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AN INVESTIGATION INTO THE PERCEPTIONS AND USAGE OF AI AND ONLINE TRANSLATION SOFTWARE IN A JAPANESE UNIVERSITY EFL CLASSROOM

Abstract:

The aim of the current study was to investigate the perceptions and roles of AI and translation software in learning English as a foreign language in a Japanese university classroom. 112 Japanese university students were selected based on random cluster sampling and participated in the study. Their attitudes towards the usage of AI and translation software were examined by a LIKERT-based questionnaire, given to them at the end of the academic semester. Results showed that over half of students engaged in using AI and translation software in their EFL classes. Students expressed that they used them mainly when they felt pressed for time and when the assignments given to them were too difficult. A majority also felt that their use helped them learn materials and did not consider them to be cheating when doing homework or class assignments. The use of AI and translation software can be lessened by having teacher explicitly warn against their usage, and by incorporating old-fashioned paper and pencil writing assignments. A majority of students also stated they would continue to use AI and translation software which would indicate that instead of railing against their uses in classes, teachers and educators may benefit from learning how to utilize them in class to enhance the students' learning experiences.

Keywords:

AI, Translation Software, Cheating, EFL, Writing Classes

JEL Classification: I29, I21, I20

Introduction

The use of AI in university classrooms has increased exponentially since the release of Chat GPT in 2020 (Cotton et al. 2024). ChatGPT which is a variant of the GPT-3 (Generative Pre-trained Transformer 3 (Brown et al., 2020) is an artificial intelligence app that was developed and released by OpenAI. There are many other similar apps including Deep, and Elsa Speak that have also grown in popularity. In the case of the Japanese university EFL classroom, students regularly engage in the use of these AI apps as well as synchronous translation software such as Google Translate or LINE translate (Tracker, 2020). According to a study done by Tracker (2020), students use these apps to “copy-and-paste” also known as “kopi-pe” while doing assignments. In his article he noted that over 50% of Japanese university students regularly look to these apps and kopi-pe to finish assignments (Jordan, 2010). This creates a great conundrum for EFL teachers as it is not the students who are doing the assignment, but rather the AI or translation software. Japanese students also use their phones to take pictures of each other’s notes, assignments, and contents on blackboard or white boards.

While cheating on exams and assignments are the most common forms of academic dishonesty, many young students believe that the use of AI and translation software is not an example of pure cheating as it is not an actual person who they are copying from. Rather, they are using AI and translation software more as a tool, than a way to perform academic dishonesty. However, according to Brown-Wright et al (2012), in an academic context, cheating is defined as

students’ conscious involvement or participation in deception (i.e., lying falsifying, misrepresenting, corruption, plagiarism, copying or the unlawful assistance provided to someone else), typically for the purpose of performing well or giving the perception of performing well on an academic task.

Looking at this definition, one could argue that the use of AI or translation software in an EFL classroom is undeniably cheating as the purpose of the course is to test language ability, for which the student may or may not possess. Furthermore, according to a study done in 2008 by Toprak, Ozkanal, Kaya and Aydin, when technology becomes more interwoven in the classroom, there is less distance between ethical behaviors of students and cheating. Thus, one could argue that, as the technology gets better and the more and more classes start to offer online or e-learning aspects of courses, the amount of cheating and dishonest practices by students will go up. Online courses remove barriers of observation between teachers and students, thereby allowing more students to engage in cheating incidents in the classroom. There are mainly two different ways of cheating. The first involves premeditated planning and behavior such as copying someone else’s work, using AI or translation software on assignments, and having someone else do assignments. The second is panic cheating in which students cheat on the spot, usually during tests or quizzes. In another study done by Jenkins et al. (2022), cheating in online classes increased during the Covid 19 pandemic as more and more schools moved to online models.

While the use of AI and plagiarism has been on the rise since the covid-19 pandemic, how about the case of the Japanese university EFL classroom? In his article Tracker (2020) also

suggested that the concepts of cheating are different in the East-Asian versus Western educational systems. He argued that there may be a “cultural disconnect between the ways the students perceived their behaviors and how their teachers say them.” (pg. 11) In many East Asian cultures students are taught to read, memorize and copy answers that have been deemed correct. For them it is more of a regurgitation of correct answers than it is more of a synthesis of ideas and concepts. Tracker (2020) also argues that using technology to help turn in assignments is not considered cheating as the technology is simply a tool students may choose to use to finish assignments.

