Corpus-assisted Translation Learning: Attitudes and Perceptions of Novice Translation Students

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6 Corpus-assisted Translation Learning

Attitudes and Perceptions of Novice Translation Students*

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Introduction

Corpora have been viewed as empowering translation students by promoting a shift from teacher-centred to student-centred translation pedagogy (Rodríguez-Inés 2009). Among the various types of corpora, parallel corpora allow students to extract translation equivalents, collocations, and bilingual terminologies (Frankenberg-Garcia and Santos 2000, 2015; Bowker and Pearson 2002) and to inductively explore, analyse, and discover language use and translations in different contexts (Bernardini 2016), as well as learn translation strategies from professional translators (Pearson 2003). The affordances of parallel corpora are believed to facilitate students' critical thinking skills and enhance their translation competence (Frérot 2016). While previous studies on corpus-assisted translation teaching focused primarily on senior-level translation students (Heylen & Verplaetse 2015; Liu 2020), little has been done to learn about the affordances and challenges of parallel corpora for students with little or entry-level translation knowledge. While it is easy to acquire the use of a corpus-assisted translation tool within several weeks, the possibility of mastering an additional language and translating it effectively has been contested (de Cespedes 2019). To this end, this study explored novice translation students' perception about using parallel corpus in translation. The findings of this study is expected to facilitate translation educators to better understand how pedagogy-oriented parallel corpora and corpus-assisted translation teaching can be improved.

Literature Review

Corpus-assisted Translation Teaching and Learning

Corpus-based translation studies (CBTS) advocated by Mona Baker (1993) has evolved from the investigation of translation phenomena to corpus-assisted

translation pedagogy. Recently, the availability of various types of large-scale corpora makes corpus-assisted translation pedagogy more amenable to the needs of translation trainees with varied language abilities. The major advantage of the corpus approach, as agreed by many researchers, lies in the accessibility of large-scale authentic language resources (Reppen 2010). For teachers, these resources are critical in the preparation of teaching materials, as they can decide on what to teach based on the occurrences of language patterns in corpora rather than on their intuition or experience (Li 2013). For students, the descriptive evidence of language patterns offered by corpora is crucial for dealing with their translation problems (Bowker and Pearson 2002) and thus directly contributes to the accuracy and adequacy of language/translation choices and also the enhancement of students' language proficiency (Santos and Frankenberg-Garcia 2007; Zanettin 2002). By examining a large amount of authentic representative texts (Bowker and Pearson 2002: 9), students can develop their own expertise and, through comparative analysis of corpus data, improve their critical thinking and cognitive ability in the long term (Rodríguez-Inés 2009). In addition, corpora which are sampled from text categories determined on a priori basis exist in the form of structured data, which can provide students easy access to quality data and thus assist them in coping with the growing demands of efficiency in the translation markets (Ørsted 2001).

Among the various types of corpora, parallel corpora are considered the most significant for translation teaching and learning (Kübler 2011; Zanettin 2002). Previous research has shown that parallel corpora are convenient and helpful for students to extract terminology and identify translation equivalents (Santos and Frankenberg-Garcia 2007; Zanettin 2002). Many of the mistakes made by learner translators (e.g. miscollocations or misuse of semantic prosodic words) can be addressed with the help of parallel corpora (Ruiz Yepes 2011: 78). Parallel corpora can also offer students opportunities to learn how professional translators utilise different translation strategies in dealing with translation problems (Pearson 2003; Nebot 2008). While earlier researchers mainly focused on the compilation and pedagogical design of parallel corpora for translation teaching purposes (Bernardini 2003; Wang 2004; Barros and Castro 2017), more scholars have recently attempted to obtain empirical evidence to test the effectiveness of using a parallel corpus in translator training. Starting from 2015, there has been a surge in empirical studies to investigate the use of parallel corpora in translation teaching among undergraduate translation majors or MA translation students (Heylen and Verplaetse 2015). More recently, Liu (2020) conducted both intragroup and intergroup experiments on using English–Chinese parallel corpus in translation with senior-year translation majors in China. He confirmed the efficacy of using a parallel corpus for improving wording and terminology in both Chinese–English and English–Chinese translations. The participants also expressed interest and confidence in the parallel corpus and acknowledged its unique values for Chinese–English translation.

