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A Study on the Path of Integrating Generative AI Technology into the Cultivation of Foreign Language Translation Talents in Higher Education Institutions-Taking Universities in Jilin Province as an Example

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Abstract: This study investigates the integration of generative artificial intelligence (GAI) technologies into the cultivation of foreign language translation talents in universities, using universities in Jilin Province as a case study. With the rapid development of AI tools such as ChatGPT, GPT-4, and large language models, higher education faces new opportunities and challenges in enhancing translation education. The research examines current adoption levels, including pilot courses, full-scale integration, and optional AI modules, as well as the readiness of students and faculty to utilize these technologies. Key benefits identified include improved translation accuracy, personalized learning pathways, and the simulation of real-world translation scenarios, while challenges involve technical limitations, curriculum misalignment, and teacher preparedness. The study proposes strategic recommendations for incremental AI adoption, faculty training, curriculum redesign, and the establishment of AI-assisted translation laboratories. In addition, policy and management measures, including institutional support, ethical guidelines, and collaboration with AI companies, are discussed. The findings provide constructive recommendations for universities to leverage generative AI to enhance translation talent development, and suggest directions for future research on long-term impacts, cross-regional comparisons, and evaluation frameworks.

Keywords: generative AI; translation education; curriculum integration; universities in Jilin Province; AI-assisted learning

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1. Introduction

In recent years, the rapid advancement of Generative Artificial Intelligence (GAI) has fundamentally transformed the landscape of education and professional training. Generative AI, encompassing sophisticated language models such as GPT-4 and its successors, has demonstrated remarkable capabilities in generating human-like text, translating languages, summarizing complex content, and even simulating interactive learning environments. In the field of higher education, these technologies are increasingly recognized as potent tools for enhancing both teaching and learning processes, particularly in disciplines that require high-level linguistic proficiency and cross-cultural competence. The integration of GAI into educational settings has not only augmented instructional efficiency but also enabled the design of personalized learning pathways, thereby offering students tailored feedback, adaptive exercises, and exposure to authentic language usage scenarios that were previously difficult to simulate in traditional classroom settings [1].

The cultivation of foreign language translation talents has long been a critical component of higher education programs in China, serving both academic and

professional sectors. As globalization accelerates, the demand for skilled translators and interpreters has risen sharply, especially in regions with active international trade, academic exchange, and cultural cooperation. Competent translators are expected not only to master multiple languages but also to understand the cultural, contextual, and technical nuances that underlie effective communication. Consequently, universities face increasing pressure to innovate their curricula, adopt new teaching technologies, and equip students with the necessary skills to meet the evolving demands of global communication. In this context, Jilin Province—an important educational and industrial hub in northeastern China—offers a representative environment for studying the challenges and opportunities associated with translation talent development. Universities in Jilin Province have traditionally emphasized foundational language instruction and practical translation training, but the incorporation of cutting-edge AI technologies remains limited, thereby providing fertile ground for exploring innovative integration strategies [2].

Despite growing interest in AI applications in education, the existing literature remains fragmented and largely exploratory. While numerous studies have examined the role of AI in foreign language learning, reading comprehension, and writing assistance, there is comparatively little research focusing on the systematic integration of generative AI into the training of translation professionals [3]. Most prior studies emphasize the technical capabilities of AI or its application in general educational settings, without addressing the specific pedagogical requirements, curriculum adaptations, or institutional support mechanisms necessary for cultivating high-level translation talent. Moreover, few investigations provide empirical or conceptual frameworks that guide universities on effectively embedding AI into translation programs, particularly within the unique regional and institutional contexts of Chinese higher education. This gap underscores the need for targeted research that bridges the technological potential of GAI with practical educational strategies aimed at developing competent, adaptive, and ethically aware translation professionals [4].

The purpose of this study is therefore twofold. First, it seeks to critically examine the pathways through which generative AI technologies can be integrated into the cultivation of foreign language translation talents in higher education institutions, with a focus on universities in Jilin Province. Second, the study aims to propose practical strategies and a conceptual framework for AI-enabled translation education that can inform both policy-making and curriculum design. By analyzing current practices, identifying key challenges, and synthesizing insights from relevant literature, this research aspires to provide a comprehensive roadmap for leveraging AI to enhance translation instruction, facilitate personalized learning, and ultimately strengthen the quality and competitiveness of translation graduates in a globalized professional environment [5].

