

Understanding Translation Learning Beliefs in the AIGC Era: A Cross-Year Study of Translation Majors and Its Implications for Translation Education

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Abstract: In the age of Artificial Intelligence Generated Content (AIGC), translation learning beliefs have been reshaped. This study surveyed translation learning beliefs among translation major students across four academic years at a Chinese university featuring science and technology. Focus group discussions were organized with students from the first year to the fourth year. Data were analyzed under Horwitz's learning belief framework as a conceptual perspective. The findings show that multidimensional translation learning beliefs are influenced by AIGC. Instead of displaying a linear progression, academic-year differences were mainly found in the emphasis, specificity, and patterns. The findings give pedagogical implications such as stage-sensitive belief support, reflective AI use, and professionalism cultivation for translation education.

Keywords: Translation learning beliefs; AIGC; Translation major students; Translation education

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1. Introduction

In recent years, artificial intelligence has facilitated translation practice in terminology search, draft generation, information collection, etc. Studies imply that technologies are reshaping translation practice and translator competence. Yang *et al.* ^[1] provided an expert-informed basis for revising translator competence models. Yang and Wang ^[2] surveyed the willingness of student translators to use machine translation. Within the context of widespread translation technology adoption, the question is not about whether students use technological tools, but how students perceive translation learning.

How students understand their learning falls into the category of learning beliefs. Horwitz ^[3] believed that students learn with previous learning experiences and beliefs, which further shape learning behaviors, thereby affecting learning outcomes. Wenden ^[4] viewed learning beliefs through the lens of metacognition,

which guides learners' decisions and learning strategies. Barcelos ^[5] extended learning beliefs from being static to dynamic, adopting qualitative methods to explore the concept further. Wu ^[6] explored translation learning beliefs among Chinese students. Previous research laid a solid ground for research on learning beliefs, yet left unaddressed gaps. They did not include the AI-mediated learning context or students specifically in translation programs. Besides, most studies adopted quantitative methods to identify translation learning beliefs, yet without exploring how students themselves see such differences. Therefore, this paper, through a qualitative method, intends to answer: (1) What learning beliefs do students in the translation major hold in the Artificial Intelligence Generated Content (AIGC) era? (2) How do these learning beliefs vary across academic years? (3) What are the pedagogical implications for translation education?

2. AI-mediated learning beliefs in translation

2.1. Horwitz's learning beliefs framework

Horwitz introduced the Beliefs About Language Learning Inventory (BALLI), laying the foundation for surveying learning beliefs in second language acquisition. Kern ^[7] compared students' and teachers' learning beliefs assessed by means of the BALLI developed by Horwitz, suggesting that teachers' beliefs are one of many factors that may influence students' learning beliefs in the language learning context. Peacock ^[8] surveyed the relationship between language learning beliefs and language proficiency, implying that some learning beliefs negatively affected language learning and resulted in many dissatisfied and frustrated students. Researchers have referred to Horwitz's inventory in their quantitative studies as an initial conceptual framework.

2.2. Contextualizing learning beliefs in translation learning

While Horwitz tried to identify factors that matter in learning beliefs, Chinese researchers applied Horwitz's BALLI to the context of translation learning, because it differs from general language learning with its distinct disciplinary features. Translation learners may ponder over the nature of translation, the content of translation learning, required translation competence, and strategies for translation problem solving. Wu further proved that translation learning beliefs among English major students take a more discipline-specific form and that translation learning experience shapes translation learning beliefs on an academic-year basis. Following researchers examined the correlations among translation learning beliefs, strategies, motivation, and translation proficiency ^[9-11]. Therefore, translation learning beliefs are not just about how students perceive translation learning, but may also exert an influence on translation learning behaviors and learning outcomes. Given that most previous studies were conducted before the AIGC era, this further leads to the question of how translation learning beliefs are shaped when AI-enabled translation becomes a trend.

2.3. Reframing translation learning beliefs in the AIGC context

As AI tools become increasingly present in translation practice, researchers have started to examine translation learning beliefs in the AIGC context. AIGC does not present an additional dimension to the existing dimensions of translation learning beliefs, but becomes a factor interacting with those dimensions. Regarding the nature of translation learning, students may think about what they should still learn if AI can produce a translation. They may continue to question what constitutes an appropriate translation learning strategy and what new challenges may arise when AI tools are incorporated into translation learning. They

may also develop new beliefs about the abilities of a competent translator and even the professional value of a translator. Yang and Wang found that students have different levels of willingness to adopt machine translation, while AI is reshaping translation competence by including the use of technological tools in translation ^[2]. Therefore, AIGC as a contextual extension provides a new angle to examine translation learning beliefs, instead of being treated as an independent dimension of learning beliefs.