Factors Influencing the Adoption of Parallel Corpora in Translation Learning

Existing studies seemed to offer some empirical evidence in support of using parallel corpora in translation teaching. However, we should take heed of the tendency of reporting the advantages instead of challenges in using parallel corpora. All the studies just cited were conducted with somewhat experienced and advanced translation students. Considering that language abilities play an important part in fostering the competence development of translators (de Cespedes 2019), research on corpus application in translation teaching should also include novice translation learners whose language and translation competences are still at the developmental stage. So far, little has been done to understand the affordances and challenges of parallel corpora for this group of translation learners. Another omission in this line of inquiry is the availability of user-friendly corpora suitable for translation teaching purposes, which is reported as the most prominent obstacle hampering the adoption of corpus-assisted pedagogy (Frankenberg-Garcia 2012). Boulton (2012) also found that the difficulty of using corpus tools might further inhibit students' adoption of corpus in their learning. Compared with monolingual and comparable corpora, parallel corpora are less frequently used in translation teaching due to the lack of available parallel texts (Liu 2020). In addition, it is also found that students' personal factors might also influence the adoption of the parallel corpus. For example, Wu, Zhang, and Wei (2019) pointed out that students with low motivation and technological self-efficacy tended not to use technological tools in their translation practices. Difficulties of adapting to an inductive learning style using a corpus can also inhibit students from corpus use in their study (Yoon and Hirvela 2004). Therefore, more studies need to be conducted to understand the possible factors that hinder students' use of a parallel corpus.

Research Questions

The current study aims to explore how novice translation students perceive the use of parallel corpus in translation teaching or practices. Specifically, two research questions guided our study:

1. How can novice translation students benefit from using a parallel corpus?
2. What are the possible factors that impede novice translation students from using a parallel corpus?

Methods

Context and Participants

The participants in this study were 12 sophomores enrolled in a translation course at a Hong Kong university who voluntarily signed up for the

corpus-assisted translation training. The students were taking their first translation course at the time of their training. In other words, they had minimal knowledge of translation and were all novice translation students. Before the training, a background survey was administered. Based on the background survey, the native language of all the participants was Cantonese (a Chinese dialect). All of the participants indicated little to no experience using corpora, and half of the participants did not even know what a corpus was.

The corpus-assisted translation training lasted for five weeks. The first three weeks were the training sessions. The instructor introduced the basic concepts related to corpora and the different functions of parallel corpus use in translation. Students also did some related translation exercises with the help of the parallel corpus to practice their skills and consolidate their knowledge. Week 4 was the tutoring session in which students were allowed to freely explore the parallel corpus and were also encouraged to troubleshoot possible issues that arose. In week 5, an in-class translation test was conducted to examine their knowledge of the various functions of the parallel corpus and to understand their corpus-assisted translation behaviours. The test consisted of one English-to-Chinese translation task and one Chinese-to-English translation task. Both tasks were to translate a financial news report containing some financial terms. The students were allowed to use the parallel corpus (i.e. TR Corpus, which will be elaborated in detail in the next section) and the prescribed online dictionaries during the test.

After the training, three participants were selected for follow-up interviews based on purposeful sampling (Patton 1989). They reported to have different translation experiences, corpus use experiences, and English proficiency levels. It is believed that a detailed analysis of the perceptions of these participants was conducive to revealing shared perceptions toward parallel corpus use in translation. The focal participant profiles are shown in Table 6.1 (names have been anonymised). Informed consent was obtained with all the participants before the study.

Table 6.1 Focal Participants' Personal Profiles

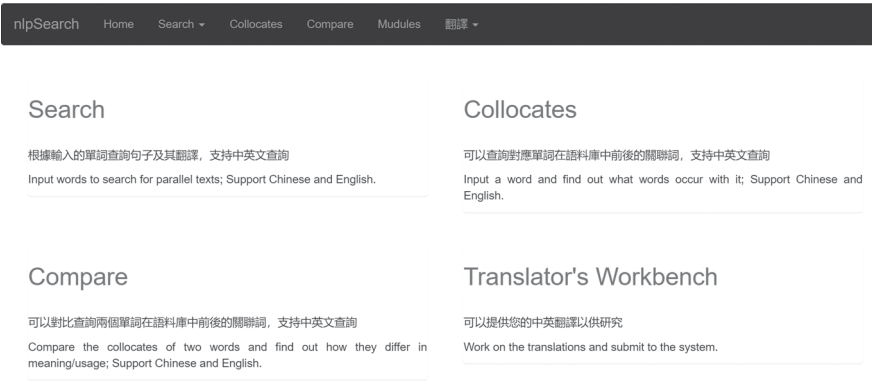| Name	Major	Translation Experience	Corpus Use Experience	Self-reported English Proficiency Level
Candice	English	Translated some interview transcripts	No	Moderate
Charlotte	Chinese	No	No	Poor
Belle	English	Co-translated one scientific article	Some basic knowledge of BNC	Proficient (IELTS 7)

Figure 6.1 Homepage of the parallel corpus.

