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DOES CHOICE OF LANGUAGE REALLY MATTER IN TAKING NOTES FOR CONSECUTIVE INTERPRETING?

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Abstract

There has been considerable debate over what language to use in taking notes for consecutive interpreting, but no consensus has been reached among scholars. In particular, little is known about the Chinese-English language pair with regard to language preference and efficiency. This study examines novice/trainee interpreters' language use in relation to quality of interpreting. The findings revealed the interpreters generally used their L1 (A language) whether interpreting to or from that language, but that sometimes translators consistently chose either the source language (SL) or the target language (TL) relative to each translation. Contrary to some past findings that the use of source language facilitates interpretation, here we see that it correlated negatively with the quality of the renditions in this study. Students who used the target language obtained the highest scores of all the categories. The findings described in this paper help to identify Chinese trainee interpreters' approach and, show that quantitative analysis of the relationship between language use in notes and the quality of interpretation adds to our understanding of the relationship between notes and awarded grades. Questions are raised about didactic issues in training interpreters.

Keywords

Consecutive Interpreting, Note-Taking, Language Use, Interpreting Quality

1. Introduction

Note-taking in consecutive interpretation has been substantially discussed over the years, such as note-taking strategies in interpreter training (Gillies, 2014; Ilg and Lambert, 1996; Roderick, 1998; Seleskovitch, 1975; Seleskovitch and Krawutschke, 1989), but research on language use in notes, is a relatively recent endeavour. Past studies have acknowledged a few parameters that have an impact on the language use in notes, such as the nature of a particular language combination (Szabó, 2006), effective use of notations (Chmiel, 2010), use of SL (source language) (Liu et al. 2023) or TL (target language) (Abuín, 2012; Baselli, 2012; Gile, 1998, 2009), function of A/B-language (Dam 2004a, 2004b), and use of a third language (Błaszczyk & Hanusiak, 2010; Matyssek, 1989). In particular, Dam's series of studies (Dam 2004a, 2004b, 2007; Dam et al. 2006), using empirical data, are informative on how language is used but raised many questions: Does variation in A-language (L1) among interpreters show up as a variation in the notes? What is the relationship between language choice and the quality of interpreting although research has suggested the important role of notes in interpreting practices?

Among the assumptions underlying note-taking mechanisms, the SL/TL distinction has attracted the most debate. The traditional approach embraces the idea of using TL, and using TL in notes is even considered to be an important strategy in interpreting 'sense' rather than words. Seleskovitch explicitly stated: "The language used for note-taking should always be the target language; though many interpreters take their notes in the source language, beginners should get used to taking theirs in the language they will use for speaking, thus making sure from the start that they are not merely jotting down the words they hear but really note reminders of things understood" (Seleskovitch, 1989:76). The statement was made mainly from Seleskovitch's observation of trainee interpreters' performances, her reflections on her personal interpreting experiences, and popular understandings in the field of neurological studies in 1970s (See Ilg, G., & Lambert, S., 1996 for a comprehensive historical review of note-taking in consecutive interpreting). She suggests that interpreters are able to interpret the source passage not primarily because they remember the words in the SL, but rather because they understand the message. She further recommends a three-step process in interpreting, with the second step being 'deverbalisation' which refers to the

strategy of 'discarding the wordings' in the SL (Seleskovitch, 1975; Seleskovitch & Krawutschke, 1989). Criticism of Seleskovitch's approach has never ceased, but even until today, her TL-based interpretive approach to information processing in interpreting practices has been the most influential guideline in interpreter training. Unsurprisingly, the interpretive approach has been most positively welcomed and practiced among professional interpreters (Ito, 2016: 42). The TL approach mainly articulates an argument from a semantic perspective: deep semantic encoding in long-term memory is superior to surface acoustic encoding in short-term memory, and a thorough understanding of the source text is a requirement for an effective and accurate rendition. Roderick's book (1998) on conference interpreting is widely used worldwide for interpreter training, and this is also geared towards the use of TL in consecutive notes.

