustrate the sentences again. Thus, I think AI is a helpful tool for teachers in this regard.</p>	<p>To some extent, yes, because It's fast but other than that no you can't depend on it at all.</p>	<p>Professors can use it for grading assistance sometimes, and to enhance research tools, which makes learning more interactive and efficient.</p>
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❖ **List of Interview's Questions Juries:**

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❖ **List of Questionnaire's Juries**

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Dr. Khaled Dweikat	Assistant Professor of English Language Curriculum and Instruction/ Al-Quds Open University- Nablus.	kdweikat@qou.edu
Dr. Osama Jarrar	Assistant Professor of English Literature/ Arab American University.	Osama.Jarrar@aaup.edu
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Lect. Mohammad Sabaaneh	Lecturer of Applied Linguistics & Translation / Arab American University.	mohammad.sabaaneh@aaup.edu

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الجامعة العربية الأمريكية

كلية الدراسات العليا

2024/10/26

حضرة السادة الشؤون الأكاديمية المحترمين

تسهيل مهمة بحثية

تحية طيبة وبعد،

تهديكم كلية الدراسات العليا في الجامعة العربية الأمريكية أطيب التحيات، وبالإشارة إلى الموضوع أعلاه، تشهد كلية الدراسات العليا في الجامعة أن طالبة ميس ساند مجاهد شحادة والتي تحمل الرقم الجامعي 202212002 هي طالبة ماجستير في برنامج الترجمة وتعمل على رسالة الماجستير الخاصة بها بعنوان:

"موثوقية الذكاء الاصطناعي في ترجمة النصوص القانونية العربية إلى الإنجليزية"، تحت إشراف الدكتور فواز عقل. نأمل من حضرتكم الإيعاز لمن يلزم لمساعدتها للحصول على المعلومات اللازمة للدراسة من خلال توزيع استبيان ورقي لطالبة بكالوريوس القانون ونسخة الكترونية لطالبة بكالوريوس اللغة الإنجليزية (الترجمة)، علماً أن المعلومات ستستخدم لغاية البحث فقط وسيتم التعامل معها بغاية السرية، وقد أعطيت هذه الرسالة بناءً على طلبها.

وتفضلوا بقبول فائق الاحترام

عميد كلية الدراسات العليا

د. نوار شحليب



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موثوقية الذكاء الاصطناعي في ترجمة النصوص القانونية باللغة العربية واللغة الإنجليزية

ميس سائد مجاهد شحادة

د. فواز عقل

د. مصدق براهيمة

د. عفاف اسعيد

د. أسامة جرار

ملخص

هدفت هذه الدراسة إلى استقصاء مدى موثوقية الذكاء الاصطناعي في ترجمة النصوص القانونية من اللغتين العربية والإنجليزية من وجهة نظر طلبة البكالوريوس في الجامعة العربية الأمريكية. استخدمت الباحثة منهجًا مختلطًا اعتمدت على أداتين هما (الاستبيان والمقابلات). يتكون مجتمع الدراسة من ٦٣ طالبًا من كلية قسم اللغة الإنجليزية وقسم القانون للطلبة اللذين يأخذون مساق الترجمة القانونية ومساق المصطلحات القانونية. شملت عينة الدراسة ٢٣ طالبًا من طلبة بكالوريوس اللغة الإنجليزية و ٤٠ طالبًا من طلبة بكالوريوس القانون. بينما تضمنت المقابلات شبه المنظمة ٤ محاضرين من قسم اللغة الإنجليزية في الجامعة العربية الأمريكية. أظهرت النتائج أن استخدام الذكاء الاصطناعي كبديل موثوق للمترجمين البشريين حصل على متوسط حسابي قدره ٢.٧٣ وبدرجة منخفضة. بالإضافة إلى ذلك، جاءت القيود التي تواجه الذكاء الاصطناعي في ترجمة النصوص باللغة العربية والإنجليزية بمتوسط حسابي قدره ٣.٦٠ وبدرجة متوسطة. أما فيما يتعلق بخصوص فوائد استخدام الذكاء الاصطناعي؛ فقد حصلت على متوسط حسابي قدره ٣.٧٧ وبدرجة متوسطة.

هذا واتفق الأكاديميون الأربعة على أن الذكاء الاصطناعي لا يمكن استبدالها بشكل كامل دون وجود المترجم البشري لضمان الدقة والنزاهة في الترجمة القانونية. ومع ذلك، اختلفت آراؤهم حول عدة جوانب، حيث إن بعض المشاركين أكدوا على عجز الذكاء الاصطناعي في ترجمة الفروقات الثقافية وعن عجز التعامل مع النبرة والأسلوب. في حين مشاركين آخرين أكدوا على أهمية عدم الاعتماد الكامل على الذكاء الاصطناعي في النصوص التقنية وعلى ضرورة الالتزام بالقرارات الأخلاقية والفهم الشامل للنص.

وبناءً على نتائج الدراسة؛ تقترح الباحثة بعض من التوصيات، مثل ضرورة التدخل البشري إلى جانب أدوات الذكاء الاصطناعي واعتباره جزءاً أساسياً من الترجمة القانونية لتحقيق الدقة وتجنب الانتحال الأخلاقي. كما توصي بضرورة تنظيم ورش تدريب ووضع مناهج تعليمية تهدف إلى تدريب الطلاب، المترجمين، الباحثين والشركات حول كيفية استخدام أدوات الذكاء الاصطناعي بشكل صحيح ومناسب لدور المترجم القانوني.

الكلمات المفتاحية: الموثوقية، الذكاء الاصطناعي، الترجمة القانونية، الترجمة الآلية، الترجمة البشرية.