

Analyzing Japanese Student Tutor Reports with LLM

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Abstract: This study analyzes paper-based reports submitted by Japanese student tutors (hereafter referred to as tutors) who supported international students at a Japanese university. We compare the experiences of tutors who supported short-term exchange students with those who supported regular students enrolled in full academic programs using a Large Language Model (LLM). Summaries generated by the LLM show that tutors supporting exchange students focused more on short-term daily life assistance and cultural exchange, while tutors for regular students provided more academic support. Sentiment analysis revealed that regular student support was perceived as more burdensome.

Keywords: e-learning, tutor, international students, LLM

1. Introduction

In Japanese universities, a tutoring system exists in which Japanese student tutors (hereafter referred to as tutors) support international students in their daily lives and academic pursuits. This initiative benefits both international students and Japanese students, but Uzuka and Oka (2016) have highlighted the need for appropriate training to enhance the quality of tutoring. Although Hirayama et al. (2024) developed an e-learning program to train tutors supporting exchange students, a program tailored for tutors supporting regular students is still lacking.

This study aims to investigate the differences in tutoring experiences between exchange students and regular students by analyzing tutors' paper-based reports to design an appropriate training program for tutors supporting regular students. A Large Language Model (LLM) was applied for analyses because it enables efficient and scalable analysis of large amounts of qualitative data, which is typically labor-intensive and time-consuming when conducted manually (Long et al., 2024).

2. Methodology

For this study, 137 tutor paper-based reports at the authors' university from academic years 2022 to 2023 were analyzed: 75 from tutors supporting exchange students and 62 from tutors supporting regular students.

The reports about support contents and reflections were first digitized and categorized. An LLM, GPT-4o, was prompted to summarize them and perform sentiment analysis. Since the original results were in Japanese, they were translated into English for this paper.

3. Results and Discussion

3.1 Comparison of Support Contents

Table 1 shows a summary of tutors' support contents generated by the LLM. Tutors for exchange students primarily engaged in short-term, practical, face-to-face support such as

course registration, city hall visits, and cultural adaptation. On the other hand, tutors for regular students provided a more balanced combination of academic and personal support, including assignment assistance, explanation of technical terms, and long-term lifestyle consultation.

Table 1. Summary of Tutors' Support Contents by the LLM

Category	exchange students	regular students
Support contents	Course registration, city hall procedures, bank account setup, classroom support, cultural adaptation, and hospital visits. Mainly short-term, face-to-face practical assistance.	Support with assignments, explanation of technical terms, and long-term lifestyle consultation (e.g., moving, government offices). Balanced support with academic and personal elements.

3.2 Comparison of Reflections

Table 2 shows a summary of tutors' reflections by the LLM. Tutors supporting exchange students emphasized enjoyable experiences such as cultural exchange, personal growth, and deepening relationships. In contrast, tutors for regular students highlighted the complexity and burden of their responsibilities, including explaining academic systems and institutional procedures.

Sentiment analysis at the document level generated by the LLM further supported this observation. Tutors supporting exchange students showed a higher proportion of positive sentiments (23%) compared to those supporting regular students (11%).

Table 2. Summary of Tutors' Reflection by the LLM

Category	exchange students	regular students
Positive Experiences	Enjoyed spending time together, engaging in cultural exchange, learning through teaching language, and experiencing fulfillment from deepening relationships.	Witnessed students' adaptation, and self-reliance, and received feedback that academic support was helpful.
Challenges Faced	Difficulties adjusting to Japanese language levels, communication breakdowns, and frustration with limited support time.	Complex paperwork (moving, city hall), explaining technical or institutional content, balancing life and study.

4. Conclusion

By analyzing paper-based tutor reports using the LLM, this study found that tutors supporting regular international students provided more frequent academic support, and felt more emotional burden compared to those supporting exchange students. Future work should adopt a range of validation approaches, including human evaluation and using other LLMs, to ensure validity. To address the limitation of generalizability due to the data being from a single institution, future studies should include data from multiple institutions.

References

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