Scholars of the SL approach do not disagree on the pivotal position of meaning or sense in interpreting, but their concern lies in the extra cognitive load of interlingual transfer in the listening phase, a phase that also demands interpreters to listen, comprehend, remember, write, and co-ordinate (Gile, 2009). In Gile's (1995, 2009) effort model of the consecutive interpreting process, he explicitly identifies a lag between the production and the reformulation, and notes that there is an extra production effort required in order to produce notes in the first phase. For this reason, scholars such as Kirchhoff (1979) and Ilg (1988) favour the use of the SL in notes, pointing out that SL facilitates the processing of original speeches, and prevents the risk of saturation. Gile (1995, 2009) suggests that taking notes in the TL requires extra processing capacity: when searching for the TL equivalent takes place concurrently with analysing the speech, the risk of saturation may be increased because of the requirement of extra processing capacity for translation. He therefore suggests that language used in notes might be decided by the conditions of processing capacity- when there is adequate processing capacity, TL might be at play; in contrast, if processing capacity is limited, SL might be used to ease the processing load.

The first empirical study on notes in consecutive interpreting was conducted by Seleskovitch in 1975 (Ito, 2016). The purpose of her study was to seek evidence for the cognitive model of interpreting she put forward (the TL-based interpretive interpreting). Six professionals were asked to interpret two English texts into French. Rather than noting down their own 'ideas', the interpreters were found to use either SL or corresponding TL words in the notes. The participants' unexpected pattern of not noting down 'ideas' intrigued Seleskovitch to search for reasons underlying such a behaviour. Seleskovitch suggests that 'verbatim notes' are mainly used to record information such as numbers, listed items, proper nouns and technical terms, which are also called 'transcodables'. According to Seleskovitch, note-taking is a mnemonic device, which has the function of triggering memory. More experimental studies can be found in recent years but as González (2012) wrote, 'empirical studies of the language used in interpreters' notes are still scant.' What confounds the situation even more is that findings on language used in the notes are very much mixed.

Returning to the debates of SL/TL dichotomy, some empirical evidence shows that SL is more frequently used in the notes (Baselli, 2012). In contrast, TL is more frequently used in other observations (Dam 2004a, Dam 2007). Abuín González (2012) recommends that the use of SL or TL may be a function of interpreter's expertise level. She observed that there is a difference in the language use among the three groups of participants in her experiment: beginner students, advanced students and interpreters. She finds that there is a shift of moving to the use of TL when interpreters' expertise level increases. This conclusion, however, can only be tentative since the author only collected 10 notes for each group, which considerably limits the scope of any sound statistical analysis.

Dam (2004b) found that instead of consistently using either SL or TL, the four students in her study preferred their A language (L1), Danish, in interpreting both into and from Danish (i.e., in effect using TL in the first case and SL in the second). Likewise, five professional interpreters in her 2007 study also demonstrated a preference of A language. In contrast but along the same lines, Palazzo (1999) and Szabó (2006) noticed the marked use of B language (L2) in their data for translating in either direction. English is the B-Language in both authors' experiments. Palazzo's participants include 18 Italian students who were engaged in bi-directional interpreting tasks involving English and Italian. English was favoured in the notes regardless of SL/TL difference, or the direction of the interpreting. In Szabó's experiment, eight Hungarian students were also interpreting between English and Hungarian in both directions, but English again is the preferred language in notes. In the follow-up questionnaires, the participants claimed that English is morphologically simpler. Hence, Szabó suggests that language combination - the relative morphological complexity or simplicity of the two working languages - might have played a role in which language to use.

However, the findings from the above experiments are not strictly comparable. One variable which needs to be noted is the variation in participants in the studies. Some involve students, some quasi-professionals and others professionals who are at different stage of their careers. The participants' experience with notes and their acquisition of interpreting skills can make a difference in their language choice in note-taking. Also, it should be noted that the interpreting tasks in different experiments were designed to fit varied purposes. As such, some experiments only required the participants to interpret into one direction- i.e., to their A language, which to a large extent restricts the possibility of making comparisons with other similar studies whose participants were examined in a bi-directional situation. Both directions, however, need to be studied, which 'has been achieved in only a few studies' (Chen, 2017: 6). Moreover, most experiments often have a small sample size for analysis, such as eight

students in Szabó's study (2006), five professionals in Dam's experiments (2007) and 18 students in Baselli's analysis (2012). If quantitative analysis is used for comparing differences in language choice, it is advisable to use adequate number of samples to allow for reliable statistical calculations.

