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Addressing machine translation and AI tool use in the English language learning classroom

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Balancing academic integrity with the effective use of machine translation (MT) services such as Google Translate and DeepL, and generative AI tools like ChatGPT and Google Bard is an area of concern for many language instructors. This study used semi-structured interviews ($N = 9$) to investigate how university English instructors in Japan are currently addressing the use of MT and AI tools in their courses. Analysis of the interviews revealed seven distinct approaches: detecting and possibly punishing use, preventing use, warning or reminding students of institutional policies, dissuading students from use, allowing or ignoring use, encouraging use, and educating students on effective use. This paper discusses these approaches along with illustrative comments from the interviewees.

Keywords: machine translation, artificial intelligence, pedagogy

Introduction

The use of machine translation tools (MT), such as Google Translate, in language classes has long been a contentious issue (e.g. Groves & Mundt, 2015). Of primary concern is its potentially detrimental impact on learning through misuse or over-use by students. However, because of its increasing pervasiveness, instructors have sought methods to harness its potential in ways that enhance student learning.

Two recent studies reflect this evolving situation. Lee (2021) found that guided practice with lower proficiency English students helped them complete writing tasks while giving them greater confidence in their skills. On the other hand, Can (2023) found that while there was some nuanced support of the use of MT by both teachers and students, both groups still felt its overuse was unethical.

More recently, generative AI has created a new dimension to the technology

available to language learners. While most of the conversation has focused on AI's potential to impact academic integrity, there have also been early findings supporting its potential to aid teachers and students alike when used effectively and guided by clear policies and instructors skilled in its use (Kasneci et al., 2023; Mizumoto & Eguchi, 2023; Su et al., 2023).

With this in mind, the researchers set out to investigate how teachers are addressing both MT and AI use in their classrooms in this rapidly evolving environment.

Methodology

During a pilot study (Jolley & Rubesch, 2024), 32 English teachers at Japanese universities answered a Google Forms survey exploring their approaches towards the use of MT and AI for class work. Respondents were also asked whether they could participate in a follow-up interview. From those that answered favourably, respondents who demonstrated clear policies regarding the use of MT and/or AI were selected to be interviewed.

Semi-structured 30-minute interviews ($N = 9$) were conducted with respondents, including both part-time and full-time university teachers. The interview transcripts were then coded for approaches instructors take towards the use of MT and AI technologies in their classes.

Results

Analysis of the interview transcripts revealed seven instructor approaches towards student use of MT and AI tools: detecting and possibly punishing use, preventing use, warning or reminding students of institutional policies, dissuading students from use, allowing or ignoring use, encouraging use, and educating students on effective use. These themes are discussed below including exemplary comments from the interviewees related to each theme.

Detecting and (possibly) punishing

One approach mentioned was detecting students' use of these tools. Interviewee 4 stated that they attempt to use students' previous work as a comparison for other assignments, "We do a handwritten in-class writing sample as kind of a baseline comparison for future assignments." Interviewee 1 said they asked students to extend or explain their work, to detect work that was not student-created, "In writing class, I will ask students to explain the ideas in their assignments 'what does this mean?'" Interviewee 2 uses their knowledge of typical students' writing abilities and common errors to judge the validity of assignments, stating "AI... has a real sing-song [quality]... you just sort of feel it when you read it."

Preventing use

A common approach, mentioned by 8 of the 9 interviewees, was the implementation of course activities which prevented the use of MT and AI. Some interviewees

attempted to achieve this by creating unique, specific, and personalised activities. For example, Interviewee 3 said they design writing assignments which are based on the students' personal experiences instead of assignments requiring research of already established information because "... to make it a compelling argument, it needs to have those personalised experiences that can only come from a writer – and so far, ChatGPT is unable to do that." Similarly, Interviewer 5 explained an assignment they used which asked students to describe how their favourite junior high school teacher inspired them instead of a more generic assignment such as "the history of tempura."

Another common method to prevent use was instituting more in-class, teacher-monitored activities, and requiring students to write by hand instead of with a computer. Interviewee 6 referred to this as "rewalling" the language learning classroom, saying to students, "Okay. All of you come into this classroom. No computers, no nothing, and get out a pen. Here's the paper and write."

Warning or reminding of policies

Some instructors informed or reminded students of institutional policies which address academic integrity, conduct, and honesty related to MT and AI use in school-work. For example, Interviewee 4 stated, "We rewrote [the department handbook] this summer to include machine translation and LLMs... We're supposed to on the first lesson... go over that policy." While Interviewee 8 explained, "I didn't even really mention it, except to say that it's, you know, if you use AI it's plagiarism."

Dissuading

General dissuasion was another approach. Here, students were not warned of any policy but instead informed or reminded of how relying on digital tools can weaken or defeat the purpose of studying languages. Interviewee 4 used this approach, stating, "I try to iterate the purpose of the course which is to prove their own writing skills... I try to frame it like... this is why we have class, and if you're doing it this way, while you may pass the class, you didn't receive the benefit you paid for."

Some teachers used grades as a way to dissuade students. An example from Interviewee 9 being, "I try to discourage it" and "Hey [you] shouldn't do it. And if they do, they get a low grade."