Corpus Design

A large-scale parallel corpus was used in this study. The parallel corpus is a web-based corpus with a user-friendly and interactive interface, compiled specifically for translation teaching purposes. The corpus covers a wide array of text types, including news, financial reports, features, company profiles, legal documents, and chairman's statements of listed companies based in Hong Kong and Mainland China. Currently, the corpus has a total of around 80 million English words and 172 million Chinese characters, which are annotated for the part-of-speech and aligned at the sentence level to facilitate bilingual concordance and co-occurrence. Modelling after COCA (Corpus of Contemporary American English), TR Corpus also has three primary search functions and one upload function, as shown in the homepage (see Figure 6.1)

Data Collection and Analysis

In order to reveal a holistic picture of parallel corpus use in translation teaching from the perspective of students, a mixed methods approach was adopted to collect multiple types of data.

The data collection and analysis started with an integrative analysis of the survey results and students' search histories on the parallel corpus to explore some key issues underlying corpus-assisted translation teaching. Students' search histories on TR Corpus in completing the translation tests were collected to complement the survey findings. It is believed that observation of students' actual behaviours of using the parallel corpus can help us know when and why the students sought help from the corpus. The search histories were coded based on the types of search they conducted, i.e. words, multiple-word expressions, sentence structures, proper nouns, and terminologies. After

the training, the students were asked to finish a 7-point Likert questionnaire survey to examine the perceived usefulness and difficulties of using parallel corpus in translation. The survey was adapted from the survey of Yoon and Hirvela (2004) regarding students' attitudes towards corpus use in L2 writing and from Liu (2020)'s survey about students' assessment of corpus use in translation. Two experienced researchers then reviewed the adapted survey to ensure validity. Descriptive statistics of the mean scores of students' responses were calculated to understand students' perceptions about the affordances and challenges of parallel corpus use in translation.

Based on the initial exploration, subsequent interviews and longitudinal follow-up interviews were conducted to provide a close-up and in-depth understanding of the possible factors that might influence the adoption of the parallel corpus in translation (Miles, Huberman, and Saldaña 2014). Two rounds of semi-structured interviews with three focal students, each round lasting for about 50 minutes, were conducted immediately after the corpus training to supplement and explain the survey results and to delve deeper into students' perceptions about corpus use in translation (Seidman 2006). The interview questions enquired into students' prior experiences, their English proficiency, their translation learning and corpus use, and their perceptions about using parallel corpus in translation. The interviews were conducted via online meetings using Cantonese, Mandarin Chinese, and English, as preferred by the participants Candice, Charlotte, and Belle, respectively.

Then half a year after they finished the corpus training, two focal participants—i.e. Candice and Charlotte, one who kept using and the other who gave up using the parallel corpus—were invited to participate in a follow-up interview which lasted for about 30 minutes for each person. The follow-up interview can help us understand the translation students' perceptions about parallel corpus from a longitudinal perspective. All the interviews were audio-recorded with the participant's consent and were transcribed verbatim. Then the research team scrutinised the interview transcripts and followed the iterative process of initial open coding, focused coding, and categorization until the categories reached saturation.

Finally, the different types of data were compared to identify possible items of discrepancy or corroboration to further explore the possible reasons and answer the two research questions.

Findings

Affordances of the Parallel Corpus

Parallel Corpus as a Reference Resource

Table 6.2 shows students' perceived usefulness and advantages of a parallel corpus. Overall, students reported positive evaluations of the parallel corpus such as solving translation problems at the word, terminological, sentence,