The literature also contains little discussion on how language is used in Chinese interpreters' notes in particular. Only a handful of studies can be found. Chen Sijia has recently published a few insightful articles in the field. Her 2016 publication serves an informative review of note-taking between Chinese-English language pair. In another publication, Chen (2017) focused on the cognitive process of note-taking in an attempt to 'unveil the underlying principles' of note-taking process. She analysed five professionals' notes from a quantitative approach using *Eye and Pen* technology. The small sample size excludes the possibility of statistical analysis, but at face value, all five of her participants have displayed a clear preference for English that is their B language. Chen cautions that the five interpreters are based in Australia so their B language is an active language in everyday use, and which is in contrast with their L1 Chinese, which may not be used as much and frequently as English. Notably, a few other experiments have also tackled Chinese interpreters' notes (Dai and Xu, 2007; Liu, 2010; Wang et al., 2010), but they either explored note-taking language from one direction or had a sample size too small to yield reliable statistical analysis (n=12 in Wang et al., 2010).

As to the relationship between notes and the quality of interpreting, we know little about which features of note-taking contribute most to the quality of interpreting, nor which language is more likely to enable effective and accurate renditions. Little empirical evidence can be found in the literature from which to draw a conclusion. One research result that is worth mentioning comes from Dam's (2007) exploration of the function of words, abbreviations, relative to both SL and TL in the interpreting quality. She suggests that higher quality of the interpreting is correlated with more words and notations used in the notes. However, no conclusion can be drawn from her data about the relationship between SL/TL and the quality of interpretation. We need to bear in mind that in her study, the participants only include five professionals so the data restricts the scope for quantitative analysis. Dam and Engberg's (2006) study also explores the relevance of notes and accuracy of renditions, but the focus is actually on the accuracy in consecutive interpreting. Along the same line, when Chen (2017) examines the relationship between the quality of interpreting and notes, accuracy of linguistic rendition is the core criterion for both the quality of notes and that of interpreting. Her findings indicate no immediate relation between the two indices.

However, past literature does suggest a close relation between notes and interpreting quality. Arumí Ribas (2012) identifies four problems in training interpreters in consecutive interpreting, half of which are related to note-taking and decoding notes. Her study reiterates the importance of notes and their impact on the quality of consecutive interpreting. Lung (1999) strongly argues that note-taking is 'the major prerequisite' for quality interpretation, and further states that the five factors which hamper high-quality interpretation can be mitigated by 'effective' note-taking. 'Effective' note-taking is only vaguely used, which is not clearly defined in the article.

This paper will examine Chinese trainee interpreters' notes when doing interpretation in both directions: from and into Chinese. It is intended that the research will contribute to the existing understanding of language choice in note-taking in general, and shed fresh insight into language use between the English and Chinese language pair specifically. Especially, as mentioned above, one limitation from some previous studies is the small sample size. So in current study we have included more participants. With a bigger sample size of 30 participants, it is hoped that this study could add to our understanding of the relationship between language choice and interpreting quality, and enhance our practice of didactic strategies in training students to take notes in the CI mode. In summary, the study was designed to address the following two questions:

RQ1. Which language is more frequently used in Chinese students' notes?
RQ2. What is the relationship between language use and grades assigned to the Chinese students?

2. Methodology

2.1: Participants

Notes were collected from 30 undergraduate students during a simulation practice at a university in China. All 30 students' A language is Mandarin Chinese, and their B language is English. At the time of undertaking the consecutive interpreting tasks, the students had undertaken consecutive interpreting class for one year. Besides guided self-study, students were asked to attend a three-hour workshop and a five-hour self-training session in the lab every week. Students were asked to volunteer to participate in the study. They were not aware that their use of language in the notes was the focus of the research, but they were notified that their notes were going to be analysed for research purposes. Consent and ethical forms were signed prior to the test.

2.2: Data

The purpose of the study was to examine language use, including SL versus TL, A-language versus B-language, and their relationship with the quality of the interpreting as reflected in the grades. Hence, students were asked to

interpret in both directions: English into Chinese and vice versa. Two spoken texts were used in the test. The English text was an extract from a talk on an accident involving a boat that sank in South Korea, and the Chinese text was a speech on environmental issues. Both audio files were about 3 minutes in length.

The interpretation was captured using audio recording facilities in the interpreting lab. Sixty mp3 audio files (30*2=60) were named and indexed, then transcribed. Students' notes were collected after the tasks and were then scanned and saved electronically. The audio files were marked independently by two interpreter trainers. The trainers marked the 60 audio files following a holistic marking scale with the total mark of 100, considering the overall quality of the interpreted output. In other words, besides accuracy, other important constructs of interpreting competence were also considered, such as fluency, accuracy, intonation, language register and terms. Inter-rater agreement was rho=.875, p<.05. Five students were also interviewed about their strategies in taking-notes after the simulation task.