However, the concept of cheating on quizzes and tests seems to be universal, as numerous studies have shown that students understand that using technology or AI to complete assignments is not fair (Rahimi & Goli, 2015). Thus, it is important for teachers to maintain academic integrity in classrooms. This means curbing cheating as well as the use of AI or translation software. This study looks at the specific case of the use of AI and translation software by Japanese university students in an EFL classroom. It argues that while teachers may not be able to completely ban the use of AI and translation software in classes, there are strategies teacher may use to discourage its use. It also recommends teachers talking with students about the use of AI and translation software in classes and on assignments. Finally, rather than railing against the use of AI or translation software, the author argues that it is imperative teachers understand why students use these tools to cheat and how they can be used to promote learning, as many students feel they are beneficial to their learning outcomes.

Literature Review

Cheating using AI or translation apps provide quick and easy ways for EFL students to finish assignments. According to Gilmore (2009) plagiarizing in writing is easy and results from students who are too lazy to think of what to write, as writing is so much more than just writing sentences. Furthermore, according to Parfitt (2012), the main two reasons why EFL students plagiarize is due to poor time management, and that they think that the assignments are too difficult. These reasons correlate with the results from the survey done in this paper. When asked if students use AI or translation apps because they thought the assignments were too difficult, 19.6% answered they definitely agreed, and 42.9% of students answered that they somewhat agreed. That is 62.5% who felt that assignments were out of their capability. Also, when asked if they used AI or translation apps because they felt that they did not have enough time to complete the assignment, 21.4% answered that they definitely agreed, and 32.1% answered that they somewhat agreed. Combined, that is 53.5% of students who answered that time is a main contributing factor in their choice to plagiarize. Parfitt (2012) mentions that many time students underestimate the size and amount of work that goes into an assignment. They push it off to the last minute and then panic when the deadline approaches. They look for a quick and easy way out, thereby turning to AI or translation apps to get the assignment done.

Menager & Paulos (2011) state that EFL students suffer from a lack of confidence when it comes to expressing ideas and concepts in another language. This may be exceptionally true in the case

of Japanese students who strive for grammatical perfection. Tacker (2024) explains that “the Japanese education system may play a role in determining how strongly students feel they need to manifest uncertainty avoidance in the EFL classroom.” (pg. 17) Japanese students may feel that they would rather ensure that the answer is correct by using an app, than by thinking of something by themselves and risking it being incorrect. Even if it is marked wrong, by the teacher, it is the machine or app’s answer that is wrong, not their own, thereby moving the responsibility and blame. In an educational system like the one in Japan, answers are very clear cut. Students who are trained to take tests and use rote memorization to spit out answers, feel more comfortable assigning blame to an app, rather than risk being marked wrong.

Materials and Methods

An online questionnaire through Google Classroom was administered to 112 Japanese university students as a private four-year university in Tokyo Japan. Students ranged in from freshmen to seniors but were mainly comprised of freshmen students. All students were EFL students taking English language classes. The survey used a modified Likert scale (6-point) questions developed to gauge the students use of AI and translation software in their English classes, their attitudes towards them, their reasons behind using them, and how they felt about using them in the future. A total of 18 questions were asked. All questions were asked in both Japanese and English. All translations and questions were created by the author of this paper. Finally, the means were calculated to gauge overall answers to each question.

The first four questions dealt with their frequency of usage of AI and translation software during classes. Tables 1-4 summarize their answers.