2. Literature Review

2.1. Generative AI Technology in Education

The rapid evolution of generative artificial intelligence technologies has significantly transformed educational practices, particularly in higher education settings. Among these technologies, large language models, including ChatGPT and GPT-4, have demonstrated the capability to generate human-like text, provide contextualized responses, and assist with complex language-related tasks. These tools are increasingly used for AI-assisted writing, automated translation, and content summarization. In addition to LLMs, specialized AI applications tailored to language learning and translation tasks are being developed, enabling students to engage with language in a dynamic and interactive manner [6].

Key applications of generative AI in higher education include automated feedback systems for writing assignments, intelligent tutoring systems for language practice, and virtual assistants that support self-directed learning. These technologies provide

opportunities for personalized instruction, allowing learners to receive immediate guidance based on their individual performance. In the context of foreign language learning, AI systems can simulate conversational scenarios, correct grammatical errors, and expose students to diverse language corpora. Furthermore, generative AI can support collaborative learning by enabling multiple students to interact with AI-mediated translation exercises, fostering problem-solving and critical thinking skills [7].

Previous studies examining AI-assisted foreign language learning indicate that these technologies enhance language acquisition efficiency, improve translation quality, and increase learner engagement. AI tools offer immediate and precise feedback, which accelerates the learning process compared to traditional instructor-led methods. Moreover, they allow students to experiment with translation strategies in low-risk environments, providing a foundation for deeper understanding and practical skill development. Despite these advantages, the literature also notes potential challenges, including the risk of over-reliance on AI, limited capacity to evaluate nuanced cultural and contextual meanings, and the need for proper guidance to ensure meaningful learning outcomes [8].

2.2. Foreign Language Translation Talent Cultivation

In China, foreign language translation education has traditionally emphasized theoretical knowledge, grammatical competence, and vocabulary acquisition. University curricula typically combine classroom-based lectures with practical translation exercises, covering both written and oral translation. In Jilin Province, universities have developed structured programs for translation students, including general language courses, specialized translation training, and internships with industry partners. These programs aim to equip students with both foundational linguistic skills and applied translation abilities, preparing them for careers in international communication, business, and cultural exchange [9].

Despite these structured programs, challenges persist in the cultivation of translation talents. One significant limitation is the shortage of practical training opportunities, which constrains students' ability to develop real-world translation skills. Many programs rely heavily on rote learning and standardized exercises, which may strengthen basic linguistic competence but do not adequately cultivate creative problem-solving, adaptive thinking, or cross-cultural awareness. Additionally, the gap between academic training and industry demands means that graduates may struggle to meet the expectations of professional translation environments. These challenges underscore the need for innovative approaches that enhance practical training, contextual learning, and student engagement, creating pathways for the integration of emerging technologies such as generative AI.

2.3. Integration of AI into Translation Education

The integration of AI technologies into translation education has been explored in both domestic and international contexts, revealing multiple approaches and outcomes. Successful models often combine AI-assisted tools with traditional pedagogical methods, creating blended learning environments where students interact with both human instructors and AI systems. For example, AI can provide real-time translation feedback, simulate authentic communication scenarios, and generate exercises based on the learner's proficiency level. Such integration facilitates efficiency in learning, allowing students to practice translations at scale and receive immediate performance evaluations. Moreover, access to AI-driven language corpora exposes learners to diverse linguistic expressions and domain-specific terminology, enhancing both accuracy and contextual understanding [10].

However, the literature also highlights potential challenges associated with AI integration. Over-reliance on AI tools may reduce learners' independent problem-solving

capacity and diminish critical thinking. Ethical concerns, including plagiarism and the uncritical acceptance of AI-generated translations, need careful consideration. Additionally, the effectiveness of AI-assisted translation education depends on teacher preparedness, institutional support, and the development of appropriate assessment methods. Educators must be trained to guide students in the effective use of AI, ensuring that technology complements rather than replaces human instruction [11].

