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Pocket-Sized Translation Gadgets: Friends, Foes, or Fellow Teachers in English Language Education?

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Abstract

The rapid development of artificial intelligence (AI), machine translation (MT), speech recognition, and wearable technologies is transforming English language education. Pocket-sized translation gadgets, including translation earbuds and smart glasses, can provide immediate linguistic assistance and support comprehension, vocabulary development, writing, pronunciation, and learner autonomy. This article examines whether such technologies should be regarded as "friends," "foes," or potential "fellow teachers" in English language education. Drawing on recent research, it argues that translation technologies can complement teachers and scaffold learning when used appropriately. However, their role changes significantly when they are used during assessments intended to measure independent English proficiency. This concern is particularly relevant to Japanese universities, where TOEIC- and TOEFL-type tests may be used for placement under conditions that are not always as strictly controlled as external certification examinations. Undetected use of wearable translation devices could therefore undermine academic integrity, assessment validity, and accurate student placement. The article advocates clear, context-dependent policies distinguishing technology-assisted learning from technology-assisted performance.

Introduction

The rapid development of artificial intelligence (AI), machine translation (MT), speech recognition, and mobile technologies has changed how language learners' access, process, and produce English. Translation is no longer confined to dictionaries, desktop software, or occasional teacher consultation. Increasingly compact and sophisticated devices can provide instantaneous translation, pronunciation support, speech recognition, and multilingual interaction, potentially putting on-demand linguistic assistance literally in learners' pockets. This development prompts an important question for English language education: should such technologies be regarded primarily as learning aids, threats to language development, or emerging partners in the teaching and learning process?

Recent research provides substantial evidence for the pedagogical potential of translation technologies. In their detailed review of 46 studies, Shadiev et al. (2024) [1] identified 22 computer-aided translation technologies used across instructional settings. They found benefits including vocabulary development, grammar improvement, language support, and feedback for writing and translation. Although inaccuracies and inappropriate translations remain important concerns, the overall data show that computer-aided translation can positively shape learning when appropriately integrated into instruction. Similarly, Yang (2025) [2], in a systematic review of 26 studies on AI translation tools in English education, found that technologies such as Google Translate have been widely employed, particularly for reading and writing, while additionally identifying cognitive and affective benefits together with concerns

about overreliance and cultural and textual inaccuracies. Deng and Yu (2022) [3] likewise showed that MT-assisted language learning can be systematically incorporated through stages of introduction, demonstration, task completion, and reflection, while reporting mixed attitudes among teachers and students.

Nevertheless, the increasing accessibility and advancement of these technologies also create significant pedagogical challenges. Paterson (2023) [4] argues that MT has become an inescapable part of many second-language learners' academic lives, raising questions about academic integrity while also offering opportunities for vocabulary development, writing, metalinguistic awareness, and learner autonomy. More recently, Nguyen et al. (2025) [5] identified overreliance, contextual inaccuracies, insufficient training, moral concerns, and inadequate curricular integration as principal challenges associated with AI translation tools.

Against this background, the present article examines pocket-sized translation gadgets as an emerging category of language-learning technology. Rather than asking simply whether such devices are beneficial or harmful, it considers when they function as friends, when they become foes, and when they might operate as "fellow teachers" that augment rather than replace human instruction. It pays particular attention to their consequences for language learning, learner autonomy, teacher roles, and assessment, where unrestricted technological assistance may conflict with measuring students' independent linguistic ability.

Discussion

The educational value of translation technologies is increasingly difficult to characterise in purely positive or negative terms. Recent research suggests that machine translation (MT) can meaningfully support language learners, particularly when used strategically and accompanied by appropriate pedagogical guidance. In a comprehensive review of 46 studies, Shadiev, Chen, and Altinay (2024) [1] identified 22 different computer-aided translation technologies used within educational contexts and demonstrated the breadth of their possible applications for both learning and instruction. Such technologies can provide immediate linguistic assistance, facilitate access to authentic materials, and offer learners opportunities to work more independently. In this respect, portable translation technologies may function as "friends" that help learners overcome temporary linguistic problems without necessarily replacing the learning process itself.

Research evidence involving language learners further supports this interpretation. Murtisari, Kristianto, and Bonar (2024) [6] investigated tertiary language learners' self-directed use of MT and found that students used it to support independent reading and writing. Although overreliance sometimes led to second-language avoidance and superficial learning, the researchers still recognised MT's potential for autonomous learning. They emphasised the importance of instructional scaffolding and guidelines for responsible use. Similarly, Kudo (2022) [7], investigating Japanese university students and teachers, found that 84.6% of surveyed students used MT for English learning, primarily for vocabulary searches, while more than 70% of MT users reported comparing machine-generated translations with the source passage and making corrections when necessary. This finding is particularly relevant to English education in Japan because it suggests that students do not necessarily treat translation technology as an unquestionable authority; many learners appear able to use it to check, compare, and evaluate linguistic information.