Table 1 – Results of “AI and Translation Software Use” Survey No. 1

私は授業中にワークしている時にAIや翻訳アプリ(コピーペースト)を使用したことがある。I have used AI or translation software when doing my work in class.		
Answer options	Yes	No
No.	54 (48.2%)	58 (51.8%)

Table 2 – Results of “AI and Translation Software Use” Survey No. 2

私は授業中のクイズやテスト中に翻訳アプリやAI(コピーペースト)を使用したことがある。I have used translation software or AI during a quiz or test in class.		
Answer options	Yes	No
No.	10 (8.9%)	102 (91.1%)

Table 3 – Results of “AI and Translation Software Use” Survey No. 3

私は家でワークしている時にAIや翻訳アプリ(コピーペースト)をよく使用したことがある。I frequently use AI or translation software when doing work at home.		
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Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	6 (5.4%)	11 (9.8%)	15 (13.4%)	66 (58.9%)	14 (12.5%)

Table 4 – Results of “AI and Translation Software Use” Survey No. 4

課題をやるときAIや翻訳アプリ(コピーペースト) はとても役に立っていると思う。I think that using AI or translation software when I do classwork is very helpful.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	3 (2.7%)	10 (8.9%)	9 (8%)	40 (35.7%)	50 (44.6%)

The mean was 4.11

The following seven questions asked the students about their perceptions of AI and translation software during their classes. They were also asked their reasons for using them and whether they were told about not using AI or translation software by their teachers. Tables 5 to 11 summarize their answers.

Table 5 – Results of “AI and Translation Software Use” Survey No. 5

翻訳アプリやAI(コピーペースト) を使用することは私が英語を学ぶ上で役立つと思う。I think that using translation software or AI helps me learn English.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	6 (5.4%)	15 (13.4%)	27 (24.1%)	39 (34.8%)	25 (22.3%)

The mean was 4.67

Table 6 – Results of “AI and Translation Software Use” Survey No. 6

私は宿題や授業中の作業時にAIや翻訳アプリ(コピーペースト) を使用することは不正だと思う。I think that using AI or translation software when doing homework or class work is cheating.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	15 (13.4%)	44 (39.3%)	25 (22.3%)	22 (19.6%)	6 (5.4%)

The mean was 2.64

Table 7 – Results of “AI and Translation Software Use” Survey No. 7

私は宿題や授業中の作業時にAIや翻訳アプリ(コピーペースト)を使用することは不正だと思う。 I think that using AI or translation software during quizzes or tests is cheating.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	2 (1.8%)	3 (2.7%)	7 (6.3%)	22 (19.6%)	78 (69.6%)

The mean was 4.53

Table 8 – Results of “AI and Translation Software Use” Survey No. 8

私は教師や他の人からAIや翻訳アプリ(コピーペースト)を使用することは不正だと言われたことがある。 I have been told by my teachers or others that using AI or translation software is cheating.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	15 (13.4%)	12 (10.7%)	16 (14.3%)	37 (33%)	32 (28.6%)

The mean was 3.53

Table 9 – Results of “AI and Translation Software Use” Survey No. 9

翻訳アプリ(コピーペースト)やAIを使用するとき、そうするのは宿題が難しすぎるからだ。 When I use translation software or AI for assignments, I use it because I think the assignments are too hard.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	8 (7.1%)	11 (9.8%)	23 (20.5%)	48 (42.9%)	22 (19.6%)

The mean was 3.58

Table 10 – Results of “AI and Translation Software Use” Survey No. 10

翻訳アプリ(コピーペースト)やAIを使用するとき、そうするのは自分で課題をする時間が十分でないからだ。 When I use translation software or AI for assignments, I use it because I think I don't have enough time to do the assignments by myself.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	11 (9.8%)	26 (23.2%)	15 (13.4%)	36 (32.1%)	24 (21.4%)

The mean was 3.32

Table 11 – Results of “AI and Translation Software Use” Survey No. 11

翻訳アプリ(コピーペースト) やAIを使用する時、そうするのは課題をすぐに終わらせることができるからだ。When I use translation software or AI I use it because it gets the job done quickly and easily.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	12 (10.7%)	17 (15.2%)	15 (13.4%)	39 (34.8%)	29 (25.9%)

The mean was 3.50

The following seven questions asked students whether they had been caught by teachers in the past, what kind of actions did teachers take to deter the usage of AI or translation software in the classroom, and finally whether they wanted to continue to use these tools in their future classes. Tables 12 to 18 summarize their answers.