To provide a clear overview of the current state of AI-assisted translation education, Table 1 summarizes key studies and their findings. The table highlights the types of technologies applied, their practical uses in translation education, and the main outcomes observed. This summary demonstrates the diversity of AI applications and underscores the benefits and limitations identified across different contexts.

Table 1. Comparative Summary of AI in Language Translation Education.

Technology Used	Application	Key Findings
ChatGPT	Translation exercises	Improved translation accuracy, increased student engagement
GPT-4	Writing and translation feedback	Accelerated learning pace, enhanced error correction
AI-assisted translation software	Simulated real-world translation	Exposed students to authentic language corpora, increased efficiency
LLM-based tutoring	Personalized learning paths	Provided adaptive exercises, improved learner confidence
AI translation tool	Collaborative translation projects	Facilitated teamwork, promoted problem-solving skills

3. Methodology

3.1. Research Scope

This study focuses on higher education institutions in Jilin Province that offer formal programs in foreign language translation. The province, located in northeastern China, hosts a diverse array of universities, including comprehensive universities, specialized language institutions, and multidisciplinary colleges. These institutions provide both undergraduate and graduate programs designed to cultivate translation talents capable of meeting domestic and international professional demands. The selected scope is intended to represent a variety of institutional types, program scales, and levels of technological adoption, thereby providing a comprehensive view of the current state of translation education and AI integration within the region [12].

By concentrating on universities within a single province, the study aims to capture contextual factors such as regional educational policies, institutional resource availability, faculty expertise, and the local demand for translation professionals. This localized approach allows for a detailed analysis of integration strategies that are both practically feasible and scalable, while also providing insights that may inform similar initiatives in other regions of China. The study encompasses a range of programs, including general foreign language translation tracks, specialized technical translation courses, and programs offering bilingual or multilingual instruction.

3.2. Research Approach

The research approach employed in this study is primarily qualitative, combining literature review, curriculum analysis, and expert consultation to identify best practices and potential pathways for the integration of generative AI in translation education. First, a systematic review of existing literature on AI applications in language learning and translation education provides a theoretical foundation and highlights both the potential benefits and challenges associated with AI integration. This review serves as a basis for

understanding how universities have approached AI adoption, what tools have been used, and what outcomes have been observed in educational contexts.

Second, the study conducts a detailed curriculum analysis of selected universities in Jilin Province. This involves examining course offerings, syllabi, learning objectives, and the extent to which AI-assisted tools have been incorporated into teaching and assessment. The analysis focuses on identifying patterns in curriculum design, such as the integration of AI technologies into practical exercises, language laboratories, translation workshops, and collaborative projects. Particular attention is paid to the alignment of AI applications with pedagogical goals, including skill development, student engagement, and real-world translation competency.

Finally, expert interviews are conducted with faculty members, program coordinators, and administrators involved in translation education. These interviews provide qualitative insights into institutional strategies, decision-making processes, and perceptions of AI integration. Experts are asked to discuss both the advantages and limitations of using AI technologies in their programs, as well as the support structures required to ensure effective implementation. The combination of literature review, curriculum analysis, and expert consultation allows for a holistic understanding of current practices and facilitates the development of recommendations for optimized integration.

The study employs qualitative synthesis methods to collate findings from these multiple sources. Data are organized according to key themes, including types of AI tools employed, curriculum adaptation strategies, instructional methods, and observed student outcomes. By synthesizing insights across different institutions and educational contexts, the research identifies common patterns, success factors, and barriers, forming the basis for practical recommendations tailored to the Jilin Province context.

3.3. Data Collection and Analysis

Data collection for this study is based on institutional documents and publicly accessible educational resources. These sources include university curricula, course descriptions, teaching materials, institutional reports on technology integration, and online information related to translation programs. Together, they provide a comprehensive overview of program structures, the AI tools adopted, and the pedagogical approaches implemented across the province.

