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Integrating AI Translation Ethics and Sociolinguistic Awareness into BA Programs at Saudi and Jordanian Universities

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ABSTRACT

This research examines the inclusion of AI ethics and sociolinguistic consciousness in Saudi Arabian and Jordanian translation programs at the university level. As the use of AI technology in translation activities increases, the necessity for the inclusion of ethical considerations and sociocultural knowledge in academic programs is of critical concern. A mixed-method model of data collection and analysis using quantitative data from structured questionnaires and qualitative data from semi-structured interviews and open-ended feedback from faculty members, curriculum designers, and professional translators has been utilized. The outcome of the research indicates a wide gap for inclusion of AI-related considerations and sociolinguistic skills in the existing translation programs. Although the participants showed broad agreement with the relevance and necessity of AI-related considerations and sociolinguistic skills, they also noted multiple barriers to implementation, including the lack of instructors' knowledge in the area, the unavailability of updated training resources, and resistance from institutions to make changes to the curriculum. The strongest approaches for bridging the gaps indicated through the study include the provision of exclusive courses in AI ethics for the translation program, fostering interdisciplinary integration with the departments of computer science and ethics, and training teachers professionally. The study advocates for a full-scale revision of the translation curricula to

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equip students with the knowledge for linguistic capabilities as well as the cultural and moral competencies to tackle the changing environment of AI-based translation. The study provides timely and immediate recommendations for the strengthening of the curricula for the training of translators against the backdrop of rapid technological advances.
Keywords: AI Ethics; Sociolinguistic Awareness; Translation Curriculum; Curriculum Reform; AI-Assisted Translation

1. Introduction

The advent of artificial intelligence (AI) has accelerated the practice of translation at unprecedented scales, facilitated by the ease of access provided by technologies like neural machine translation [1]. The breakthrough innovation comes with ethical and sociolinguistic concerns that must be entertained [2]. For nations like Jordan and Saudi Arabia, where cultural density is complemented by high multilingualism and rapid digitalization, enacting AI translation ethics and sociolinguistic sensibilities as part of university curricula is not an ivory-tower improvement but a public duty [3]. This research examines the imperative need to merge these two pillars in Bachelor of Arts (BA) translation studies in Saudi and Jordanian universities in response to present pedagogical needs to prepare ethically conscious and culturally sensitive translators.

As crucial as translation studies, the issue of sociolinguistic awareness concerns responsiveness to social and cultural contexts of language use [4]. In Saudi Arabia and Jordan, as linguistically rich and culturally unique as they are, relegating this factor in translation classes may lead to misrepresentations or meaning loss in target languages, as explained by Baker (2018) [5]. This becomes crucial in providing an accurate translation and building cross-cultural awareness in today's globalized world, when intercultural communication may be the key. Integrating this into the syllabus and artificial intelligence ethics in translation could sufficiently build better competencies among future translators.

1.1. The Rise of AI in Translation and Ethical Complexities

Breakthroughs in deep learning and neural networks have driven the expansion of artificial intelligence translation. Translations facilitated by AI technology, such as Google Translate and DeepL, have completely revolutionized how people and organizations communicate across languages [6]. The systems offer quick, cheap, and more accurate translations, crucial in global business, education, and journalism. While AI translation has evolved significantly in processing linguistic form and handling large-scale data, it still lags in addressing highly nuanced human issues, such as context, cultural nuances, and pragmatic meaning [7]. This gap highlights the need for a critical approach within translation studies to assess and address the ethical and sociolinguistic implications of AI-generated translations.

The most significant ethical concerns in AI translation are fairness and bias. Machine learning algorithms are trained on massive datasets that typically contain built-in social and historical biases within human language [8]. As a result, AI translations can unintentionally reinforce stereotypes, stereotype, misrepresent cultural expressions, and disregard minority languages and dialects. Additionally, AI decision transparency raises concerns about liability when a machine-generated message is offensive or leads to misunderstanding [9]. These raise questions of morality, for which proper moral guidelines and rules of interpretation are necessary to obtain fair, transparent, and respectful translations facilitated by AI. Incorporating AI translation ethics into university teaching programs equips students with the valuable ability to address such issues and foster a more equitable and ethical language technology culture.

1.2. Ethical Considerations in AI Translation

The ethical dilemmas of AI translation stem from various challenges, including bias, disinformation, data privacy, and matters of accountability. The AI translation software relies on large, multilingual data corpora, which, as they exist, retain historical and social biases present in the source material [10]. Studies, for instance, have shown that AI translation models are gender-biased and reinforce stereotypes by misapplying gender pronouns, based on assumed expectations rather than contextually applicable patterns [11]. This ethical deficiency is important as it addresses fairness and representation in AI-based translation.

Another concern on the ethical front is the propagation of disinformation and contextual inaccuracy. AI translations are now more accurate than ever, but they still struggle to capture linguistic nuance and cultural references, which can render translations confusing or inaccurate [12]. This is most important in medical, legal, and diplomatic discourse, where mistranslation can have profound implications. Sahari et al. (2024) note that AI translation programs are prone to misinterpreting figurative language, idioms, and culturally bound expressions, which need human intervention to attain accuracy and ethical responsibility [13].

Data privacy is also a primary issue of AI translation ethics. Most AI translation models collect and store user data to improve machine learning algorithms, which creates issues related to data protection and user anonymity. This is

particularly true in high-risk domains, such as law and medicine, where unauthorized data access can result in severe privacy infringements [14]. To respond to such challenges, developers of AI translation should implement effective data protection measures, with educators at the forefront in teaching the ethical processing of user data in the context of translation.

