



Machine translation in language education: Perspectives from advanced language learners

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Abstract

This paper explores the experiences and perspectives of advanced language learners on the use of Machine Translation Tools (MTTs). The study focuses on how learners navigate their use of tools like Google Translate, DeepL, and Reverso, and how their usage is influenced by instructional recommendations. Nine learners, studying different languages at an advanced level, were interviewed in focus groups. Thematic analysis of the interview transcripts revealed key themes related to the use of Online Language Learning Tools (OLLTs) and MTTs, students' uncertainty about MTT functionalities, policies regarding MTT use, and suggestions for MTT training. The findings highlight the significant impact of initial encounters with MTTs on learners' long-term perceptions and use of these tools. Participants demonstrated strategic use of MTTs to support their reading, writing, listening, and speaking skills, while being aware of their limitations. Although learners found MTTs helpful, they also emphasised the importance of authentic communication in language learning. The study concludes with recommendation for a collaborative approach between teachers and learners to effectively integrate MTTs into the language learning curriculum.

Keywords: machine translation, google translate, advanced language learners, role of instructors.

1. Introduction

Machine Translation Tools (MTTs) have become widespread in language learning, resulting in increased speed, fluency, accuracy, and overall quality of student writing (Briggs, 2018; Chung & Ahn, 2021; Kok Wei, 2021; Kol et al., 2018; Lee, 2020; Tsai, 2019;). However, their effectiveness is still debated among teachers and students (Cowie & Sakui, 2023). Studies show a link between MTT use and learner proficiency, more advanced learners tend to use MTTs for vocabulary searches while low proficiency learners often check grammar (Ahn & Chung, 2020). In addition, higher proficiency learners are more likely to critically evaluate MTT output to ensure it matches their intended meaning, using it as a tool to improve their writing. In contrast, lower proficiency learners tend to more readily accept the unmodified MTT output without further modification, focusing on micro-level errors.(Lee & Briggs, 2021; Chung & Ahn, 2021).

Building on our previous work (Alm & Watanabe, 2022), which revealed proficient MTT use among advanced language learners, this study further explores advanced students' experiences with MTTs. That research found

students valued the convenience and guidance MTTs provided for writing, but also recognised the importance of critically evaluating output and avoiding over-reliance on MTTs.

This study aims to extend our understanding of advanced language learners' experiences of MTTs and their associated learning trajectories. It also explores how this understanding might be used to improve the integration of MTTs into language teaching. The guiding research questions are:

1. How do advanced language learners experience MTTs in their learning process?
2. How can these experiences inform the successful integration of MTTs into language teaching?

2. Method

In September 2022, an email invitation was sent to 64 third-year language students at a university in New Zealand to participate in an interview on their experiences with MTTs. Nine students responded and participated, divided into four focus groups with 2-3 participants each. The groups included students of French, German, Japanese, and Spanish at B2 level, aged 19-30.

The interviews, conducted in English by one of the researchers, lasted approximately one hour. They were audio recorded and transcribed in real time using Otter AI. To protect the anonymity of the participants, pseudonyms were used to report the findings. Ethical approval was obtained for this study and informed consent was received from all participants prior to commencement of the interviews.

The two researchers independently coded the transcripts then discussed and agreed on final coding. Inductive thematic analysis was conducted following the six phases outlined by Braun and Clarke (2006) to identify recurring patterns relevant to the research questions. An inductive, data-driven approach was taken, with themes derived from the participant data rather than imposed by pre-existing concepts or theories (Lew et al., 2018). Braun and Clarke's framework guided the coding, collating, reviewing, defining, and narrating of themes from the qualitative data through an iterative, recursive process.

3. Findings

3.1. Use and preference of Machine Translation Tools (MTTs) and Online Language Learning Tools (OLLTs)

The participants revealed that they used different MTTs and OLLTs to support their language learning process. Among the tools used, such as DeepL, Reverso, Google Translate, and language-specific ones like Leo Dictionary, WordReference, SpanishDict, and Takoboto, preferences varied among the participants. For example, Cathy preferred Reverso for its contextual feature, as she explained: "it'll translate like a word or a small phrase for you and then it'll show you a bunch of examples of like how it's been used on the internet ... like one or two sentences from like a news story or a blog post ... I find it really valuable to see it in like actual French in actual context." Ash on the other hand appreciated DeepL for providing alternative expressions, "it gives you options of like just a few different ways you could say sort of the same thing." Google Translate was mentioned for its usefulness in quickly looking up unfamiliar words or phrases and for travelling. However, it was seen as less suitable for academic learning due to scepticism about its accuracy and naturalness. These advanced students recognised the limitations of MTTs and balanced their use with language specific OLLTs mentioned earlier, which they found effective in improving grammar knowledge, increasing vocabulary, and facilitating a more nuanced understanding of context and word usage.

3.2. Proficiency in using MTTs among advanced learners

The participants reported insights in their use of MTTs for a range of learning activities. They demonstrated proficiency in using MTTs to pre-read challenging texts, to proofread their writing, to check for specific words

or phrases, and occasionally to check pronunciation. For example, Beth and Judy used Google Translate's camera translation feature to quickly understand paragraphs during pre-reading activities. This approach was particularly useful for grasping the main ideas of difficult passages when reading novels.

Learners also reported resourcefulness in their writing process. As well as using MTTs to look up words and phrases before writing, they found reverse translation useful for proofreading. This technique involves translating their work from the target language back to their first language to identify areas for improvement. For example, Sam reported that she found Google Translate extremely helpful in ensuring gender agreement of nouns and adjectives in her French writing.