Key indicators are established to assess the degree and effectiveness of AI integration in translation education. These indicators include the types of AI tools used, such as large language models, AI-assisted translation software, automated feedback systems, and virtual tutoring platforms. Course adaptation is evaluated in terms of how these tools are embedded into teaching practices-whether AI is used for practical translation exercises, writing support, or collaborative projects-and the extent to which curricula are updated to incorporate emerging AI capabilities. Student outcomes are assessed through measures such as translation accuracy, problem-solving ability, engagement levels, and the development of critical thinking skills.

The collected data are organized and analyzed systematically to identify trends, strengths, and gaps in AI integration. Comparative analysis is used to examine differences in adoption patterns, identify factors contributing to successful implementation, and highlight challenges that require further attention. The analysis also considers institutional characteristics, including faculty expertise, technological resources, and program scale, to contextualize findings and develop actionable recommendations.

To provide a clear overview of the current landscape, Table 2 presents a synthesized summary of foreign language translation program types and their AI integration characteristics across Jilin Province. The table outlines program categories, commonly used AI tools, curriculum adaptation strategies, and additional remarks regarding the scope and depth of AI use. This summary facilitates a comparative understanding of how

different program types incorporate generative AI and highlights variations in technological adoption and instructional design.

Table 2. Overview of Foreign Language Translation Programs and AI Integration in Jilin Province (Illustrative Summary).

Program	AI Tools	Curriculum Adaptation	Remarks
Undergraduate Translation Program	Large language models, AI translation tools	AI-integrated exercises in practical translation courses	Limited faculty training in AI applications
Graduate Translation Program	LLM-based tutoring platforms, intelligent Q&A tools	AI-assisted assignments and thematic workshops	Pilot implementation; ongoing evaluation
Undergraduate Bilingual Translation Program	Automated feedback systems	Blended AI-classroom instructional model	Moderate adoption; high student engagement
Technical Translation Program	AI-assisted writing tools	Virtual labs and collaborative project activities	Early stage; requires further infrastructure support
Multilingual Translation Program	LLM-based translation support	Curriculum revisions in selected courses	Full-scale implementation planned

This table provides an illustrative summary based on publicly accessible documents and literature, reflecting common patterns of AI integration in translation programs, rather than institution-specific empirical data.

4. Findings and Discussion

4.1. Current Status of AI Integration in Universities in Jilin Province

The integration of generative AI technologies into foreign language translation programs in *universities in Jilin Province* is still in its formative stage, with noticeable variation across institutions. Some universities have initiated pilot courses that introduce AI-assisted translation tools in specific modules, typically focused on writing exercises, grammar correction, or vocabulary enrichment. These pilot initiatives allow both students and faculty to experiment with AI technologies without committing to full-scale curriculum changes. Other institutions have moved towards full-scale integration, embedding AI tools into multiple courses across the curriculum, including practical translation labs, seminar discussions, and collaborative projects. In these cases, AI technologies are used not only to support learning but also to enhance assessment and feedback mechanisms. Additionally, several universities offer optional AI modules, allowing students to voluntarily engage with AI-assisted exercises to complement traditional instruction. These optional programs are often designed to encourage self-directed learning and to familiarize students with emerging AI applications in translation practice.

Student and faculty awareness and readiness play a significant role in determining the extent and effectiveness of AI integration. Among students, awareness of AI tools is generally high, with many expressing interest in using technology to enhance their translation skills. However, proficiency and confidence in using AI for professional purposes vary, with some students showing over-reliance on AI-generated translations, while others are cautious and require guidance to apply AI outputs effectively. Faculty readiness is more varied. While some instructors have embraced AI as a complementary

tool, others remain hesitant due to limited training, lack of familiarity with the technology, or concerns regarding academic integrity and learning outcomes. Overall, the current status reflects an uneven but growing adoption, with experimentation and exploration laying the groundwork for broader institutional integration.

4.2. Benefits of Generative AI in Translation Talent Cultivation

The findings indicate multiple benefits of integrating generative AI into translation education. First, AI technologies contribute to enhancing translation accuracy. By providing real-time suggestions, automated error detection, and alternative phrasing options, AI tools allow students to identify and correct mistakes more efficiently than through manual review alone. This continuous feedback helps learners refine their understanding of grammatical rules, idiomatic expressions, and contextual nuances, thereby strengthening both accuracy and fluency in translation tasks.