Translation technologies may also bridge teachers' explanations and students' existing linguistic resources. For learners with limited English proficiency, an instantaneous translation of a key word, phrase, or explanation can make otherwise inaccessible instructional content comprehensible. In this sense, the technology can function as a temporary scaffold: rather than replacing the teacher, it can help students reach the point at which the teacher's explanation becomes meaningful. Grieve et al. (2024) [8], in a study of 23 EAL nursing and midwifery students, found that students' decisions concerning MT were closely connected to questions of fairness, individual development, ownership of language and ideas, and recognition of their language needs. Their evidence shows that the educational role of MT should not be reduced to producing correct English; it can also help learners participate in academic environments in which language proficiency might otherwise be a barrier.

Importantly, translation technology may also become a "fellow teacher" by providing feedback that supplements rather than replaces teacher intervention. Sasaki, Mizumoto, and Matsuda (2025) [9] compared machine-translation feedback with comprehensive teacher corrective feedback among 23 Japanese university students in a second language writing classroom. Their results indicated that teacher corrective feedback improved complexity, whereas MT feedback improved aspects of accuracy and fluency.

These data show a potentially productive division of labour: technology can address some relatively routine linguistic problems, while teachers devote more attention to organisation, argumentation, communicative effectiveness, and elevated aspects of writing.

However, the same technologies that support learning can become problematic when the objective changes from learning to assessment. This distinction matters in Japanese universities, where TOEIC- or TOEFL-type tests may be used for internal placement, achievement measurement, or course allocation rather than as externally administered certification examinations. University placement testing can therefore occur under conditions that are not necessarily identical to the highly regulated environments associated with major external certification examinations. For example, Japanese universities explicitly use TOEIC-based tests for placement and educational purposes, while some institutions administer such tests remotely or online. [10] If students can obtain outside assistance during an assessment intended to estimate their actual English proficiency, the resulting score may no longer accurately represent their independent linguistic ability. Indeed, recent research shows that MT use in assessment raises concerns about fairness and academic integrity, particularly when students

use MT without permission or disclosure. Zhou and Wang (2026) [11] found that teachers' ability to detect unauthorised MT use can vary substantially, with unassisted detection achieving only about 52% accuracy in their experimental setting.

This issue is particularly consequential when university test results are subsequently used to place students into different levels of English instruction. If a student with relatively limited independent proficiency obtains a higher score through unauthorised technological assistance, the student may be placed in an advanced class whose linguistic demands exceed their actual ability. Such misplacement may disadvantage both the student and classmates and might complicate the teacher's task of designing instruction for a genuinely homogeneous proficiency group. Thus, the problem is not simply that students may "cheat"; unauthorised translation assistance can undermine the validity of the information on which pedagogical decisions are based.

The problem may become even more difficult to manage during oral presentations and written classroom tests. A student using a conventional smartphone or openly consulting a translation application may be relatively easy for a teacher to notice. By contrast, translation earbuds, smart glasses, or other increasingly discreet wearable devices can deliver real-time linguistic aid without obvious behavioural signals. During an academic presentation, for example, a student could theoretically receive translated speech through an earbud while appearing to deliver a spontaneous presentation. During a written test, translation glasses may be particularly difficult to detect because the student may not need to look away from the examination paper or use a visible secondary device. These possibilities should not be treated as evidence that students routinely engage in such behaviour; rather, they show how technological development questions traditional assumptions about what unauthorised assistance looks like.

Consequently, translation technologies should not simply be classified as either beneficial or harmful. Their pedagogical status depends on purpose, context, degree of reliance, and assessment conditions. During learning, they can support autonomous study, scaffold comprehension, and complement teacher feedback. During assessments intended to measure independent language proficiency, however, unrestricted access can compromise validity, fairness, and academic integrity. Grieve et al. (2024) show that students perceive MT use through competing notions of fairness and personal development, while Zhou and Wang (2026) highlight the practical difficulty of detecting unauthorised use. [8,11] The main challenge for English educators, therefore, is not necessarily to eliminate translation technologies, but to form clear boundaries between technology-assisted learning and technology-assisted performance. Pocket-sized translation gadgets may ultimately be best understood not simply as friends or foes, but as potentially valuable "fellow teachers" whose use must be carefully regulated according to the educational objective.

Conclusions

Given the pace at which new technologies emerge in the classroom, with or without teachers' will, effects of their use should be continually reviewed and assessed. Some can help students with self-study and self-evaluation, some can help students understand what the teacher is trying to explain, some can help teachers do their job more easily, and some should be banned during tests because they give an unfair advantage to students who can afford expensive gadgets. Universities should not automatically ban new technologies, but they also should not overlook possible dangers to the accuracy of student evaluation.

Conflict of interest

The author declares no conflict of interest related to the development or publication of this work.

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