2.3: Data analysis

The notes were analysed and coded using Atalas.ti. Coding was on the basis of semantic-based units. Acronyms, abbreviations and symbols were all coded and counted accordingly. For example, in Figure 1, '合作', has two symbols (Chinese characters) but represents one idea – 'cooperation' – so it was calculated as one semantic unit. The symbol '→' signifies 'leading to', so it was counted as one unit.

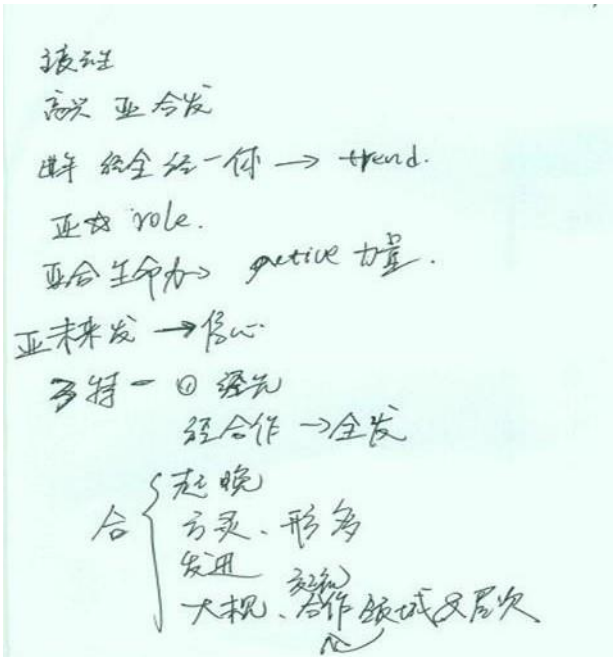

Figure 1. Sample of a section of a scanned note.

In Dam (2004b) and Chen (2017)'s study, different categories of units were calculated to compare and contrast the frequency of each category, e.g. symbols versus abbreviations and full words. The language in the notes in my study was generally categorized on the basis of symbol units (notations) and language units (including full and abbreviations in both SL and TL) for the purpose of the current study. More specifically, the notes were coded into four categories: SL (source language units), TL (target language units), nonverbal notations and unintelligible. No instances of third or other foreign language use were found in the notes.

Using Abuín's (2012) framework, a preliminary qualitative analysis of the notes was also conducted in terms of language units, semantic units, and syntactic structures to judge the nature of the notes. A judgement was first made on which category each note (n=60) was in, either SL-oriented or TL-oriented. The same two trainers who marked the notes made the judgement independently. Inter-rater agreement was calculated by Cohen's Kappa (k=.42), indicating moderate agreement between the markers. Disagreement was resolved through discussions before moving onto the next stage of analysis.

The 60 notes were further paired together for the 30 students: one student had two notes each (interpretation in both directions). Judgment was then made on the most frequently used language for each student when the two texts were pooled (Figure 2).

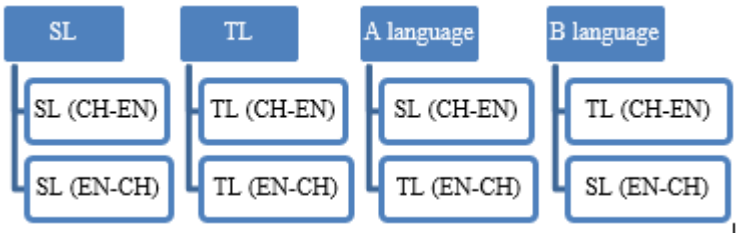

Figure 2. Categorization of language use for each student CH-Chinese; EN-English)

To give an example, if a student produced a SL-oriented note when interpreting in both language directions, then SL was regarded as more preferred choice for the student. For example, the student who produced the notes in Figure 1 shows that she produced a SL-oriented note when translating from Chinese into English, but produced a TL-oriented note when translating from English into Chinese, so Chinese was more frequently used in both conditions. In this case, the student's preferred language in note-taking was A language.

Due to the fact that the number of coded units varied greatly among the students in both directions of interpretation, a percentage was used for all the statistical computations when using SPSS to quantify the relationship between the quality of interpreting and language choice.