Table 6.2 Usefulness of Parallel Corpus

Usefulness	Number of Agree Responses	Number of Neutral Responses	Number of Disagree Responses	Mean	SD
Meaning of English vocabulary	10	2	0	5.83	0.99
Meaning of Chinese vocabulary	11	1	0	6	0.91
Usage of English vocabulary	10	2	0	5.92	1.04
Usage of Chinese vocabulary	11	1	0	5.83	0.90
Usage of English Phrases	10	2	0	5.92	1.04
Usage of Chinese Phrases	11	1	0	5.83	0.80
Solving terminological problems	10	2	0	5.83	0.99
Solving translation problems at the sentence level	10	2	0	5.83	1.07
Maintaining translation style	10	2	0	5.83	1.07
English decoding skills	11	1	0	5.67	1.18
Chinese decoding skills	10	2	0	5.59	1.32
English encoding skills	11	1	0	5.75	1.01
Chinese encoding skills	9	2	1	5.42	1.44
Confidence in Chinese–English translation	8	4	0	5.50	1.12
Confidence in English–Chinese translation	10	2	0	5.67	0.94
Sense of professionalism	11	1	0	5.58	1.11
Would use the corpus in the future	11	1	0	5.67	0.85

Table 6.3 Search Histories on TR Corpus

Items	E-C	C-E	Sum
Words	96	31	127
Multiple-word expressions	169	181	350
Sentence structures	8	95	104
Proper nouns	51	46	97
Terminologies	115	80	195
Sum	439	445	884

and stylistic levels. The search histories of students, as shown in Table 6.3, confirmed most of the survey results. Each student searched over 70 times on average, indicating the affordances of the parallel corpus as a reference resource in translation. Table 6.3 also shows a prominent number of search records for multiple-word expressions and terminologies in both translation directions. It seemed that students relied on the parallel corpus for solving sentence-level problems in Chinese–English translation, indicating their lack of confidence in using English structures to translate Chinese. In comparison, students exhibited a higher frequency of single words in their search records in English–Chinese translation.

Interviews corroborated with the survey results and search histories. Candice mentioned that the parallel corpus was helpful in translating the terminology of specialized texts. Belle and Charlotte also agreed that the parallel corpus was very useful in searching technical terms. For example, Belle searched for 進出口總值 (*jinchukou zongzhi*) ("the total value of imports and exports") in the parallel corpus.

> I searched for that one because I felt it's a technical term. So I couldn't just use my own translation; I couldn't just use what I think it should be. It's not like some random vocabulary, and I think they must have a proper name for that.

Besides finding translation equivalents, the students also reported that the corpus helped them understand the source texts and enhanced accuracy in the Chinese–English translation. For example, in translating 今年前兩個月 (*jin'nian qian liangge yue*), both Belle and Candice were confused about whether the third character "前" (*qian*) means "before" or "first". By retrieving similar lexical bundles in the parallel corpus, they understood that the phrase should be translated into "in the first two months of this year". Both Candice and Charlotte regarded the parallel corpus as an effective reference tool for solving word-level translation problems.

Aligned with the survey results and search histories, students reported that the sentence structures from the parallel corpus are especially beneficial for Chinese–English translation. For Belle, this was what she valued most in using the parallel corpus. As she mentioned in the interview:

> I tried to look at the structure, for example, whether a word should be put at the beginning or at the end of a sentence. I tried to find out which sentence structure is more frequently used in the translation and which sentence order is more common. And then I would use my version based on those (structures).

During the translation test, she searched the parallel corpus to find an appropriate structure for translating …呈現出四大特點 (*chengxian chu si da tedian*) ("are characterized by the following four features"). Even though the corpus occurrences were not exactly the same as the source text, she could find and analyse some similar sentences to produce an appropriate translation, as previously stated.

At the textual level, all three participants noted that the corpus was vital in ensuring the stylistic appropriateness of translation in specific contexts or genres. For example, when translating "this year' used in a formal news report, Charlotte searched the corpus and found that "this year" could be translated into "本年" (*ben nian*) which is a more formal expression than "這一年" (*zhe yinian*).

One area that attracts our attention is how the students developed critical thinking and analytical skills through corpus-assisted translation teaching. Both Candice and Charlotte mentioned that they pieced together some words found in the corpus to translate a complete sentence. Their translation behaviours indicate an overreliance on the word/phrase equivalents provided by the corpus. Besides, the participants always accepted the results offered by the corpus, because they believed in the reliability of the corpus data. They seldom use the "Compare" function or the "Collocates" function since the Basic Search function already satisfied their queries for translation equivalents (Belle and Candice). Such behaviours indicated that novice translation students might lack the skills to critically analyse the corpus data.