Accountability is one of the fundamental ethical issues in AI translation. Determining who should be held responsible when a mistake or bias occurs in AI translations is typically challenging—the user, the developer, or the AI itself. Transparency in AI decision-making undermines the purpose of accountability measures, necessitating clear ethical guidelines and human oversight of AI-aided translation processes [15]. Universities need to incorporate these ethical elements in BA courses to prepare future translators with the ability to judge AI translation software on moral grounds critically.

1.3. Translation Ethics Frameworks

Translation ethics have long been central to establishing professional standards in translation. One of the strongest frameworks is Andrew Chesterman's model of translation norms, which outlines three categories: product norms, professional norms, and ethics-based norms [16]. These norms guide translators not only in their linguistic choices but also in their ethical responsibilities. He emphasizes honesty, truthfulness, loyalty, and respect for the source and target cultures. These are particularly pertinent to translation with the assistance of AI, as AI programs could potentially bypass these kinds of human ethical sensibilities, increasing the likelihood of decontextualised or culturally insensitive translations. Failing in human ethical judgment might lead to mistranslations that violate social or political sensitivities, which a translator adhering to Chesterman's ethical principles would actively avoid [17].

Another foundational methodology is offered by Anthony Pym, whose risk theory redefines the translator's mission as risk management. Translators, in Pym's opinion, must constantly weigh three types of risk: credibility risk (readers' impression of the translation), uncertainty risk (whether the translator is familiar with the source text), and interpersonal risk (moral repercussions in communication) [17]. These risks are magnified in the AI age. For instance, AI systems can offer smooth output, mask uncertainty or inaccuracy, and create credibility risk when users over depend on the technology. In addition, the translator's diminished role in AI-generated output increases interpersonal risk—particularly when translations reinforce cultural bias, erase the richness of dialect, or overlook marginalized groups' values [18].

Both Chesterman and Pym refer to the moral agency of the translator, one threatened by overreliance on AI. Whereas human translators retained sole responsibility for linguistic and ethical choice, AI introduces a halfway house go-between with no ethical instinct [19]. This needs a curriculum that values ethical judgment and encourages students to think more of critical examiners than receivers of AI. For example, a learner trained under Chesterman's standards would query whether an AI translation maintains source intent fidelity and complies with cultural sensitivities. Similarly, learners using Pym's theory would analyze whether the tool threatens social or intercultural peace [20].

Thus, integrating these theories into teaching translation is theoretically legitimate and pragmatically inevitable [21]. Teachers must teach students to identify, analyze, and manage ethical issues—particularly in AI-assisted environments where the borders of ethics are blurred. Integrating Chesterman's and Pym's theories into training modules, students can become more sensitive to the social responsibility of the translator. This equips future professionals with the ability to uphold ethical standards even when using AI tools that prioritise efficiency over empathy or precision over context. Lastly, the integration of such theoretical underpinnings enhances students' preparation for real-world translation's ethical challenges, especially in multicultural, multilingual societies [22].

1.4. Sociolinguistic Awareness: Beyond Literal Translation

Sociolinguistic awareness in translation goes beyond word-for-word literal translation; it entails a proper understanding of the cultural, historical, and social contexts underlying the use of language [23]. AI translation tools, as convenient as they may be, compromise the fine connotations of meaning conveyed by dialects, idiomatic expressions, and allusions that are culture-specific. For example, the sentence whose neutral connotation in one language possesses strong affective or cultural connotations in another. Most especially in Arab societies, since they are highly heterogeneous in geography, status, and tradition. AI translations can misinterpret or misrepresent meaning without nuanced sociolinguistic awareness, resulting in misunderstandings or offence [24].

Furthermore, successful translation relies on a mastery of discourse structures and pragmatic markers that organize discourse within a particular social setting [25]. For example, formalities, indirect speech markers, and honorifics maintain politeness and social standing in Arabic. AI translation output often overlooks such nuances, resulting in an output that reads stilted or out of place in a particular setting [26]. This highlights the importance of the human element in AI-generated translations and underscores the need for sociolinguistic training. Saudi Arabian and Jordanian universities can empower students to develop the capacity for critical evaluation of AI-based translations, ensuring that they are aligned with the cultural and communication norms of the recipient community, by incorporating sociolinguistic consciousness

into their BA translation curricula.

Referencing the debate to existing models of sociolinguistic competence would strengthen the theory foundation of the study [27,28]. These models emphasize that language competence is more than grammatical correctness to include the ability to use language appropriately across a variety of social and cultural contexts. Hymes elaborated the communicative competence theory that involves an understanding of when, where, and how language has to be utilized [28]. Sociolinguistic competence was identified by Canale and Swain as a part of communicative capacity [27], underlining sensitivity towards register, dialect, and norms of culture. Through the integration of these theories, the research will be able to better analyze meaning behind faculty and student responses—gaps in teaching related to cultural and linguistic nuance in AI-assisted translation.

The current lack of formal sociolinguistic education in the majority of translation courses can hinder the development of pragmatic competence on the students' side, which leads to contextually or culturally unsuitable but grammatically flawless translations. Without theory backing, students are likely to overlook the nuanced way meaning shifts as a function of regional dialects, social norms, or culture-saturated idioms, the kind of issues that AI options struggle to address effectively. Integrating sociolinguistic competence into curricula would not only prepare students to judge critically AI-generated translations but also empower them to act to prevent such productions from leading to miscommunication or cultural insensitivity. Finally, grounding curriculum reform on these models would enhance the scholarly content of the study and render its recommendations both implementable and applicable in various kinds of educational and professional contexts.