Allowing or ignoring use

Some instructors take a laissez-faire approach with Interviewee 8 stating, "I let them choose. It's too difficult for me to police." Similarly, Interviewee 1 reported, "I'll let it slide, because I'm not going to be able to keep 30 students straight... especially when it comes to doing their work."

Encouraging use

Some instructors encourage students to use MT and AI tools. Interviewee 9 commented, “They’re such a wonderful tool to use and... we can use them and... produce something that ultimately somebody who doesn’t speak your language can understand.” Interviewee 6 said plainly, “So, I do generally encourage them to use it.”

Educating on effective use

Another approach was to educate students on effective implementation of these tools for language study. Indeed, Interviewee 3 said, “I tell them not to only focus on one translation but look at multiple sources and then decide which one is best closely aligned to the meaning that we’re searching for.” Others introduced new tools to increase effective output and check to ensure they are using the tools within the course parameters. Interviewee 7 stated that they use a free online tool called ZeroGPT (www.zerogpt.com) to detect the use of AI tools. If the program detects more than 20% AI-created writing in an assignment, then the student is asked to revise their work.

Interviewee 4 mentioned their experimentation with the instructional technique of having students create their own personalised instructional materials as follows:

They write something themselves, and then they input it in the ChatGPT. They ask ChatGPT to analyse the CEFR level of it. Then, they ask ChatGPT to rewrite it with a higher CEFR level. ChatGPT gives a list of what is changed from one writing to the next... of what vocabulary might have changed, or what sentence structures might have changed, and it gives [students] a personalised strategy for improving their own writing.

Discussion

Through the interviews it was discovered that the interviewees often use multiple approaches depending on their contexts, constraints, values, and goals. Instructors also sometimes employed contradictory approaches. This reflects the rapidly evolving situation, with many respondents seemingly trying different tactics as they come to terms with this technology’s place in their courses.

Writing classes seemed of most concern for instructors when it came to students utilising these tools, with classes focusing on reading or oral communication rarely mentioned. Though both restrictive and supportive approaches of its use in writing classes were stated, they centred around the production of work or aiding in language acquisition. There was little mention of instructing students to critically analyse content created by AI. With one of the major criticisms of AI being its potential to generate biased or inaccurate content (Su et al., 2023) critical literacy will surely become an important consideration for both teachers and institutions alike.

Finally, though this study looked at both the use of MT and AI tools, due to its rapid development, generative AI seems to currently be the one of most concern for the instructors interviewed.

Conclusion

The authors hope that this study has shed some light on common approaches employed by English instructors in Japan when dealing with MT and AI tools in their courses. There remains a lot to be discussed about the role that MT and AI tools will play in the future of language learning. Much as the portable electronic calculator had a drastic impact on the teaching of mathematics in the mid-1970s (Watters, 2015), the use of these tools may be something instructors and institutions grapple with for decades to come. Watters (2015) writes:

Much of the “Math Wars” of the late 1980s (and onward... still) involved how much technology was appropriate, what technology would mean for the acquisition of basic math skills, and what – thanks to new technologies – math education should or could look like.

Undoubtedly, similar debates about best practices in integrating or excluding MT and AI tools will be forthcoming in the language education field.

References

- Can, S. (2023). Instructors’ perceptions of students’ Google Translate use in language learning. *Söylem Filoloji Dergisi, Translation Studies Special Issue*, 474–482. <https://doi.org/10.29110/soylemdergi.1186593>
- Groves, M., & Mundt, K. (2015). Friend or foe? Google Translate in language for academic purposes. *English for Specific Purposes*, 37, 112–121. <https://doi.org/10.1016/j.esp.2014.09.001>
- Jolley, K., & Rubesch, T. (2024). Perspectives on machine and AI translation use in foreign language learning. *Baika Women’s University Faculty of Cultural and Expression Studies Bulletin*, 20, 27–40. https://baika.repo.nii.ac.jp/record/2000015/files/bunka_020_003.pdf
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., & Seidel, T., ... Kanesci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*. <https://doi.org/10.35542/osf.io/5er8f>
- Lee, Y. J. (2021). Still taboo? Using machine translation for low-level EFL writers. *ELT Journal*. 75(4), 432–441. <https://doi.org/10.1093/elt/ccab018>
- Mizumoto, A., & Eguchi, M. (2023). Exploring the potential of using an AI language model for automated essay scoring. *Research Methods in Applied Linguistics*, 2(2). <https://doi.org/10.1016/j.rmal.2023.100050>
- Su, Y., Lin, Y., & Lai, C. (2023). Collaborating with ChatGPT in argumentative writing classrooms. *Assessing Writing*, 57, Article 100752. <https://doi.org/10.1016/j.asw.2023.100752>
- Watters, A. (2015, March 12). A brief history of calculators in the classroom. *Hack Education*. <https://hackededucation.com/2015/03/12/calculators>

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Troy Rubesch’s research centres around the use of technology in language education. He has published on topics including conversational agents (chatbots) in language learning, distance education, and technology in self-access learning.

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