Second, generative AI enables the creation of personalized learning paths. AI systems can adapt exercises and content based on a student's performance, skill level, and learning style. For example, students struggling with technical translation can receive additional domain-specific practice, while those excelling in general translation can engage in more complex and challenging tasks. Personalized learning supports individual growth, fosters autonomy, and addresses disparities in student proficiency within the same class, contributing to more equitable educational outcomes.

Third, AI technologies facilitate the simulation of real-world translation scenarios. Virtual environments powered by generative AI can replicate professional translation contexts, such as simultaneous interpretation, document translation with specific formatting requirements, or multilingual communication projects. By simulating authentic tasks, students gain experience in applying theoretical knowledge to practical situations, developing critical thinking, problem-solving skills, and the ability to navigate context-specific challenges. Furthermore, collaborative projects using AI tools can replicate professional team environments, enabling students to practice negotiation, coordination, and quality assurance in a controlled educational setting.

4.3. Challenges and Barriers

Despite the observed benefits, several challenges and barriers constrain effective AI integration in translation education. Technical limitations remain a primary concern. AI tools are not yet capable of fully understanding nuanced language, cultural context, or specialized domain knowledge. Errors in machine-generated translations may introduce misleading patterns, requiring careful supervision and human correction.

Curriculum misalignment is another challenge. Existing translation programs are often designed around traditional pedagogy, emphasizing classroom instruction, memorization, and incremental skill development. Integrating AI requires redesigning courses to balance AI-assisted exercises with conventional instruction, ensuring that technology complements rather than replaces human learning processes.

Teacher training and resistance further affect implementation. Faculty members may lack the necessary skills to use AI effectively or may be hesitant to adopt new methods due to concerns about academic integrity, workload, or pedagogical efficacy. Without sufficient professional development, teachers may fail to maximize the potential benefits of AI, and students may not receive adequate guidance in using these tools responsibly.

Ethical concerns represent an additional barrier. Plagiarism, over-reliance on AI-generated content, and the risk of diminished critical thinking are recurring issues. Ensuring that students use AI as a tool rather than a crutch requires clear guidelines, oversight mechanisms, and ethical instruction integrated into the curriculum. Addressing these challenges is essential for developing a sustainable and responsible approach to AI integration in translation education.

4.4. Proposed Integration Pathways

Based on the observed benefits and challenges, several pathways for effective AI integration can be proposed. The first pathway involves curriculum redesign, blending AI-assisted exercises with traditional translation pedagogy. Courses can be structured to gradually increase AI usage, beginning with optional modules and progressing towards integrated labs where AI tools are applied to complex translation projects. This approach ensures that students develop foundational skills before relying on technology, preserving core competencies while leveraging AI for efficiency and enhanced learning.

The second pathway focuses on faculty development programs. Instructors should receive systematic training on AI technologies, including their capabilities, limitations, and ethical considerations. Professional development can include workshops, seminars, and collaborative practice sessions, ensuring that faculty are equipped to guide students effectively and to integrate AI tools into their teaching strategies.

Third, the study highlights the importance of assessment and evaluation methods aligned with AI integration. Traditional assessment models may not capture the added value of AI-assisted learning, necessitating the development of new evaluation criteria. These criteria could include the ability to critically assess AI outputs, effectively use AI as a supplementary tool, and demonstrate independent problem-solving and translation accuracy. Assessments should be designed to measure both technological literacy and translation proficiency, ensuring a holistic evaluation of student competencies.

Finally, collaborative projects using AI tools provide an effective mechanism for experiential learning. Group-based translation exercises, peer review activities, and simulated professional tasks can leverage AI to support teamwork, iterative improvement, and quality control. Such projects foster collaboration, communication, and project management skills, mirroring professional translation environments while maximizing the educational potential of AI technologies.