1.5. Current State of Art and Gaps

The integration of AI translation ethics and sociolinguistic awareness in the translation curricula of Saudi and Jordanian universities remains scarce. While most universities offer traditional translation and linguistics courses, few curricula address AI-based translation tools and their ethical and sociolinguistic consequences. A review of existing BA curricula in translation studies in the two countries reveals that most courses cover traditional methods of translation, literary translation, and interpretation with minimal emphasis on the application of AI in contemporary translation practice.

Additionally, Saudi Arabian and Jordanian higher education institutions tend to employ curricula based on conventional linguistic principles, rather than focusing on the rapid technological advancements in translation. Although some have begun teaching machine translation (MT), these are primarily technical aspects of AI technology, rather than its sociolinguistic or ethical implications. This lack of concern for learning renders students unprepared to address the ethical issues and cultural nuances they will likely encounter when utilizing AI-based translation technology in the workplace.

The second essential shortage is the absence of interdisciplinary exposure. AI translation must witness a mature conversation among linguistics, computer science, and ethics, but BA programs do not necessarily offer courses that intersect these disciplines. Limited exposure to AI ethics and sociolinguistic sensitivity means students must gain the critical thinking skills to evaluate AI-generated translations critically. Bridging this gap requires a redesign of the curriculum to combine machine translation technology with AI translation ethics, sociolinguistic education, and experiential learning, thereby equipping students for the evolving nature of translation.

2. Literature Review

Ethical Issues in Translation Education, by García and Costa (2020) [29], discusses the ethical implications of applying AI tools in this field of education. Data privacy issues, algorithmic bias, and the accountability of AI-produced translations were the key concerns identified by their study. The authors believe that ethics should be incorporated into the curriculum of translator training courses, enabling students to consider the impact of AI on linguistic and cultural diversity. The study also fosters understanding between teachers and artificial intelligence software developers in the development of software per ethical translation principles.

Sheirah et al. (2025) aimed to measure the levels of awareness of AI ethics among faculty members in science research [30]. Using a descriptive survey research design, a 40-item instrument was used with 245 faculty members from various Jordanian universities. They discovered high levels of awareness of AI ethics values with no significant differences indicated by college affiliation, years of teaching experience, academic rank, or degree source. The study centers on the integration of AI ethics training into teacher training to enable ethical research practice with AI.

Al-Othman (2024) investigated teachers' opinions on the advantages and limitations of applying AI to Saudi foreign language learners of English [31]. According to semi-structured interviews with instructors at the College of Languages and Translation, Al-Imam Mohammed Bin Saud Islamic University, the research identified themes ranging from ideas on how to incorporate AI into the classroom to the impact of AI on students' skill levels and ensuring students learn to use AI properly. The results justified professional development training in language curriculum alignment, enabling teachers to use AI technologies effectively.

Almayez (2022) investigated attitudes of English language teachers towards translanguaging and how these are enacted in pedagogic practice [32]. A questionnaire survey of 101 mono-, bi-, and multilingual English language teachers

at a Saudi university was conducted with the aim of determining whether there is a discrepancy between teachers' reported attitudes and actual practices. Furthermore, obstacles to effective pedagogical translanguaging were identified with the need for policy developments to enable more inclusive language pedagogies.

Following the literature review, the study revealed that the majority of research on AI in translation focuses on its applications, while some address ethical concerns; however, few studies examine the intersection of AI ethics and sociolinguistic awareness in translation studies, particularly in Saudi and Jordanian universities. The present study is unique in that it attempts to holistically close this research gap by proposing an integrated model of AI ethics and sociolinguistic awareness in translation education. Unlike previous research, which tackled AI applications in translation or ethics separately, this study adopts a holistic approach in investigating the interaction between these two elements and academic preparedness. Furthermore, by utilizing Saudi and Jordanian universities as case studies, this study provides regionally applicable results and practical recommendations for curriculum development that cater to both technological and cultural needs in Arabic translation.

3. Methodology

The current study employs a convergent parallel mixed-methods design, combining quantitative and qualitative approaches to investigate the integration of AI translation ethics and sociolinguistic consciousness into BA studies in Jordanian and Saudi universities. In this type of convergent parallel mixed-methods design, the study gathers and examines both data sources simultaneously to obtain in-depth information regarding the study problem. This involves more than one perspective and triangulates the findings to establish strong findings**.**

3.1. Study Analysis

The study employs a mixed-methods approach, incorporating both quantitative and qualitative data collection, to enhance the understanding of the curricula for translation in Saudi and Jordanian universities that include AI ethics and sociolinguistic awareness.

The data collection procedure involves two key elements: qualitative interviews and questionnaires, supplemented by document analysis. The quantitative procedure involves a structured survey of decision-makers, scholars, and students who are undertaking translation programs within Saudi and Jordanian universities. The survey examines the current curriculum coverage of AI ethics and sociolinguistic topics, perceived importance, and impediments to such coverage. Stratified random sampling yields a balanced sample of 150 individuals from the two countries. Survey feedback from the two environments has been statistically analyzed using SPSS to identify trends, relationships, and variability. Concurrently, qualitative research involves semi-structured interviews with 15 purposively selected experts from faculty staff personnel, translators, and curriculum planners. Interviewers ask about the challenges and preparation required to incorporate AI ethics and sociolinguistic awareness into translation programs.