3. Methodology

3.1. Participants and context

This research was conducted among 24 undergraduates from a translation program at a Chinese university featuring scientific and technological disciplines. The researcher organized four focus groups on an academic-year basis, with 6 students from each year. Students in the same academic year were recruited voluntarily to participate in a semi-structured discussion, as they had relatively shared learning experiences to enable cross-year comparison. This comparison aimed to discover variations in translation learning beliefs across different academic years of the translation program.

3.2. Focus group question design

This research used focus groups to dive into the question of how translation major students perceive translation learning in the AIGC context. This focus-group research method was appropriate for exploring the associations among learning beliefs, feelings, and behaviors, while within-group discussion gave participants opportunities to clarify and compare their views ^[12,13]. This semi-structured discussion was designed primarily based on Horwitz's theoretical framework of learning beliefs while incorporating the translation-specific context based on previous empirical studies. Discussion questions covered the nature of translation learning, translation abilities, translation learning challenges, the use of learning strategies, motivation, and expectations, while AIGC-related questions were probed after general questions on translation learning beliefs so as to avoid participants' views being directly influenced toward technology. These questions were reviewed and revised after being piloted among a small group of students under the guidance of the question-development procedure ^[14]. Participants in the four years were asked the same core questions to enable cross-year comparison.

3.3. Framework analysis

This research used framework analysis applied to focus-group data ^[15]. This approach allows existing research questions and theoretical frameworks to inform data analysis, yet remains open to new themes arising from participants' discussions. The analysis involved familiarization, identifying a thematic framework, indexing, charting, mapping, and interpretation. The transcripts were read closely and repeatedly and coded separately. The five dimensions of Horwitz's learning beliefs provided an initial lens for coding, while new themes related to translation learning and AIGC were also allowed to emerge from the data. Coded data were charted into a matrix under the categories of learning belief themes and academic years. The final step was to map and interpret similarities, differences, and possible patterns of translation learning beliefs across four academic years.

4. Findings and discussion

4.1. Beliefs about the nature of translation learning

Translation major students across all four years reached common ground that translation is more than just the linguistic conversion of information. However, they still showed differences in the beliefs about the nature of translation learning. First-year students more frequently linked translation learning with bilingual proficiency, knowledge accumulation, and personal development. Some recognized the value of translation in cross-cultural communication. One student made it even clearer that she would not pursue a translation-related profession in the future, but still she thought the nature of translation learning would enable her to be a more proficient reader of English materials and a better cross-cultural communicator. The second- and third- year students were more articulate about the importance of contextual meaning, cultural differences, textual suitability, and expression appropriateness in learning translation. The fourth-year students talked more about understanding cultural differences, the use of flexible translation strategies, and cultivating one's unique understanding. One student even emphasized the importance of understanding the cultural position of the source language. Through comparison, linguistic proficiency was deemed important in the nature of translation learning by all four groups, but higher-year students were more explicit in highlighting the contextual and intercultural aspects of translation learning.

4.2. Translation aptitude and learner self-concept

Students from four years were very humble about their translation aptitude and competence even though some of them had won prizes in translation competitions. Besides linguistic proficiency, first-years mentioned that they were insufficient in cultural awareness, scope of knowledge, and sense of responsibility. They included AI in their self-concept by admitting their readiness to turn to AI when encountering challenges in translation. Second-year students associated their aptitude and self-concept with on-site translation training and practice. They were more aware of the interpersonal aspect by realizing that the essence of translation is communication, which requires adaptability. One even described his role as “language service provider,” seeing his ability to communicate, adapt, and mediate as equally important as language ability. Some students were explicit that AI lowered the threshold for translation tasks. The third-year students tended to be clear about their deficiencies in domain knowledge, readiness, and responsiveness in on-site high-pressure scenarios, using “beginner” to describe themselves for a lack of practical experience in translation tasks. They relied on AI, yet showed a cautious self-concept. Fourth-year students could see their freedom in making choices between alternative expressions and contextual demands by stressing critical thinking, displaying more confidence in AI-mediated translation tasks. In a word, AIGC seems to reshape aptitude and self-concept beliefs by shifting attention from linguistic and cultural competence to the competence to regulate and work with AI in translation tasks.