Parallel Corpus as a Learning Aid

Besides using the parallel corpus as a reference tool, the interviewees also mentioned using the corpus as a learning aid in translation. For example, Candice stated that she paid attention to the translation strategies employed by professional translators, such as omissions or part-of-speech transitions in English-Chinese and Chinese-English translations. Belle also repeatedly mentioned that the parallel corpus was a helpful learning aid for L2 learners. She explained that the most valuable affordance of the parallel corpus was not for literal or direct translation but for helping L2 learners to understand how translation was done "in a common way". Corpus examples helped her to know the possible translation norms or taboos.

The corpus also serves as a good learning aid in enhancing students' second language skills. As the survey indicated, most students found the corpus useful in improving their language encoding skills. The focal participants explained how the parallel corpus could be used to improve their writing. For example, Charlotte mentioned that she enlarged her vocabulary and increased the variety and accuracy of word choices in writing. She also used the parallel corpus to search for parallel texts in her English writing:

> I would search for the keywords of a certain topic on the corpus to get some translation examples. The URL links that come together with each example can further direct me to the source websites. In this way, I can get many articles or websites that are useful for my writing.

Belle, likewise, used the parallel corpus to ensure that her writing style was appropriate. Furthermore, the three participants all reported enhanced search skills with increasing use of the parallel corpus. Where Belle initially would just "copy the entire phrase" from the corpus occurrences, she quickly learnt that this approach was not adequate and that adaptation was needed ("to trim it down") to ensure accuracy. In addition, Belle also developed a "double-check" tactic by conducting a further search on the corpus. Specifically, she

would search the corpus for the translation candidates provided by the corpus to verify whether such translations are accurate. Such a method of verifying the translation-of-a-translation shows her creativity in using the corpus.

Affective Support

Importantly, the parallel corpus also offered affective support by enhancing learners' confidence in translation and their sense of professionalism (see Table 6.2). It is worth noting that students feel more confident in English–Chinese than in Chinese–English translation. This might be accounted for by the fact that all the participants are native Chinese speakers, so it is easier for them to translate into rather than out of their native language (Liu 2020). As far as confidence is concerned, the corpus can further help translation students with the decoding of English source texts and the encoding of Chinese translations.

In the interview, the translation students all expressed anxiety due to their lack of translation experience, especially when they needed to translate specialized texts that they were unfamiliar with:

> I had no confidence in my own translation. Even when I produced a translation version, I would feel that it might not be as appropriate in wording or style (Candice).

However, Candice noted that she felt more confident with her translation quality after the corpus-assisted translation training because she "has learned how to use the corpus tool, and therefore could make use of more resources than other students [who did not attend the training]". She also noted that, by checking translations in the corpus, she became more confident in the stylistic appropriateness of her translation. With similar sentiment, Charlotte stated that her confidence increased after training which was unavailable to her peer students. Likewise, Belle noted that the parallel corpus offered a kind of "reassurance", since the translation examples provided by the corpus are more comprehensive than the definitions of dictionaries. As the corpus occurrences are displayed in context, they have a clear advantage over dictionaries in which the words are only semantically defined and rarely used in context. By examining the translation examples in the corpus, the students have reported improved confidence in translation.

Affective support also came from the reliability and quality of the corpus data. Both Charlotte and Candice expressed their trust in the parallel corpus data which is more straightforward and cost-effective than web searching or machine translation. Although the corpus might not contain all the technical terms that students wanted to search, the amount of quality data in the form of pre-existing translations by experienced translators can serve as professional references for students to work on their own translation (Pearson 2003).

Factors Obstructing the Adoption of the Parallel Corpus

Although 11 students expressed their intention to use the corpus in the long run in the survey, only four students were found to keep using the parallel corpus six months after the training based on their search histories, indicating that some obstructive factors still exist despite the affordances of the parallel corpus.

Ease of Use

The ease of using a parallel corpus is an important factor affecting students' adoption of it. As shown in the survey results (see Table 6.4), one-third of the participants reported problems in time and effort spent on analysing the data and performing search techniques. Four students also reported difficulties in identifying the proper search techniques. The focal participants further elaborated on some "annoying" characteristics of the parallel corpus that discouraged them from using it for translation. In the parallel corpus, the search keywords can be highlighted while the translations cannot be highlighted because a word or language expression can be translated in different ways. Students thus need to analyse the translations against the source text to find out how a word is translated. However, students frequently mentioned that the translation of the keywords was not highlighted in the result, which added to their difficulty of analysis, especially when the sentence was very long (noted by Candice) or when they were unfamiliar with the context (Belle). In the follow-up interview six months after the training, Charlotte mentioned that online dictionaries or the search engines were more convenient in this regard as she sometimes only wanted a translation of a word or term.