3. Results

The following graph (Figure 3) demonstrates the distribution (by percentage) of language category in the notes when considering the interpretation in each direction respectively: Chinese to English and English into Chinese.

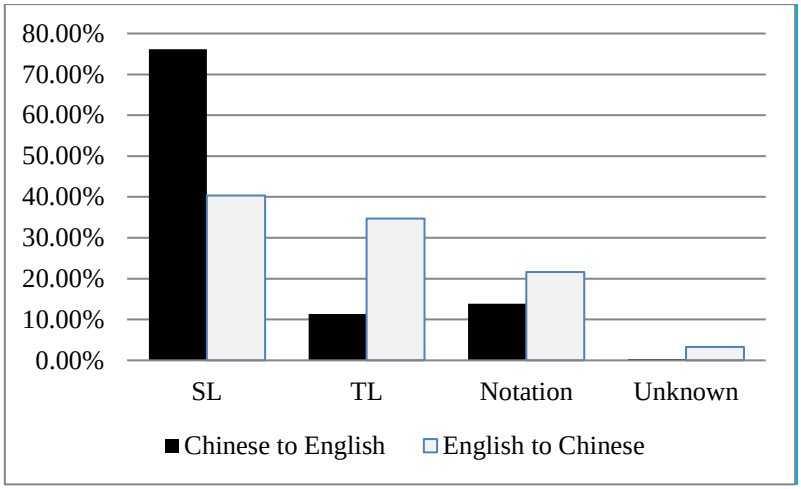

Figure 3. Language distribution in the notes (in percentage, n=60)

Table 2. Number of SL-oriented and TL-oriented notes in the interpretations

	Chinese to English translation	English to Chinese translation
SL-oriented	25 (A-Language)	14 (B-Language)
TL-oriented	5 (B-Language)	16 (A-Langauge)

Taken at face value, Figure 3 shows that students employed the SL more than the TL in both directions of interpretation, indicating a preference of the SL in the students' notes. In particular, the SL was used statistically significantly more frequently than the TL when interpreting from Chinese into English during a two-tailed paired sample t-test ($t=8.177$, $p<.01$). Also, it is obvious that Chinese was used much more frequently than English when it was used both as a SL or TL, highlighting the interacting function of A language in the language choice.

When SL coincides with A language (Table 2), the language used was mainly SL (Chinese, 25 out of 30 samples). A close examination reveals that 7 out of 30 students used 100% SL and 20 out of 30 students used more than 90% SL in this direction of interpretation, which is in line with the findings in previous studies of student interpreters (Baselli, 2012; Dai &Xu, 2007; Wang et al., 2010). In contrast, when the SL was B language, the data presented a mixed picture, with no clear-cut dominance of SL use.