4.3. Translation learning difficulties in the AI-enabled context

Difficulties in translation reflect how students identified their problems. Students in the first year showed a tendency to locate their learning challenges at surface language levels, such as vocabulary, collocation, syntactic structures, and other grammatical problems, saying that they were unable to evaluate their own translations and AI-enabled translations. Generally, AI-mediated translations could overtake students' versions, creating students' over-dependence on AI tools. The second-year students were faced with more independent translation tasks in translation training sessions. They attributed their increased learning

difficulties to interdisciplinary knowledge, output problems, and the challenge of using AI without compromising their individual thinking and judgment. Some students were clear that even with thorough preparation with the help of AI, they were still overwhelmed by on-site pressure in some interpreting tasks. As third-year students enhanced their competence in translation evaluation and appreciation, they felt a strong sense of frustration and affective burden when AI-generated translations surpassed their own. Fourth-year students were more preoccupied with issues such as balancing faithfulness, readability, tone, and cultural effect. One student mentioned that the rapid updating of AI tools made it challenging for her to catch up with the technological developments in tool usage. Overall, difficulties ranged from language challenges and translation skills to task management, evaluation, and decision-making, while AI tools reduced comprehension and output difficulties and posed self-regulatory challenges.

4.4. AI-assisted learning strategies

Students from four years showed continuity and increasing diversification in their beliefs about learning strategies and the role of AIGC. First-years admitted their heavy reliance on AI for translation assignments and used conventional learning strategies for translation, such as vocabulary memorization, grammar checks, and comparison with other translations. They also realized the need to avoid overreliance on AI. Second-year students described their efforts in more deliberate and active combinations of independent work and AI assistance. They usually used AI for practice material generation, practice feedback, draft revision, and knowledge reference. Students mentioned that they would make selections and deliberate after comparing their versions with the AI-generated version. Third-year students integrated AI into their own translation workflows. They tended to complete their translation independently and used AI as a translation coach for feedback reference. They mentioned that they were more cautious about the backfiring effects of AI on their learning abilities and outcomes. Fourth-year students emphasized more about the assisting role of AI in personalized and interactive learning. Through comparison, beliefs about AI-assisted learning strategies varied from AI as immediate support for year-one students, to AI as a comparison and feedback tool for year-two students, AI integrated into specific translation workflows for year-three students, and finally AI embedded in personal and interactive learning.

4.5. Motivation, expectations and future professional roles

Even though the translation program was not their first academic choice, they still became more interested in this major and showed varied motivation and professional expectations. First-year students shared their concerns over employability, admitting that AI-caused reductions in routine employment did not necessarily discourage them. One student felt an urgent need for self-improvement, for she believed AI would replace less competitive translators. Second-year students displayed stronger career planning. Some considered an interdisciplinary path between law and translation. They perceived that AI would not replace translation altogether but would raise professional expectations. Students in the third year viewed translation competence as transferable skills even though they might not choose translation as their profession. They valued AI's role more in reviewing, stylistic control, cultural mediation, and communication. Accounts from the fourth-year students were the most polarized. Half were determined to be professional translators while the others would drift away from the profession, yet keep translation as a long-term skill. Students from the four years showed diversified beliefs about motivation, expectations, and future professional roles.

5. Pedagogical implications for translation education

5.1. From uniform teaching to stage-sensitive belief support

Translation learning beliefs across the four academic years do not exhibit a linear pattern from less to more developed statuses. However, they show varied emphasis on different dimensions of translation learning beliefs, so students across academic years should not be treated as a homogeneous group. Translation teachers should identify students' translation learning beliefs and address their concerns accordingly. Teachers need to help first-year students develop a clearer disciplinary understanding of translation rather than a mere focus on language improvement, whereas second-year students may need more support with their increasing learning challenges. Third-year students should be guided to develop an awareness of human-AI collaboration. As for fourth-year students, support should be directed toward professional positioning. This is echoed by Wu's and Jiang's research, which found significant relationships among translation learning beliefs, strategy use, engagement, and learning performance.