Table 12 – Results of “AI and Translation Software Use” Survey No. 12

私はAIや翻訳アプリ(コピーペースト) を使用して課題をしているのを見つかったことがある。I have been caught using AI or translation software on an assignment.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	51 (45.5%)	19 (17%)	23 (20.5%)	13 (11.6%)	6 (5.4%)

The mean was 2.14

Table 13 – Results of “AI and Translation Software Use” Survey No. 13

たとえ見つかったとしても、私は課題に対してAIや翻訳アプリ(コピーペースト) をこれからも使用する。Even after being caught, I continue to use AI or translation software on assignments.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	13 (11.6%)	21 (18.8%)	29 (25.9%)	36 (32.1%)	13 (11.6%)

The mean was 3.13

Table 14– Results of “AI and Translation Software Use” Survey No. 14

私は対面でのクラスよりオンラインクラスにおいてよりAIや翻訳アプリ(コピーペースト) を使用する。I use AI or translation software more in online classes than in face-to-face classes.					
Answer	Strongly	Disagree	Neither	Agree	Strongly

options	Disagree		Disagree or Agree		Agree
No.	23 (20.5%)	19 (17%)	35 (31.3%)	27 (24.1%)	8 (7.1%)

The mean was 2.80

Table 15 – Results of “AI and Translation Software Use” Survey No. 15

私は何を書くか詳細な指示があった場合はそれほどAIや翻訳アプリ(コピーペースト)を使用しない。I use AI or translation software less if I am given specific instructions on what to write.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	6 (5.4%)	24 (21.4%)	19 (17%)	37 (33%)	26 (23.2%)

The mean was 3.48

Table 16 – Results of “AI and Translation Software Use” Survey No. 16

私はもし教師は使用するなと指示があった場合はAIや翻訳アプリ(コピーペースト)を使用しない。I am less likely to use AI or translation software if the teacher tells me not to use it.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	4 (3.6%)	13 (11.6%)	17 (15.2%)	24 (21.4%)	54 (48.2%)

The mean was 3.99

Table 17 – Results of “AI and Translation Software Use” Survey No. 17

私は、もし課題が鉛筆と用紙だけの場合は、授業中にAIや翻訳アプリ(コピーペースト)を使用することは控えると思う。I am less likely to use AI or translation software in class if assignments use just pencils and papers.					
Answer options	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
No.	1 (0.9%)	19 (17%)	11 (9.8%)	27 (24.1%)	54 (48.2%)

The mean was 4.02

Table 18 – Results of “AI and Translation Software Use” Survey No. 18

私はこれからもAIや翻訳アプリ(コピーペースト)を使用したい、もしくは継続して使用するつもりだ。I want to use or continue to use AI or translation software in the future.					
Answer	Strongly	Disagree	Neither	Agree	Strongly

options	Disagree		Disagree or Agree		Agree
No.	8 (7.1%)	6 (5.4%)	19 (17%)	51 (45.5%)	28 (25%)

The mean was 3.76

Results and Analysis

Results of the survey showed that more than half of students admitted to using AI or translation software while doing assignments. However, 90% of students replied that they had not used AI or translation software during tests or quizzes. The mean for question 3 was 4.11, showing that students chose to use AI or translation software mostly at home, while doing assignments alone. Students also have an overall positive view of AI or translation software use, as shown by the mean of question 4, which was the highest at 4.67. Students overwhelmingly think that using AI or translation software is helping them learn English. This would tell teachers and educators that rather than going against AI or translation software, it would be better to think about how to constructively incorporate their usage into classes. Furthermore, the last question regarding further use of AI or translation software, produced a mean of 3.76, which means that most students want to continue to use them in the future.

There was an interesting result in question 7 regarding the use of AI or translation software during tests or quizzes. The mean score was 4.53, the second highest score, which means that students know that using these tools during tests or quizzes was considered cheating. However, question 6 asked them if they thought using AI or translation software during homework assignments or class was cheating, to which the mean score was just 2.64, which means they did not consider it to be cheating behavior. This divide would suggest that Japanese EFL students think of AI and translation software as a tool, akin to a pencil or eraser. It is simply a way to help them during the assignment. However, they also recognize their use as cheating, when it comes to tests or quizzes.