In terms of listening and speaking, many participants used MTTs to check specific words or phrases and, despite recognising the limitations of automated voices, to hear the pronunciation of individual words. These strategies reflect an overarching skill in the use of MTTs among advanced learners. As suggested by Cathy, "[at the advanced level] everyone knows how to use the tools they like," indicating a shared understanding among their peers of using these tools effectively.

3.3. Evolution of MTT usage from high school to university

The use of MTTs among the learners evolved from an initial reluctant reliance in high school to a more strategic and productive approach in university. Some participants reported to have been discouraged from using MTTs by their high school teachers. Teachers stressed the importance of understanding grammar and being able to formulate sentences independently, and even explicitly condemned the use of Google Translate. Instead, they recommended alternative tools such as Reverso, WordReference, and Leo Dictionary as reliable online dictionaries. Cathy, for example, recalled that her high school French teacher warned her against using Google Translate, saying "it's terrible. Don't ruin your French!" and suggested Reverso, which Cathy still uses today.

Despite the general discouragement from teachers, students found MTTs useful for home assessments because of their accessibility. This held particularly true during the periods of lockdown amidst the COVID pandemic, which often meant a lack of consistent monitoring. Some participants, such as Kate, admitted using Google Translate out of necessity, explaining that she did not "know anyone who didn't cheat their way through those writing assessments." Students' experiences in high school therefore shaped their initial perceptions and use of MTTs, which were heavily influenced by teachers' suggestions and the assessment format.

At university, participants' understanding and use of MTTs evolved. They found that teachers' recommendations often had a positive impact on their language learning. Ash recalled her German instructor introducing DeepL, which she found valuable for translating and understanding texts. Similarly, Kate's curiosity was piqued when her French teacher used Reverso for a translation, which led to her own exploration of Reverso. As the students' learning progressed, they acknowledged that the quality of the MTTs had improved, mentioning Google Translate in particular. Although the use of MTTs was not explicitly discouraged at university level, assessments were designed with MTTs in mind to prevent learners from 'cheating' through the use of MTTs. For example, students were sometimes required to mark where they had used MTTs in their assignments. This practice, together with class discussions about independent language practice (including the use of MTTs), seemed to have fostered an understanding of the potential of MTTs for language learning. Amy summed up this feeling by saying, "if you actually want to learn, [MTT]'s going to provide you with more resources than you can use," acknowledging the value of MTTs when used for active learning.

3.4. Expectations and suggestions from advanced learners

Despite their proficient use of MTTs, participants expressed uncertainty about their teachers' perceptions and acceptance of the use of MTTs in the language classroom. Ash remarked on the negative attitude of some teachers towards MTTs. This was echoed by Cathy and Judy, who emphasised the need for teachers to

acknowledge the existence and recognise the potential of MTTs. Beth noted inconsistent attitudes among her teachers and expressed concern about the lack of open discussion about MTTs in the classroom. As Judy states: “Tell us how you feel about it and what you’re comfortable with us doing.” Participants strongly recommended clear guidelines and expectations for MTT use to reduce student confusion. Cathy advocated an informative approach to guide students towards responsible and independent use of MTTs for language learning by including an MTT policy in course outlines and providing MTT training to effectively guide students. Fiona suggested that teachers should have open discussions with students about the appropriate use of MTT and its benefits. Ash suggested creating opportunities for students to share their innovative use of MTTs in small group discussions.

Participants recognised the usefulness of MTTs in certain scenarios, however, they also emphasised the importance of authentic communication and understanding cultural nuances. They advocated challenging monolingualism and actively engaging with other languages. Ash emphasised the joy of authentic communication: “I can't think of anything else that gives you the same feeling of achievement when you can communicate with other people.” Sam stressed the importance of making an effort to learn a language and challenging the assumption that everyone speaks English. Participants' clear goals and strong motivation seemed to drive their productive use of MTTs.

4. Discussion

This study provides valuable insights into advanced language learners' experiences and perceptions of the use of MTTs. It highlights the influence of students' initial exposure to MTTs on their perceptions and use of these tools. In this sense, educators have a crucial role to play in shaping these attitudes and should be aware of the lasting impacts their guidance can make on learners. To encourage critical use of MTTs, and to alleviate the widespread student anxiety and uncertainty identified by Cowie and Sakui (2023), educators need to provide explicit guidance. Careful consideration should also be given to assessment formats, with activities designed to encourage the effective use of MTTs while promoting independent language comprehension and production. The emergence of advanced language models such as ChatGPT adds an interesting dimension to the conversation. In line with the findings of this study, learners with clear goals and strong motivation are more likely to use MTTs productively. Despite recognising the limitations of MTTs, advanced learners used them as effective support tools, adopting strategies such as pre-reading and reverse translation for different learning contexts.

5. Conclusions

This study explored the perspectives and experiences of advanced language learners regarding the use of MTTs in their learning journey. The findings highlight the importance of the initial encounter with MTTs in shaping students' perceptions and use of these tools over time. From hesitant reliance in high school to strategic use at university, it is clear that the role of the teacher in guiding learners is crucial.

The potential of MTTs, despite their limitations, is recognised by learners. They valued these tools for specific purposes, such as pre-reading challenging texts or proofreading written work. However, the study also emphasised that authentic communication and understanding cultural nuances remained a priority for these advanced learners, highlighting the importance of a balanced approach to the use of MTTs.

The study findings suggest that teachers collaborate with students to clarify the effective use of MTTs, integrate them into language learning tasks, and emphasise the importance of real communication beyond machine translation in language teaching.

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