Table 6.4 Challenges in Using the Parallel Corpus

Difficulties/Problems	Number of Agree Responses	Number of Neutral Responses	Number of Disagree Responses	Mean	SD
Time and effort spent on analysing data	4	2	6	3.92	1.66
Unfamiliar vocabulary in corpus output	5	3	4	4	1.63
Too many sentences in corpus output	4	4	4	4.08	1.61
Limited number of sentences in corpus output	4	4	4	4	1.53
Performing search techniques	4	2	6	3.75	1.83

Language Proficiency Level

In evaluating the usefulness of the parallel corpus, five students reported unfamiliar vocabulary in the corpus output as one of the difficulties. For novice translation students, their low language proficiency level is clearly an obstructive factor for the adoption of the parallel corpus.

Charlotte, who gave up using the parallel corpus after the training, reported having more difficulties in using the corpus in Chinese–English translation than in the other direction. Her relatively poor English proficiency, together with a better command of Chinese (as a Chinese major), might explain her experience. Even though the corpus offered her translation examples in various contexts, she still found it challenging to reorganize the English words in proper sentence structures in Chinese–English translation. In contrast, she had performed with better confidence in English–Chinese translation with the aid of the corpus. Charlotte also reported her disappointment: "I could not understand the English text, and I could not find out the translation equivalents". This shows that parallel corpus might be more useful in L2–L1 translation for novice translators as they cannot write or translate effectively in English. Such a finding is contrary to Liu (2020) who found that translation majors found that parallel corpus is more useful in Chinese–English translation than in the other direction.

Candice mentioned in the follow-up interview that, when she needed to translate colloquial Cantonese words into English, she must firstly do an intralingual translation to translate the words into formal Chinese synonyms before searching for the English equivalents in the parallel corpus. However, as a local Hongkonger with a Cantonese background, her low proficiency in written Chinese also limited her use of the corpus.

Practical Needs

Whether students needed to work with a specialized translation was another factor that influenced their continued use of the parallel corpus. Candice and Charlotte reported that the corpus which contains practical translations was not very useful for literary translation, which was often the focus of translation courses. This indicates that pedagogy-oriented corpus design should take the specific needs of translation students into consideration. Although the corpus genres might be an important factor hampering the utilization of corpus use by students, it also brought to our attention the clear gap between a translation curriculum which places too much emphasis on literary translation and the translation industry in which specialized translation accounts for more than 90% of all the translation work (Chan 2015: 44).

This point is best reflected in the case of Candice who first complained that the corpus was not very useful for her schoolwork but who noted that she found it particularly helpful when she had to work with related translations during her internship. In the follow-up interview six months after the training,

Candice reported that part of her internship was to translate between English and simplified Chinese; thus her "needs" for high-quality simplified Chinese–English parallel texts greatly increased, and she was happy to still have access to the parallel corpus. As a result, her perceived usefulness of the corpus also improved. She commented that the Chinese translations provided by the parallel corpus were of high quality and much better than the fragmented or unnatural "Europeanized" translations on the Internet. Contrary to Candice, Charlotte mentioned in the follow-up interview that she gave up the parallel corpus after the training because there was no genuine need for her to work with either Chinese–English or English–Chinese translations.

Discussion

The findings reveal that a parallel corpus could empower novice translation students from different perspectives. Both the survey findings and the focal participant interviews confirmed the benefits of a parallel corpus for translation. For novice translation students, a parallel corpus was most useful as a reference tool at the word, terminological, sentence, and stylistic levels, suggesting the efficacy of the parallel corpus in improving students' translation quality. This is consistent with the findings of previous studies conducted with more experienced or proficient translation students that the parallel corpus serves most effectively as a reference tool (e.g. Heylen and Verplaetse 2015; Liu 2020). In addition, students also used the parallel corpus as a learning aid in translation and language learning, which demonstrated that novice translation students can explore the usefulness of the parallel corpus by themselves, regardless of their language proficiency level. It also indicates the potential of using a parallel corpus to improve students' language skills, which have always been a central component in translation competence development (Li 2013). Students also reported that the parallel corpus offered them affective support, indicating corpus use could help reduce anxiety even though students might have little translation experience. Such affordances of the parallel corpus align with the suggestion that using technological tools could improve students' self-efficacy in translation training practices (Wu, Zhang, and Wei 2019) and reduce students' anxiety by fostering a sense of achievement (Yan and Wang 2012), both of which are important indicators of student performances (Lian, Chai, Zheng, and Liang 2021; Liu 2022). Our findings are largely in line with the findings of Kübler, Mestivier, and Pecman (2018), who found that a corpus enables students to produce better-quality translations despite some technological and pedagogical limitations. In sum, the usefulness of the corpus was well acknowledged despite the varied language abilities of the participants. Belle, a relatively proficient English learner, focused on using the corpus to improve her translation competence or writing skills, while, for Candice and Charlotte, corpus served as a helpful reference resource for translation. This shows that a parallel corpus with its diverse functions can cater to a spectrum of students' needs.