Another surprising result concerned questions 15, 16, and 17. The results showed that students were less likely to use AI or translation software if teachers explicitly told them not to use it and were given clear instructions. The use of pencils and papers were also likely to decrease the chances students use these tools in class. These results tell teachers that the subject of AI and translation software use for assignments needs to be clearly addressed.

Discussion

Due to the challenges presented by the use of AI and translation software in the Japanese university EFL classroom, there is a need for educators to formulate ways to ensure an authentic learning experience. According to Cotton et al. 2024, the first step is communicating with students that the use of AI and translation software in the classroom is unacceptable. As seen in the survey in this study, 69.6% of students answered that they were less likely to use AI or translation software if explicitly told by teachers not to use it on assignments. 55.2% of students also answered that they are less likely to use AI or translation software if given clear instructions on

assignments. Thus, one could argue that rather than discouraging the use of AI or translation software in the classroom, educators need to communicate to students about its proper usage and when and how to use it. Educators may see a significant drop in these forms of cheating by simply giving student clear instructions and telling them not to use them for a given assignment. While this may not ensure 100% compliance, it is a meaningful step forward which cannot be understated.

Cotton et al., (2024), go a step further by giving five concrete ways in which to combat specifically the use of AI in classrooms. The first as mentioned earlier was to educate students on plagiarism; what it is, and why it is harmful to their learning. The second is to require students to submit drafts in order to give teachers a chance to possibly find AI generated answers and warn students. The third is to use plagiarism detection tools. This, however, has shown not to be 100% accurate and may result in students being falsely accused of using AI on work (Paridon, 2024). The fourth as mentioned earlier involved setting clear guidelines for the use of AI and other resources for assignments. If students are explicitly told what they can and cannot do, there is a greater chance of compliance. Finally, teachers must monitor work carefully to understand the students' abilities better. If teachers are able to gauge a students' writing abilities, tendencies and even quirks there is a greater chance they will be able to distinguish between what is authentic and what is AI generated.

There are even more methodological based ways in which to prevent the use of AI and translation software in the classroom (Cotton et al., 2024). The first has to do with assessment strategies that steer away from conventional essays and ask students to engage in group discussions, presentations, and other interactive activities. Since the assignments are mainly done in real time, it would be difficult for students to use AI or translation software while performing the assignments. Another way is to create assessments that are open-ended and encourage originality, creativity, and critical thinking. This could take the form of an oral test. Finally, if teachers would prefer assessment in an essay style, assessments in which students are given a writing prompt in class and asked to immediately write an essay could be done. Students would be told they could not use their cellphones or computers and be asked to complete the essay on just paper and pencil. This takes away the time for students to use AI or translation devices. The results in this survey also showed that students were 72.3% less likely to use AI or translation apps if they were given in class writing assignments using pencil and paper. In fact this is a popular way in which many educators have been able to prevent the use of AI on tests and assignments (Klein, 2023).

Dornyei (2001) argues that EFL teachers need to set specific motives such as a relaxed classroom atmosphere. Presenting tasks properly to students, fostering a positive relationship with students, helping students to increase their self-confidence, and personalizing the goals for students. Not only do these things result in increased motivation for students to want to learn the new language, but they may also help to discourage the use of AI or translation apps. Learning a foreign language is linked to a student's personal identity, which is heavily dependent on self-motivation (Dornyei, 2001). Ghaith (2003) also emphasizes the importance of practicality of EFL assignments. If students feel that what they are learning is meaningful and will be useful to them in the future, they are more likely to be motivated. The more intrinsic motivation students have, the less likely they are to use AI or translation apps in the EFL classroom.

As technology continues to develop and AI and translation software become more and more accurate, it is without a doubt that students will increase their use. However, results from

this study point to fact that educators need to be open and frank in their classrooms. Instead of considering these tools as enemies of learning, educators need to develop ways in which to positive incorporate them into lessons to help foster positive learning experiences for students. While AI and translation software allow for quick and easy answers, they undoubtedly do not result in the same deep learning that traditional language learning offers. Future research could be done on why students use it, and what motivates them to use them during homework assignments.

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