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To cite this article: Deliang Man, Aiping Mo, Meng Huat Chau, John Mitchell O’Toole & Charity Lee (2019): Translation technology adoption: evidence from a postgraduate programme for student translators in China, Perspectives, DOI: 10.1080/0907676X.2019.1677730

To link to this article: https://doi.org/10.1080/0907676X.2019.1677730

Published online: 28 Oct 2019.
Translation technology adoption: evidence from a postgraduate programme for student translators in China

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ABSTRACT
The ability to use translation technology is considered a key component of a translator’s translation competence. However, few studies have investigated the extent of use of translation technology, especially among student translators. This paper reports on a survey of translation technology adoption among 441 students enrolled on a Master-level Programme in Translation and Interpreting. A questionnaire was used to measure student knowledge and frequency of use for six common types of translation technology tools and resources: electronic dictionaries, search engines, online encyclopaedias, corpora, machine translation and computer-aided translation tools. The results show that there is a strong, positive correlation between student knowledge and their use of translation technology. More specifically, the second-year students generally used translation technology more frequently than the first-year students. This paper provides a baseline for future comparisons of translation technology use, which has implications for teaching translation technology in China and similar contexts elsewhere.

ARTICLE HISTORY
Received 15 November 2018
Accepted 2 October 2019

KEYWORDS
Translation technology; technology adoption; student translators; Master of Translation and Interpreting

1. Introduction
Research into the use of translation technology has attracted considerable attention in recent years (Burchardt, Lommel, Bywood, Harris, & Popović, 2016; Cadwell, O’Brien, & Teixeira, 2017; Rico, 2017). Studies have focused on how translation technology can assist the language services industry (Alonso, 2015; Gallego-Hernández, 2015; Gaspari, Almaghout, & Doherty, 2015), and the extent to which translation education programmes around the world can benefit from it (Doherty & Kenny, 2014; Rico, 2017; Rodríguez-Inés, 2013; Wang, 2013). As one of the basic components of translator competence, the ability to use technological tools has a crucial role to play in the translation process (EMT, 2017; PACTE, 2018). Conceptual research has been done to develop pedagogy and curriculum to teach translation technology in educational contexts (Alcina, Soler, & Granell, 2007;...
According to The European Master’s in Translation Competence Framework (hereafter EMT), translation students are expected to acquire technology skills for their future career no matter how different the real situation might be. Translation education programmes around the world have been integrating translation technology into their curriculum, though the specific technologies to be acquired vary across programmes and contexts.

This study focuses on the Chinese context. Public universities in China have only recently begun to offer programmes that award professional degrees in translation and interpreting. In 2007, the Academic Degree Committee of the State Council of China announced the launch of the Master of Translation and Interpreting (MTI) Programme with the purpose of educating high-calibre and professionally competent translators and interpreters (Tao, 2016). In 2018, 249 institutions offer MTI programmes, and now the MTI graduates constitute the largest group of prospective professional translators. The increasing demand for professional translators has encouraged researchers and teachers to integrate information and communication technology into the curriculum (Wang, 2012, 2017). A recent survey by Wang, Li, and Lei (2018) shows that 125 out of the 224 MTI programmes offer standalone courses on translation technology. However, other research has suggested that this apparent enthusiasm for teaching translation technology could encounter many difficulties such as the students’ inadequate computer literacy, lack of teaching facilities, lack of qualified teachers for translation technology teaching, and misconceptions regarding translation technology (Wang, 2012). A question arises regarding whether and to what extent student translators would use technology for their translation work. There is, however, little published research concerning the extent of use of translation-related technology tools and resources among student translators. The objective of this paper is to address this concern by drawing on a survey of 441 students studying on the MTI Programme from 20 Chinese universities. Two research questions guide the study reported here:

1. To what extent do MTI students adopt translation technology tools and resources?
2. In what way do the first- and second-year MTI students differ in their knowledge and use of translation technology tools and resources?

2. Literature review

2.1. Translation and technology

A wide variety of technologies are integrated into various stages of the translation process to enhance translation quality and productivity for professional translators (Quah, 2006; Rodriguez-Inés, 2010). One line of enquiry is to categorize translation technologies from different perspectives (Alcina, 2008; Austermühl, 2001; Quah, 2006): (1) the degree of automation; (2) the function of technology; (3) the stage of using technology in the translation process; (4) the level of computer knowledge required; and (5) the relationship between technology and translation.

The increasingly integrated nature of translation technology makes such categorizations problematic (Alcina, 2008). Previous research shows that most CAT tools (e.g.,
SDL Trados Studio 2017 and Wordfast Classic) have a built-in machine translation system (hereafter MT) whereas MT (e.g., Google Translator Toolkit) is integrated with translation memory (Garcia, 2012, 2015). There are also cases where some of these tools are integrated in one platform so that CAT and MT might be used concurrently. This problem is further complicated by advances in technology (e.g., neural machine translation) and innovative uses of technology (e.g., combining speech recognition technology with sight interpreting for written translation, see Baxter, 2016). Consequently, ‘translation technology’ can serve as an umbrella term for a wide variety of technologies integrated into the translation process. The present study focuses on translation technology tools and resources that are most relevant to the local context.

2.2. Functions and constraints of translation technology

The qualities or properties of a technology define its possible uses (Anderson & Robey, 2017). The reasons are obvious: (1) a translator needs to know the properties of a technology before recognizing its possible uses for doing translation; (2) a translator familiar with a technology may not necessarily use it frequently; (3) the use of translation technology could be constrained by its accessibility (Bowker, 2014), by the translator’s ability to evaluate task-technology fit and by the results generated by that technology (Shih, 2017; Wang, 2017).

From Table 1, we can see the major functions and constraints of translation technology (cf. Burchardt et al., 2016; Doherty, 2016; Killman, 2015; Quah, 2006; Royle, Richardson,

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Functions</th>
<th>Constraints</th>
</tr>
</thead>
</table>
| Electronic dictionary | • reliable and accurate  
 | • quick and easy to use | • slow in adapting to changing language use  
 | | | • not customized to individual needs |
| Online encyclopaedia | • a comprehensive archive of knowledge  
 | • a de facto multilingual dictionary | • information may not be accurate or reliable |
| Search engine | • provide up-to-date information  
 | • has a wide coverage of topics | • information may not be accurate or reliable  
 | | | • need critical evaluation of information |
| Corpus | • provide a great deal of information about the use of a word or phrase (e.g., frequency, collocate and register) and its translations  
 | • allow customization to suit individual needs | • available corpora may not suit individual needs  
 | | | • custom-designed corpora are not easy to build  
 | | | • effective use requires search and analytical skills |
| Computer-aided translation | • reuse previously translated texts  
 | • manage terminology and ensure terminology consistency | • high cost constrains accessibility  
 | | | • compatibility constrains use on non-Windows operating systems  
 | | | • good output needs customization |
| Machine translation | • pre-edit text  
 | • pre-translate text  
 | • provide tentative solutions | • time consuming for pre-editing and post-editing  
 | | | • needs customization  
 | | | • needs contextual information |