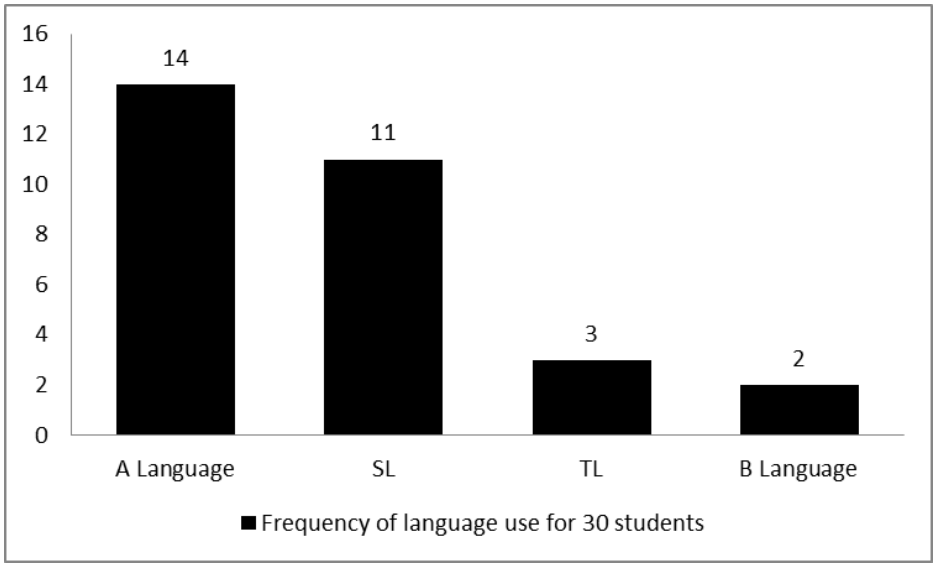

Figure 4. Distribution of language use for 30 individual students

Figure 4 illustrates the distribution of dominant languages used in individual students' notes when both directions of interpretation were pooled (n=30) following the categorization as shown in Figure 2. As Figure 4 shows, A language was most prevalently used (n=14), and SL was the second most preferred language (n=11). Nearly half of the students (14 out of 30) preferred to use A language, which further underlined the importance of A language use in the students' notes. Eleven students produced SL-oriented notes, and three students TL-oriented notes. Only two students used B language (English) more in both directions of interpretation.

Table 3. Grades and number of units (words/symbols) in each category (n=30)

	SL	TL	A-language	B-language
No. of Students	11	3	14	2
Average score	58.45	66.17	62.11	62.25
Average units	53.27	41.5	43.32	53

The students' notes were further computed in relation to the average number of units of the two texts (quantity of semantic units) and average score (quality of the output) in the four categories (Table 3): SL, TL, A language, and B language. The average score in each group of students shows that students who produced TL-oriented notes had the highest average scores (66.17); whereas students whose notes were SL-oriented had the lowest average scores (58.45). No clear difference was found in the scores for the use of A (62.11) or B language (62.25). When students had TL-oriented notes, they not only got the highest average score but were also among those who wrote down the least number of words and/symbols (41.5) of all the categories. In comparison, students with SL-oriented notes got the lowest score and produced the greatest number of notes, indicating the negative impact of SL use on the interpreting process.

Table 3 is, on the one hand, helpful in identifying group performance by looking at the average scores; but on the other, the use of an average may cover individual students' behaviours in the group. In order to understand better the relationship between the grades and percentage of SL units, percentage of TL units, and coded units, Spearman correlations were calculated for the above indices.

Table 4. Spearman correlation between language used and grades (n=30)

	Grades
SL (Ch–En)	-.248
TL (Ch–En)	.270*
SL (En–Ch)	-.399*
TL (En–Ch)	.445**
No. of semantic units (Ch–En)	-.224
No. of semantic units (En–Ch)	-.134
Notations (Ch–En)	.112
Notations (En–Ch)	.280

.*Correlation is significant at the 0.05 level (2-tailed).

.** Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows that the correlations between marks were statistically significant when translating from English into Chinese (SL: rho=-.399, $p<.05$; TL: rho=.445, $p<.05$), indicating that the use of SL (English) corresponded to lower scores and the use of TL (Chinese) was associated with higher scores. When the translation was from Chinese to English, the correlation between TL (Chinese) and grades was statistically significant (rho=.270, $p<.05$), implying again that there was a tendency that the more TL used, the more effective the notes were. No statistically significant correlation was found between SL use and the grades. The correlations, although moderate, suggest that there was a possible advantage in using A-language in the consecutive notes and a disadvantage in using SL.

Table 4 also shows a tendency towards lower scores where more words were written, but the correlations between the coded units and marks were not statistically significant. This is in contrast with Dam's (2007) finding, which suggests a positive correlation between words and the quality of interpreting: the more words that are used, the better the quality of the target text.

The examination of the students' notes also seems to suggest that the more notations were used the higher the mark was. However, no statistically significant relationship was found between the two variables (Table 4). This would appear to verify Chmiel's (2010) suggestion that it takes time for students to master notations and to incorporate them effectively into the note-taking system. Therefore, it is not surprising that no correlation was found between notations and interpreting quality.

To better understand the relationship between the length of the notes and the language used, computation was further conducted between the number of semantic units and the languages. As Table 5 shows, there were

statistically significant correlations between the number of words and SL/TL used in both directions of translation, indicating that the longer the note was, the more source words were used. In other words, students who took notes in the source language spent more time writing down the information during the listening and comprehension stage.

Table 5. Spearman correlation between language and quantity of units in the notes (n=30)

	No. of semantic units
SL (Ch-En)	.600**
TL (Ch-En)	-.596**
SL (En-Ch)	.463**
TL (En-Ch)	-.480**

. ** Correlation is significant at the 0.01 level (2-tailed).

4. Discussion

RQ1. Which language is more frequently used in Chinese students' notes?