Despite the perceived usefulness of the parallel corpus, some factors are also found to negatively influence students' adoption of the corpus in their translation learning. One major factor is the ease of corpus use. Compared with Boulton's (2012) findings, students in this study reported relatively moderate difficulties in using the parallel corpus, which might be attributed to the user-friendly design of the parallel corpus used in this study. On the other hand, the time and efforts, as well as search strategies needed to effectively use the parallel corpus might lead to technology hesitancy (Wu et al. 2019). Second, students' personal factors also influence their adoption of the parallel corpus. For novice translation students, their relatively low language proficiency clearly affects their analysis and understanding of the corpus data. In fact, previous studies have revealed that L2 language proficiency plays a key role in making effective translation decisions and that, as result, it should be treated as a prerequisite in translator training (Prior, Whinney, and Kroll 2007; Wu et al. 2019). Furthermore, students' actual translation needs to complete real-world tasks, which can also be a deciding factor for their adoption of the parallel corpus in the long run.

The findings of the study have important implications for corpus-assisted translation training and parallel corpus design. Despite students' positive evaluations of parallel corpus use, interview data also indicated that novice translation students still regarded it as more of a reference tool than a learning aid. Such perceptions might be accounted for by the learners' inadequate language and analytical skills. Students also reported overreliance on corpus results, which were often directly used without critical analysis. This corroborates previous studies' findings that translation students tend to resort to external resources more frequently and process the information more superficially than professional translators (Whyatt 2012). All these problems call for a more comprehensive course design when using a parallel corpus for translation teaching. Since language proficiency is a crucial component of translation competence, translation teachers should strike a balance in their teaching of language skills, translation strategies, critical thinking and analytical skills, and digital literacy (de Cespedes 2019; Li 2002). In teaching novice translation students, teachers can place a special focus on improving students' language skills besides developing other skills and competence. Secondly, although the corpus functions are relatively easy to acquire, performing effective search techniques and analysing corpus results to make proper translation decisions might still be difficult for novice students (Stewart 2009). To help students use the corpus more effectively, teachers can guide students to do a variety of exercises aiming to solve different translation problems (Barros and Castro 2017). Most importantly, teachers can explicitly teach the effective searching techniques in order to get the desired parallel texts (Stewart 2009). Thirdly, collaborative learning, which has proved useful in corpus-based training (Ma, Tang, and Lin 2021) and language learning (Chen and Du 2022), might also be helpful for students who are unfamiliar with corpus methods in translation or at the low language proficiency level. In this study, two participants

discovered that the parallel corpus was useful for improving their second language writing skills. This repurposing of the parallel corpus through collaboration has extended its function for empowering novice translators.

Conclusion

This study investigated novice translation students' perceptions and the possible factors that inhibit them from using the parallel corpus in translation in the Hong Kong context. Overall, novice translation students acknowledged the merits of parallel corpus use in the translation classroom. The corpus empowered student translators by serving as a reference tool and learning aid and by providing necessary affective support. However, the ease of corpus use and students' practical needs for translation or English writing are factors that influence their adoption of the parallel corpus in the long run.

It should be acknowledged that this study focused on only a small sample group. The findings can be further tested with a larger group of participants. In future studies, the textual analysis of students' translations can also be undertaken to provide additional evidence and to triangulate data. It is hoped that our study can provide educators and researchers with a better understanding of the role of the parallel corpus for novice translation students. To a large extent, translation teachers need to tailor-make appropriate and effective corpus-assisted teaching activities and materials based on students' needs and levels to ensure that the parallel corpus can make some meaningful impact on the translation classroom.

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