3.1.1. Quantitative Analysis

The quantitative phase involves mailing a closed-ended survey questionnaire to decision-makers in translation programs, students, and academics at Saudi and Jordanian universities. The survey assesses the extent to which AI ethics and sociolinguistic concerns are currently addressed in curricula, the significance they are deemed to have, and the barriers to their inclusion. A stratified random sampling approach was employed to provide balanced representation of both nations, and 150 individuals were to be approached. Before it was distributed, the survey was presented to an expert panel for review and vetting. A pilot study was also conducted, with a sample of 20 responses analyzed using SPSS to establish statistical reliability. The results were utilized to test the reliability of the survey instrument, enabling it to be used more extensively. Statistical analysis involved descriptive statistics, correlation tests, and trend identification to identify patterns, deviations, and intriguing findings about AI ethics and sociolinguistic concerns in the practice of translation studies.

3.1.2. Qualitative Analysis

Qualitative study components include semi-structured interviews with 15 purposively selected experts, such as teachers, professional translators, and curriculum specialists. Interviews yield higher-quality data regarding challenges, opportunities, and ways to integrate AI ethics and sociolinguistic awareness into translation programs. In addition to the content analysis already conducted, six universities were selected—three Saudi and three Jordanian—based on their active translation programs and academic diversity. Jadara University, Applied Science Private University, and Yarmouk University were selected from Jordan, each with a unique institutional profile and translation education orientation. These institutions were selected for research on how private and public universities implement AI ethics and sociolinguistic consciousness into their translation programs. King Saud University, Imam Mohammad Ibn Saud Islamic University, and Najran University were selected from Saudi Arabia. These organisations are well-established with language and translation faculties, which offer a broad overview of how subject matter and cultural-linguistic capacities related to AI are being infused into curricula. This multi-dimensional qualitative study enables a thorough examination of institutional perspectives, functional issues, and potential solutions to enhance translation training in Saudi Arabia and Jordan. To conduct the curriculum analysis,

Combining quantitative and qualitative methodologies ensures a robust and fair assessment, providing evidence-based recommendations for curriculum redesign underpinned by technological innovations and cultural awareness in translation studies.

Qualitative Data Analysis Procedure

The interview data were analyzed using a thematic analysis approach, adhering to Braun and Clarke's (2006) six-step guideline [33]. The objective was to identify, analyze, and report on recurring patterns manifesting across participant accounts with regard to the integration of AI ethics and sociolinguistic awareness in translator training.

Coding Process:

The coding was done manually to allow close, iterative engagement with the data. Transcripts were read multiple times to get to know them. Initial codes were developed by coding key phrases and statements to convey perceptions, challenges, and recommendations related to the curriculum. These codes were analyzed and grouped into broad themes associated with the significant areas of inquiry in this study:

A. Perceptions of AI ethics in translation education

B. The role of sociolinguistic consciousness in AI-based translation

C. Institutional and teaching challenges

D. Recommended curriculum reforms

E. Theme Categorization:

Themes were derived inductively from participants' language and deductively from the study's research questions and theory. Coding and theme development were compared with one another by a second reviewer to enhance validity and ensure consistency of interpretation.

3.2. Curriculum Document Selection and Analysis Procedures

3.2.1. Discussion and Analysis

The gender distribution of the survey sample is 48% male and 52% female, which is quite relevant in providing a detailed insight into the perceptions of both sexes regarding the incorporation of AI ethics and sociolinguistic awareness in translation studies (**Table 1**). The near-equally distributed representation lowers the chances of gender disparity in the results, providing a more unbiased reflection that can be generalized to the study sample. The balance also states that the outcomes are representative and reflect the opinions of both male and female teachers, which may be crucial in crafting policies or curricula that are representative and equitable to diverse viewpoints.

Table 1. Demographic Information Analysis.

Category	Subcategory	Responses	Percentages
Gender	Male	72	48%
	Female	78	52%
Institution	Saudi Universities	75	50%
	Jordanian Universities	75	50%
	Head of the Department	18	12%
	Head of Curriculum Committee	20	13%
Role	Faculty Member	112	75%
	1–3 years	30	20%
	4–6 years	38	25%
Experience	7–10 years	30	20%
	More than 10 years	52	35%

The responses are evenly split between Saudi and Jordanian universities, each contributing 50%. The even split makes the comparative aspect of the study more robust, allowing for closer scrutiny of any country-specific issues or differences in how AI and sociolinguistic issues are addressed within translation programs. The data, therefore, presents a comparative cross-regional perspective that can reveal similarities or divergences in how these two education systems incorporate or leave out key aspects of AI-assisted translation and cultural sensitivity.

Role-wise, the survey shows a good representation of faculty members (75%) compared to the Head of Department (12%) and the Head of Curriculum Committee (13%). This bias towards representation implies that while most responses come from immediately concerned parties involved in the teaching work, there is little role for decision-makers who hold the power to contribute to curriculum development. As a result, while the study is enriched by intensive scrutiny of teachers' views, those of senior administrators may be underrepresented, potentially limiting the generalizability of the findings to curriculum reform. In addition, the distribution of experience levels suggests that 35% of respondents have over 10 years of experience, which would tend to indicate that experienced professionals are more likely to be interested in topics related to AI ethics and sociolinguistic consciousness. This experience may provide valuable insights into the history of translation education, although it also highlights that the views of less experienced staff may be underrepresented.