4.1: The use of SL in the notes

The results suggest Chinese (A-language) was preferred by the students, but the SL/TL parameter was also relevant. SL, next to A language, was the second most frequently used language in the notes. However, students who used SL had the lowest average scores in the four categories – SL, TL, A language, and B language – indicating that SL use was disadvantageous. The results further show that students who used SL also produced the greatest number of language and/or note units, indicating that more time was taken in note-production when SL was used. Consequently, less time used in the notes might allow more attention be allocated to analysing the source speech and memorizing the message, which, partly explains why the students were awarded the highest average scores when TL was used most prevalently.

Examination of the scripts revealed one problem: for the majority of students who used SL more frequently, their notes bore a greater resemblance to shorthand. The process of taking notes seemed not to involve simultaneous analysis of the message: using SL is closer to the written form of phonemic shadowing. In phonemic shadowing, interpreters listen and repeat what they hear word for word. The focus is on the micro-linguistic units, including exact wordings of the source text, rather than sense. By the same token, in this study most students who made notes using SL seemed to take the approach of randomly writing down what they heard. As is known, notes in SL can be derived from two distinct cognitive processes: surface information processing (surface acoustic encoding), as demonstrated in jotting down the words heard, versus deep-level information processing as reflected in the reconstruction of the information in the notes with relatively fewer instances of SL interference. The former resembles shorthand or dictation exercises; whilst the latter is the approach recommended for interpreter training. Close scrutiny of the notes suggested that most syntactic structures in SL-oriented notes also resembles closely to the source speech. It gives the impression that little analysis of the message was carried out during listening, while the main effort was devoted to writing notes.

During the interviews after the test, some students (authors of SL-oriented notes) confided that when they read their notes, they quite often forgot what they had written down when they encountered complex syntax. So, they might be able to write down the key words heard, but they found it very difficult to recall the message in the reformulation phase, naturally leading to inaccurate renditions or the omission of core information in the interpretation.

The research in cognitive psychology is helpful in understanding why notes in SL could lead to less adequate renderings. Kent and Lamberts (2008) investigated the relationship between encoding and retrieval, suggesting that recollection relies on the mental simulation of the encoding process. Although the authors cautioned that mental simulations might not underlie all of the encoding process, they explicitly expressed the significance of the relationship between the two. Its implication for consecutive interpreting is that the language used in notes whilst listening to the speech might be closely related to the recalling of the meaning while rendering it. The mental simulation in SL may need more processing capacity to convert between SL and TL in the reformulation phase for trainee interpreters, potentially leading to their trade-off in the quality of the rendering. Therefore, besides semantic encoding, the role memory plays in information retrieval when carrying out interpretation seem to underscore the traditional approach of TL.

The role of memory plays in consecutive interpreting is widely acknowledged, but is seldom studied for consecutive interpreting. Dong, Liu and Cai (2018) suggest that the operation of interpreters' working memory is best to be understood by making the distinction between consecutive interpreting and simultaneous interpreting. For the moment unfortunately, most published studies on memory refer to conference interpreting in general terms, including both consecutive and simultaneous interpreting. And the findings are mixed. More inter-disciplinary and

cross-disciplinary collaborations are clearly needed for a better understanding of the interpreters' working memory and what role it plays in memorizing and recalling passages in CI tasks.

Currently, a popular assumption is that interpreters have 'advantages' in working memory in interpreting performance. One classic story of a chess master's game play is an interesting demonstration of how working memory is closely related to the players' expertise levels. Chase and Simon (1973) described a very interesting phenomenon- a chess master can reproduce the locations of chess pieces on the board only after 5-second's observation time. The 'locations of all the pieces' were recalled with great accuracy and efficiency that novice chess players cannot compare. Especially, such an ability gets stronger as chess skills increase. Cognitive psychologists suggest that the chess masters have up to 50,000 position patterns in their long-term memory, so information retrieved from their long-term memory helps with the memorizing process. They only need 'retrieval cues' to trigger that knowledge previously stored. Similarly, in consecutive interpreting tasks, it is found that more advanced students outperform beginner students, and professionals outperform novice interpreters. One stark difference in their expertise in interpreting is their automated multi-tasking skills and their previous knowledge on different subjects stored in the long-term memory. The implication for note-taking is that the professionals might be using complete different sets of 'retrieval cues' from beginners, or student interpreters. This can partly explain some mixed findings from previous studies when both students or professionals' data are used for comparison. For example, findings in current study is mostly in line with experiments involving students as participants: students have the tendency to take SL-oriented notes (Andres, 2002; Abuín, 2012; Wang et al., 2010), but in contrast with Chen's (2017) findings which were generated from professionals who displayed a preference for English, their B language.