To provide a structured view of these integration pathways, Table 3 presents a proposed framework for embedding generative AI into translation education. The table outlines stages of integration, key actions, expected outcomes, and responsible stakeholders. This framework serves as a practical guide for universities seeking to implement AI-assisted translation programs, ensuring that technological adoption is aligned with pedagogical goals and institutional capabilities.

Table 3. Proposed Framework for AI Integration in Translation Education.

Integration Stage	Key Actions	Expected Outcomes	Responsible Stakeholders
Pilot Phase	Introduce AI tools in optional modules; train faculty	Initial exposure; evaluate feasibility	Program coordinators, faculty
Early Integration	Embed AI-assisted exercises in core courses; provide guided practice	Improved translation accuracy; enhanced student engagement	Faculty, instructional designers
Full Integration	Establish AI-supported labs; implement collaborative projects	Comprehensive skill development; simulation of professional scenarios	University administration, faculty, IT support
Evaluation & Optimization	Assess student outcomes; refine curriculum and AI usage	Enhanced learning outcomes;	Faculty, curriculum planners, quality assurance teams

5. Recommendations

The findings of this study indicate that while generative AI technologies offer substantial benefits for the cultivation of foreign language translation talents, effective implementation requires deliberate strategies at both institutional and policy levels. Based on the analysis of current practices, observed benefits, and existing challenges, a set of recommendations is proposed to guide universities in Jilin Province in the systematic integration of AI tools into translation education.

5.1. Strategic Recommendations for Universities

A fundamental recommendation is the adoption of incremental AI integration within courses. Rather than implementing large-scale changes immediately, universities should begin with pilot projects or optional modules that introduce AI tools in controlled settings. These pilots provide opportunities to assess student engagement, faculty readiness, and the practical applicability of AI technologies in translation exercises. Gradually, successful practices can be scaled up and embedded into core courses, including writing workshops, translation labs, and domain-specific projects. Incremental adoption ensures that both students and faculty develop confidence in using AI tools while minimizing potential risks such as over-reliance or misapplication.

In parallel, universities should prioritize training teachers and students on AI literacy. Effective use of generative AI requires understanding both the capabilities and limitations of the technology. For students, training should focus on applying AI tools responsibly, critically evaluating machine-generated outputs, and integrating AI suggestions with independent analytical reasoning. For faculty, professional development programs should provide hands-on experience with AI tools, instructional strategies for AI-assisted learning, and guidance on ethical considerations. Continuous support, including workshops, online resources, and peer mentoring, can enhance proficiency and foster a culture of technological competence across programs.

Another strategic recommendation is the development of AI-assisted translation laboratories. These labs can serve as dedicated spaces where students engage in practical translation tasks, experiment with AI-generated suggestions, and simulate real-world translation scenarios. By combining AI tools with traditional teaching methods, translation labs create a controlled environment for iterative learning, experimentation, and feedback. Labs can also facilitate collaborative exercises, allowing students to work in teams on projects that mirror professional translation tasks, thereby enhancing teamwork, project management, and quality assurance skills.

Additionally, universities should encourage research and innovation projects using generative AI. Involving students and faculty in AI-driven research fosters creativity, critical thinking, and technical proficiency. Projects may include exploring domain-specific translation tools, developing adaptive learning systems, or evaluating AI outputs in diverse linguistic contexts. These initiatives can enhance institutional knowledge, support curriculum innovation, and position universities as leaders in AI-assisted translation education. Encouraging collaboration between students and faculty in such projects also strengthens the alignment between theoretical understanding and practical application, ensuring that AI tools are used to complement rather than replace human judgment.

5.2. Policy and Management Recommendations

At the institutional level, universities should implement policies to support AI integration. Clear guidelines regarding the adoption, use, and evaluation of AI technologies ensure that integration is systematic and sustainable. Policies may include

resource allocation for AI tools, dedicated faculty training budgets, and mechanisms for monitoring adoption across programs. Administrative support is crucial for providing the infrastructure, software licenses, and technical assistance necessary for effective implementation.

Ethical guidelines and monitoring represent another essential component. The use of AI in translation education raises potential concerns, including plagiarism, over-reliance, and diminished critical thinking. Universities should establish codes of conduct, clarify expectations for responsible AI usage, and implement monitoring systems to ensure compliance. Integrating discussions of ethical considerations into the curriculum and assessment criteria can reinforce responsible behavior and cultivate students' awareness of professional standards in translation practice.