3.2.2. Current Integration of AI Ethics and Sociolinguistic Awareness

The answers to the initial question, "To what extent does your university's translation curriculum cover topics about AI-assisted translation?" show that, in contrast, most respondents (62%) perceive that AI-assisted translation is at least somewhat covered in the curriculum, while a relatively large percentage (38%) reports little or no coverage of the subject (**Table 2**). Expressly, 8% of the respondents indicated that AI translation is not included at all, and 30% stated that it is included only to a limited extent. These findings suggest that even though AI is perceived as substantial in the practice of translation studies, the majority of institutions are still in the process of beginning to incorporate it into their program. The result of this is clear: universities may have to redesign their courses in translation to include AI-based content so that students are adequately prepared to deal with the new AI-based translation market. The implication is essential because, without adequate exposure to AI technologies in translation studies, students may be at a loss to deal with the evolving demands of the job market, where AI plays an increasingly important role.

Table 2. AI Ethics and Sociolinguistic Awareness.

Question	Response Option	Number of Responses	Percentage (%)
To what extent does your university's translation curriculum include topics on AI-assisted translation?	Not at all	12	8%
	To a limited extent	45	30%
	Somewhat	60	40%
	To a great extent	33	22%
How often are AI ethics discussed in translation courses at your university?	Never	18	12%
	Rarely	30	20%
	Sometimes	67	45%
	Frequently	35	23%
Does the translation curriculum at your university cover sociolinguistic awareness (e.g., cultural sensitivity, linguistic diversity, regional dialects) in AI-generated translations?	Not covered at all	15	10%
	Covered to a minimal extent	35	23%
	Moderately covered	65	43%
	Extensively covered	35	23%

Regarding the frequency of coverage of AI ethics in translation courses, the results show that AI ethics are not being emphasized regularly. While 68% of the respondents report that AI ethics are sometimes or often covered, 32% note that they are seldom or never covered in the course. Specifically, 12% of the respondents reported that AI ethics are never covered, while 20% reported that they are seldom covered. This indicates a significant gap in how universities address AI ethical concerns. The impact of this gap is critical: without AI ethics discourse, students may not be able to understand the potential biases, cultural insensitivity, and ethical concerns that accompany the use of AI tools for translation. It represents a missed opportunity for educational institutions to provide students with a holistic understanding of the technical and ethical dimensions of AI-enabled translation essential for responsible translation practice.

The issue of sociolinguistic awareness of machine translations unmasks that while the majority (66%) of the informants admit that the curriculum addresses sociolinguistic topics such as linguistic pluralism and culture sensitivity to some extent or even more than that, a third (33%) consider it to be slight or not provided with any form of attention whatsoever. Specifically, 10% of the respondents stated that sociolinguistic awareness is not addressed, while 23% opined that it is addressed to a lesser extent. This suggests that, despite universities recognizing the importance of sociolinguistic awareness, they do not address this significant factor to a complete extent in the case of AI-based translations. The result of this deficit is self-evident: while AI technology is effective, it lacks the subtlety necessary for accurate cultural representation. By not incorporating sociolinguistic awareness, students are not equipped with sufficient tools to offset the cultural nuances that AI translations are likely to overlook. Therefore, AI-generated translations can be marred by misrepresentation, bias, or cultural inappropriateness.

The response to the question of whether sociolinguistic awareness is addressed in AI-produced translations reveals a notable disparity in how this matter is valued in the university curriculum. Whereas 43% of the survey respondents indicated that sociolinguistic awareness is treated moderately,

23% indicated it is dealt with comprehensively, which mirrors an appreciative recognition of the value of linguistic diversity and cultural sensitivity in translation studies. However, 23% responded that it is covered very poorly, and 10% answered that it is not covered, which reflects a severe deficit in the curricula of certain universities. These findings suggest that, although many universities recognize the need to address sociolinguistic topics, most either disregard or inadequately cover them. This lack of extensive coverage can result in subsequent translators being poorly prepared to handle the cultural and linguistic sensitivities required for culturally accurate and accurate AI-generated translations. Thus, Universities are essential in cultivating and enhancing their sociolinguistic consciousness to prepare their students to produce culturally accurate translations in an AI era.

3.2.3. Perceived Importance of AI Ethics and Sociolinguistic Awareness

The findings of the perceived significance of AI ethics in translation studies indicate that they concur on its importance (**Table 3**). A staggering 50% of the respondents believe AI ethics is “critical." In comparison, 37% think it is “moderately important," which accounts for nearly 87% of the respondents, considering the pivotal position of ethical issues in AI-based translation. By contrast, only 3% consider AI ethics “not important," and 10% consider it “slightly important." This indicates a growing awareness of the ethical challenges posed by AI-based translations, including bias, misinformation, and accountability concerns. Therefore, the ever-increasing importance of AI ethics suggests that universities should integrate ethical concerns more seriously into their curricula so that students can learn ethical AI-based translation practices.

Table 3. Perceived Importance of AI Ethics and Sociolinguistic Awareness.