5.2. From AI-mediated tool training to reflective AI use

The findings imply that translation education should focus on belief-informed AI use. Instead of merely helping students to learn various AI tools, teachers need to encourage students to reflect on when and why to use AI, when to check its reliability, and which parts of their own ideas should be retained. While Yang and Wang mentioned factors influencing technology acceptance among student translators, findings of this research suggest more effort should be guided toward learner agency and the clear boundary between AI assistance and independent learning. This also supports Jiang's finding that learning strategies mediate associations between translation learning beliefs and performance.

5.3. From career preparation to professionalism cultivation

Findings suggest that students held varied beliefs regarding the roles of translators, and they were aware of the value of human translators, such as judgment, cultural mediation, creativity, and responsibility, which cannot be replaced by AI. Translation education should shift from career preparation to professionalism cultivation. Translation teachers should therefore help students understand changing professional roles in the AIGC era while cultivating qualities that distinguish human translators from AI. Teachers should guide students toward a diversified career path while cultivating professionalism, such as professional awareness, responsibility, and human judgment, that remains valuable and transferable across different AI-mediated career contexts.

6. Conclusion

This study examined translation learning beliefs among translation major students across four academic years in the AIGC era. The findings suggest that translation students held varied learning beliefs in the context of translation learning, such as the nature of translation learning, translation learning aptitude and self-concept, learning difficulties, strategy use, motivation and expectations, and professional roles. Differences in translation learner beliefs were not displayed in a linear pattern of development, but mainly in varied emphasis, specificity, and configuration. AIGC emerged as a new factor influencing multiple dimensions of translation learning beliefs. These findings imply the need for stage-sensitive belief support, reflective AI use, and professionalism cultivation. Further quantitative and longitudinal research is needed to examine how translation learning beliefs change over time.

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References

- [1] Yang C, Hou S, Chen J, et al., 2026, Prioritizing Translator Competencies in the Era of Artificial Intelligence: A Delphi Method Study. *Discover Education*, 5: 605.
- [2] Yang Y, Wang X, 2019, Modeling the Intention to Use Machine Translation for Student Translators: An Extension of Technology Acceptance Model. *Computers & Education*, 133: 116–126.
- [3] Horwitz EK, 1988, The Beliefs About Language Learning of Beginning University Foreign Language Students. *The Modern Language Journal*, 72(3): 283–294.
- [4] Wenden AL, 1999, An Introduction to Metacognitive Knowledge and Beliefs in Language Learning: Beyond the Basics. *System*, 27(4): 435–441.
- [5] Barcelos AMF, 2003, Researching Beliefs About SLA: A Critical Review, in Kalaja P, Barcelos AMF (eds.), *Beliefs About SLA: New Research Approaches*, Kluwer Academic Publishers, Dordrecht, 7–33.
- [6] Wu GJ, 2013, A Study of Translation Learning Beliefs and Their Developmental Characteristics Among English Majors. *Foreign Language World*, 2013(1): 72–78, 94.
- [7] Kern RG, 1995, Students’ and Teachers’ Beliefs About Language Learning. *Foreign Language Annals*, 28(1): 71–92.
- [8] Peacock M, 1999, Beliefs About Language Learning and Their Relationship to Proficiency. *International Journal of Applied Linguistics*, 9(2): 247–263.
- [9] Wang H, Yan XJ, 2015, Learner Beliefs and Translation Learning. *Meta*, 60(2): 377.
- [10] Jiang C, 2023, Effect of Learner Factors on Chinese Undergraduates’ Translation Learning Performance: A Moderated Mediation Model. *SAGE Open*, 13(2): 1–12.
- [11] Sun B, 2023, Translation Learning Beliefs and Learning Strategies of Chinese English Majors. *Frontiers in Educational Research*, 6(20): 155–161.
- [12] Krueger RA, Casey MA, 2000, *Focus Groups: A Practical Guide for Applied Research*, 3rd ed., Sage Publications, Thousand Oaks, CA.
- [13] Rabiee F, 2004, Focus-Group Interview and Data Analysis. *Proceedings of the Nutrition Society*, 63(4): 655–660.
- [14] Smith JA, Flowers P, Larkin M, 2022, *Interpretative Phenomenological Analysis: Theory, Method and Research*, 2nd ed., SAGE Publications, London.
- [15] Ritchie J, Spencer L, 1994, Qualitative Data Analysis for Applied Policy Research, in Bryman A, Burgess RG (eds.), *Analyzing Qualitative Data*, Routledge, London, 173–194.

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