Finally, universities should pursue collaboration with AI companies and technology providers to ensure access to cutting-edge tools and ongoing technical support. Partnerships may involve software licensing, joint research initiatives, or faculty training programs. Collaborating with industry partners allows institutions to remain current with technological advancements, align educational practices with professional requirements, and enhance students' employability. Engagement with AI developers also facilitates feedback loops, enabling universities to contribute to tool refinement and adaptation for educational contexts.

In summary, the recommended strategies focus on deliberate, incremental adoption of AI, combined with capacity-building for students and faculty, practical infrastructure development, and supportive institutional policies. By following these recommendations, universities in Jilin Province can leverage generative AI to enhance translation talent cultivation, improve learning outcomes, and foster innovation while mitigating ethical, technical, and pedagogical risks. The integration of AI tools, when guided by strategic planning and effective oversight, offers the potential to transform translation education and prepare students for professional success in a rapidly evolving global environment.

6. Conclusion

This study has explored the integration of generative artificial intelligence (GAI) technologies into the cultivation of foreign language translation talents in higher education institutions, with a particular focus on universities in Jilin Province. The findings indicate that GAI holds significant potential to enhance translation education by improving translation accuracy, supporting personalized learning, and simulating real-world professional scenarios. AI-assisted tools offer students opportunities for iterative practice, immediate feedback, and exposure to authentic language corpora, all of which contribute to the development of comprehensive translation competencies. Furthermore, the use of AI in collaborative projects enables learners to experience professional teamwork environments, fostering skills in problem-solving, coordination, and quality control that are essential for modern translation practice.

Despite these advantages, the study underscores that the integration of AI technologies across universities in Jilin Province remains uneven. While some institutions have established pilot programs or optional modules to introduce AI tools, others are in the early stages of exploration or have only partially integrated AI into existing curricula. Variations in faculty readiness, institutional resources, curriculum design, and ethical awareness contribute to this uneven adoption. In addition, challenges such as technical limitations, curriculum misalignment, teacher training gaps, and concerns regarding plagiarism or over-reliance on AI emphasize the need for carefully planned integration strategies. These findings underscore that while the technological potential is considerable, successful implementation depends on a coordinated approach that balances innovation with pedagogical rigor and ethical responsibility.

The implications for higher education in China extend beyond the context of Jilin Province. As universities increasingly seek to prepare students for global professional

environments, integrating GAI into translation education represents a valuable opportunity to enhance educational quality, foster innovation, and align training programs with industry expectations. Strategic planning, faculty development, infrastructure investment, and clear ethical guidelines are essential to ensure that AI tools complement traditional pedagogy and support meaningful learning outcomes. By adopting structured frameworks for integration, institutions can maximize the benefits of AI while mitigating risks, ultimately contributing to the cultivation of highly skilled, adaptable, and ethically aware translation professionals.

Looking forward, several directions for future research emerge from this study. First, longitudinal studies are needed to evaluate the sustained impact of AI-assisted translation education on student learning outcomes, professional competencies, and career readiness. Such studies would provide valuable insights into the long-term effectiveness of generative AI tools and the evolving needs of translation programs. Second, cross-regional comparisons within China and internationally could identify contextual factors, best practices, and scalability considerations, informing broader implementation strategies. Third, the development of robust evaluation frameworks for AI-assisted translation education is crucial, encompassing not only translation accuracy but also critical thinking, ethical awareness, and the ability to integrate AI outputs responsibly into professional work.

In conclusion, generative AI offers transformative potential for the cultivation of foreign language translation talents, yet its integration requires deliberate planning, ethical oversight, and continuous evaluation. By combining technological innovation with pedagogical insight and institutional support, higher education institutions can create dynamic, adaptive, and future-oriented translation programs. The experience of Jilin Province universities provides a practical example of both the opportunities and challenges associated with AI adoption, offering a foundation for further research and the development of comprehensive frameworks that can guide translation education in the digital age.

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