Question	Response Option	Number of Responses	Percentage (%)
How important do you think AI ethics is in translation studies?	Not important	5	3%
	Slightly important	15	10%
	Moderately important	55	37%
	Very important	75	50%
How vital is sociolinguistic awareness in AI-assisted translation?	Not important	4	3%
	Slightly important	10	7%
	Moderately important	45	30%
	Very important	91	60%
Do you think AI translation tools adequately account for cultural and linguistic nuances?	Strongly disagree	18	12%
	Disagree	40	27%
	Neutral	32	21%
	Strongly agree	8	5%

Similarly, the concept of sociolinguistic consciousness in AI-assisted translation also aligns with this perspective, with 60% considering it "very important" and 30% considering it "moderately important." This indicates that 90% of the participants know the importance of cultural and linguistic consciousness in AI-generated translations. However, 7% find it "slightly important," whereas 3% find it "not important," with a very low percentage demonstrating negligence towards the factor. The emphasis on sociolinguistic consciousness highlights the need for training in native languages, language variation, and cultural awareness as part of translation courses, ensuring that AI-generated translations are accurate and culturally sensitive.

However, whether AI translation software accurately captures cultural and linguistic nuances is doubtful. 39% either "strongly disagree" or "disagree" that AI software does well in imitating cultural and linguistic nuances, with 21% sitting at the midpoint. Only 5% strongly agree, reflecting widespread reservations that AI can effectively deal with the subtle cultural drivers of translation. Such doubt highlights the limitations of current AI technology and emphasizes the need for curriculum changes with a focus on AI ethics and sociolinguistic sensitivity. Translators may find it challenging to work with AI-generated content that lacks cultural and linguistic nuances, which can lead to miscommunication and cultural insensitivity.

4. Challenges and Barriers

The investigation into obstacles to incorporating AI ethics and sociolinguistic awareness into translation studies reveals several significant issues. As 42% of respondents indicated, the most critical challenge is the lack of training materials, highlighting an urgent need for high-quality tools to support teachers in this area (**Table 4**). Additionally, the fact that teachers are under-educated (37%) implies staff may not be wholly equipped to incorporate AI ethics and sociolinguistics with the appropriate applications. Resistance to altering the curriculum (30%) and a lack of institutional support (27%) continue to hinder the smooth integration of these valuable courses, indicating the institution is resistant to new approaches. Additionally, the lack of collaboration with business experts and AI specialists (23%) means universities

often lack external experience to support their translation modules. Very low (8%) specified many other hurdles, pointing at somewhat exaggerated challenges in different school environments.

Table 4. Challenges and Barriers.

Question	Response Option	Number of Responses	Percentage (%)
What are the main obstacles to integrating AI ethics and sociolinguistic awareness in translation curricula?	Lack of awareness among educators	55	37
	Insufficient training materials	63	42
	Resistance to curriculum change	45	30
	Limited institutional support	40	27
	Lack of collaboration with AI and industry experts	35	23
	Other (various responses)	12	8
Are translation students adequately prepared to address the ethical and sociolinguistic challenges in AI-assisted translation?	Yes	50	33
	No	75	50
	Not sure	25	17

As far as students' readiness to deal with ethical and sociolinguistic issues in AI-supported translation is concerned, the results are alarming. Fifty per cent of the participants (50%) opine that students are not well prepared, whereas 33% feel they are well prepared. The remaining 17% are unsure, reflecting the disparity in training methods between institutions. These results reveal an acute knowledge gap in translation studies, necessitating immediate and systematic curriculum reform, professional training courses, and institutional support to equip students better to address the sociolinguistic and ethical issues associated with AI translation.

The implications of these results are tremendous, as they indicate an immediate necessity for universities to respond actively towards closing this knowledge gap. With such hurdles being the focal point, the solution is an airtight plan that includes creating inclusive training materials, building alliances between the industry and AI professionals, and funding teacher training programs. Without these, translation graduates would be unable to respond to the cultural undertones and ethical implications that accompany AI-related translation, thereby putting the accuracy and cultural representation of their work at risk.

5. Recommendations for Curriculum Enhancement

The survey findings indicate a strong inclination towards implementing various approaches to enhance the integration of AI ethics and sociolinguistic awareness in translation curricula (**Table 5**). The most desired approach is the application of case studies and real-life examples (63%), reflecting the perception that real-life applications are the most effective way to teach these subjects. Training educators in AI and sociolinguistic issues (60%) is also crucial, emphasizing equipping them with the necessary information and competencies. Offering interdisciplinary collaboration with linguists and AI experts (57%) and developing alliances with industry stakeholders (52%) recognizes that external experience and professional participation are key in enriching translation studies. Simultaneously, 53% of the respondents advocate integrating specialized courses in AI ethics, indicating the need for systematic academic frameworks to tackle ethical issues in AI-powered translation.

Table 5. Recommendations for Curriculum Enhancement.

Question	Response Option	Number of Responses	Percentage (%)
What strategies should be adopted to improve the integration of AI ethics and sociolinguistic awareness in translation education?	Introducing specialized courses on AI ethics in translation	80	53%
	Incorporating case studies and real-world examples	95	63%
	Encouraging interdisciplinary collaboration with AI and linguistics experts	85	57%
	Providing faculty training on AI and sociolinguistic issues	90	60%
	Developing partnerships with industry stakeholders	78	52%
Would you support curriculum reforms integrating AI ethics and sociolinguistic awareness into translation programs?	Strongly oppose	5	3%
	Oppose	10	7%
	Neutral	30	20%
	Support	65	43%
	Strongly support	40	27%

Regarding curriculum revisions, most respondents (70%) agree or strongly agree that incorporating AI ethics

and sociolinguistic awareness into translation curricula is necessary. This demonstrates overall agreement with the necessity of such subjects in preparing students to respond to the evolving demands of the translation industry. However, 20% of the respondents remain neutral, perhaps due to scepticism about the feasibility or practicality of such changes. Ten per cent of the participants strongly disagree or disagree with the changes, possibly due to resistance to change in the curriculum or scepticism regarding the use of AI in translation education.

These findings necessitate a balanced, multi-faceted system of translation curriculum reform. Universities can bridge the gaps in AI ethics and sociolinguistic sensitivity by integrating theoretical study, practical instruction, faculty professionalization, and collaboration with industry partners. By touching on these elements, students will be better equipped to meet the challenges of AI-assisted translation, ultimately leading to more ethically conscious and culturally sensitive translation practices in the future.

Qualitative Analysis

The qualitative analysis in this study examines the perspectives of translation teachers, curriculum designers, and specialists on integrating AI ethics and sociolinguistic sensitivity into translation studies. Semi-structured interviews were conducted with participants to gather their views on the most critical issues, including the consequences of AI-supported translation on linguistic and cultural integrity and best practices for optimizing AI-centered training in translation studies. Upon examining the responses, five recurring issues were identified as the most frequently cited problems and suggestions. The chosen responses capture the entire picture of the current issues and solutions; therefore, the significance of coordinating translation courses with the provision of required ethical and cultural capabilities in AI-aided translation.

First Question: What are the biggest challenges of integrating AI ethics and sociolinguistic consciousness into translator training?

One of the most pressing issues the interviewees face is the educators' unfamiliarity with AI ethics and sociolinguistic factors in translation. There remain some educators who apply traditional methods of translation and lack the requisite skills to address AI-related education issues. Such ignorance leaves students graduating without a clear understanding of how AI can impact translation accuracy, ethical decision-making, and cultural representation. The second central problem was training material. All the textbooks and materials available give prominence to classical approaches to translation, with limited information on the ethical use of AI in the realm of translation studies.

The second fundamental challenge is resistance to curriculum adaptation at the institutional level. Most universities typically have a formal curriculum centered on proven translation theory, making it difficult to incorporate new topics, such as AI ethics. Educators will likely oppose the application of new pedagogy due to workload issues, gaps in specialist knowledge, or unfamiliarity with the long-term impact of AI on translation. Institutional shortcomings exacerbate this resistance, as most universities are underfunded or poorly equipped to enable teachers to integrate AI ethics into their curricula effectively. Curriculum reform efforts in translation are slow and sporadic without support.

Furthermore, the lack of liaison with industry and AI experts hinders translation programs from staying current with recent advances. Most interviewees emphasized the necessity of interdisciplinary collaboration among translation schools, AI experts, and linguists since it enables students to receive comprehensive, end-to-end training. Some interviewees also emphasized the need for a framework policy to provide prescriptive guidance on instruction in AI ethics and sociolinguistic sensitivity. Without such a platform, institutions might be left in the dark about which fields of study in AI and ethics are more crucial to focus on when it comes to bringing research into practice.

Second Question: What are your views on the effect of AI translation on linguistic and cultural fidelity?

The subject matter largely agrees that machine translation, in general, fails to consider cultural and linguistic nuances, thus generating mistakes that distort meaning and context. While AI has grown more articulate and efficient at processing, AI software has yet to perfect idiomatic language, dialectical choices, and culture-specific references. For instance, an AI software program will translate a sentence word for word without regard for its implied meaning within the receiving culture. This is particularly worrisome in fields such as literary translation, legal translation, and advertising, where cultural sensitivity matters in conveying accurate and complete information.

The second primary concern is the entrenchment of bias via AI output. AI translation software is trained on massive datasets, which may contain built-in biases, thereby influencing the output translations. Some of the participants identified that such prejudice would stereotype or misrepresent specific linguistic or cultural communities. For example, AI can tend to translate from dominant dialects rather than local ones, thereby marginalizing less popular linguistic forms. It is an ethically questionable matter, as machine translations tend to lead to linguistic homogenization, which reduces the richness of language diversity.

To address these issues, interviewees were interested in the role that human monitoring plays in AI-supported translation. AI should be used as an assistant, rather than taking over the work of human translators, particularly when handling sensitive cultural content. Participants suggested that AI-supported translation software should be calibrated using

proxy and representative sets of data samples to make them more effective. They also requested transparency in AI algorithms so that users would be able to see how translations were being decided. Educators must encourage students to critically examine AI-generated translations and apply post-editing methods to fix cultural errors.

Third Question: What would you suggest for improving AI ethics and sociolinguistic sensitivity in translation programs?

One of the most popular suggested measures was introducing senior courses in AI ethics and translation. Interviewees emphasized teaching students both theoretical and applied concepts on how AI impacts translation. Detection of bias, making moral decisions, and the appropriate use of AI were among the key areas to be analyzed in depth. Second, hands-on training on AI translation software would enable students to acquire the skills necessary for identifying and correcting AI-generated mistakes. Without such courses, students would lack the corresponding skills necessary to address ethical and cultural concerns surrounding AI translation technologies.

The second essential suggestion was to incorporate case studies and real-life examples of translation practice in translation courses. By learning about real-life AI-produced translation errors and ethical mistakes, students become better critical thinkers. They are compelled to consider translation activities in both a moral and a cultural context. Participants suggested that universities make themselves more receptive to interdisciplinarity in translation education by bringing researchers in AI, linguists, and ethicists into conversation. This would enable translation students to receive a well-rounded education that addresses both the technical and humanistic aspects of AI.

Finally, the stakeholders identified the need for collaboration with industry and faculty training to bridge the gap between the academic and professional translation environment. The instructors of translation courses are generally unfamiliar with AI and would welcome workshops, training, and opportunities for interaction with AI engineers. Furthermore, collaboration with industry stakeholders would enable learners to engage in experiential learning through hands-on experience in AI-assisted translation workflows. Universities must collaborate with translation agencies, AI firms, and language technology providers to ensure their courses remain current and in sync with the evolving world of translation technology.

6. Discussion

The findings of this study's qualitative and quantitative components provide valuable insights into the implementation of AI ethics and sociolinguistic awareness in translation courses at Saudi Arabian and Jordanian universities. The responses collected from 150 participants and the qualitative findings of the interviews clearly indicate the case regarding AI incorporation in translation studies, for instance, the issu es foreseen and potential approaches.

6.1. Current Integration of AI Ethics and Sociolinguistic Awareness in Translation Curricula

The analysis shows that neither ethics nor AI tools are systematically integrated into translation training in either country. Approximately 40% of the participants indicated partial integration of AI topics, and almost half had little or no exposure to AI ethics in course materials. The findings are reflected in interview results, which reported a lack of teaching materials and minimal collaboration between AI specialists and translation teachers. This shortfall is further critical when measured against the terms of Pym's risk theory of risk, which has a high value placed upon decision-making and moral accountability within risky translational contexts. Without explicit instruction on these models, students are in danger of using AI technology and misapprehending its ethical impact. Saudi participants were likely to experience concern for regulation and curriculum control from the top down, while Jordanian participants mentioned infrastructural and funding limitations. They both reveal a systemic avoidance of updating curricula in response to the recognized growing significance of AI.

6.2. Challenges in Integrating AI Ethics and Sociolinguistic Awareness

Sociolinguistic awareness was recognised as highly significant by over 50% of the respondents, but hardly any translation courses were found to have dedicated modules on the topic. Respondents cited the inability of AI software to comprehend regional language variations, metaphors of culture, and pragmatic cues. These issues resonated in Hymes' communicative competence model and Canale and Swain's model, which greatly emphasise pragmatic and sociocultural competence in communication. Students untrained in translating may end up producing translations which are grammatically accurate but culturally inappropriate or offensive. Qualitative evidence noted that the "human touch" is crucial in helping to ensure the cultural correctness of AI-generated translations to be dealt with by revision—but such finesse is often ignored in curriculum development. Notably, Jordanian teachers emphasized the homogeneity of dialects in one translation task. In contrast, Saudi teachers emphasized maintaining religious and cultural standards in automated content—demonstrating how national imperatives affect sociolinguistic sensitivities differently.

6.3. Strategies for Improvement

Institutional reluctance to reform and opposition from staff against change were uncovered as ingrained barriers to

transformation. Quantitative and qualitative data illustrated that professors are not experienced and trained in AI ethics and pedagogy in sociolinguistics. The dominance of old-fashioned pedagogy in practice and the relative lack of collaborative research among various departments also hinder creativity. From an ethical point of view in translation—Chesterman's norm-based, more precisely—scholars have a pivotal position in imparting professional and ethical norms to prospective translators. Yet, being badly trained themselves, they are not able to do so. Institutional resistance in Saudi Arabia equalled bureaucratic dawdling; in Jordan, it was more a matter of limited funding and access to expertise. These findings indicate that focused professional development and cross-departmental cooperation are essential prerequisites for curriculum reform.

7. Conclusions

This study examined integrating AI ethics and sociolinguistic awareness into translation courses at Saudi Arabian and Jordanian universities. The findings reveal a significant gap in integrating AI topics into translation courses, particularly those related to ethics and sociolinguistic issues. While teachers and students rated AI ethics and sociolinguistic awareness highly important, the survey revealed that these concerns are not sufficiently addressed in most translation programs. Furthermore, whereas most respondents highlighted the need to provide students with ethical challenges in AI translation, they lamented that most curricula are not adequately preparing students.

The study identifies various challenges to integrating AI ethics and sociolinguistic sensitivity into translation programs. These include teacher unawareness, inadequate teaching materials, conservatism during curriculum revision, and insufficient institutional incentives. To address this, participants suggested various ways to enhance integration, including incorporating specialized courses on AI ethics, teacher training, and increased interdisciplinary collaboration with linguists and AI experts. These align with the literature, which emphasizes the role of the translation profession in adapting to keep pace with technical progress and incorporating cultural and ethical consciousness into the discipline of translation.

The current study's findings align with the most recent research on AI in translation, underscoring the further significance of the translation training agenda, including ethics and sociolinguistic sensibilities. However, the study indicates imbalances between research recommendations and educational tendencies that dominate actual contexts, such as curriculum design and resource allocation. The findings emphasize the need to transform translation studies, equipping future translators with a better ability to cope with the challenges introduced by AI technologies, thereby making them linguistically and culturally competent. Future research should focus on developing solutions to the challenges identified in this study and effectively implementing the proposed curriculum reforms.

Author Contributions

A.M.F. helped conceptualize and design the study, worked on the methodology, carried out the formal analysis, drew up the original draft, and oversaw the overall project. N.A. worked in data collection and curation, executed the investigation, helped with the review and editing of the manuscript, supplied the required resources, and facilitated validation of the results. Z.A. oversaw the research process, facilitated data visualization, helped with the manuscript's critical revision and editing, facilitated funding for the study, and aided with software tools utilized during data analysis. All authors have read and agreed to the published version of the manuscript.

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Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data is available from the corresponding author upon reasonable request.

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Conflicts of Interest

The authors declare no conflict of interest.

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