4.2: The function of A-language in the notes

The A language (here, Chinese) proved to be most frequently used in Chinese students' notes. It was not only the most preferred language but also had a clear dominance in the notes when SL coincided with A language. In contrast, the use of B language (here, English) was rare. Only two out of 30 students preferred to use English in notes. This finding fits with current conceptions of the function of A/B-language in note-taking. Dam (2004b) and Baselli (2012) come to similar conclusions in their study. Dam (2004a: 13) explains that 'other things being equal, writing in one's first language, i.e. A language, is likely to be easier/faster than writing in one's B language because of the probable differences in the levels of mastery of these languages'.

The difference between Chinese and English linguistic representations may also be a possible cause. Unlike English, Chinese does not have a direct relationship between sound and form. The phonetic composition is independent of its written structures. Chinese characters are composed of radicals. Some radicals traditionally represent sounds, others meanings. Many Chinese characters are pictographic in form, so for Chinese native speakers, it may require less effort to process the message when decoding notes for interpretation and therefore saves time. One student explained that her preferred use of Chinese was because English is an alphabetic language that sometimes contains complex morphological structures. Using abbreviations could help, but it took time to master conventions of abbreviations. A close comparison of the notes and scripts of the interpretations revealed that abbreviations, apart from well-known ones, were used only occasionally. Some abbreviations were noted down but caused great trouble in information retrieval, leading to inaccurate renditions or disfluency in delivery.

The findings from cognitive psychology can also help to understand the cognitive advantage of using A language in notes. Hulme, Maughan, and Brown (1991) identified the trend that the span was lower for foreign words than that of mother tongue when examining memory span for familiar and unfamiliar words in Italian and English. Their findings supported the assumption that long-term memory contributes greatly to short-memory performance, and implies that familiar words, such as high-frequency words, and the use of mother tongue all facilitate encoding and recollection processes. Considering professional interpreters' bilingualism, training experience and professional practice, it is possible that their use of A-language or SL in notes might have little impact on the memory span, thus leading to unnoticeable difference in the quality of interpreting compared with their peers writing notes in other languages. Helle, Engberg, and Schjoldager (2005) actually found that the professional interpreter in their study produced more accurate notes in SL (B-language) than in TL (A-language) through comparing the semantic networks between source text and target text. Nevertheless, their study, as the authors point out, involves only one interpreter, so the finding can best describe the interpreter's individual performance and/or one particular language combination (Spanish–Danish), but cannot be generalised to represent all professionals' approaches.

It is important to note that whereas A Language (Chinese) was popularly used in this study involving students, B Language (English) was preferred in the notes for the five professional Chinese interpreters in Chen's (2017) study. The difference in language proficiency level (trainee versus professional) may help to explain the conflicting findings, which again indicates that interpreters' skill levels may have factored in the interpretation strategies.

RQ2. What is the relationship between their language use and the grades assigned to the Chinese students?

4.3: Higher grades are inclined to be associated with TL-oriented notes in students' performance

The TL approach was found to have a statistically significant correlation with the quality of interpretation. Similarly, Abuín (2012) compared the notes of three distinct groups: beginner students, intermediate students and professional interpreters. TL notes correlate positively with the quality of renditions. One conclusion from the study is that the more advanced the interpreter is, the more TL-oriented the notes are.

One advantage of noting in TL is that the message may have been restructured in the TL in the first phase of interpreting, so the cognitive burden in the reformulation phase is greatly lessened. As a result, the interpreter has more cognitive capacity to reconstruct the message and monitor his/her delivery. Another explanation is that the deep processing and information reconstruction as represented in TL-oriented notes in the listening phase facilitate comprehension, resulting in more accurate information retrieval. This can also be understood from a semantic perspective: deeper semantic encoding (comprehension + translation) is believed to produce better interpretation outcomes than comprehension only in short-term memory (SL approach); not to mention that a thorough understanding of the source text is a priori for an effective or accurate rendition. Regardless of the reasons, the higher average score in TL approach in this study nevertheless confirmed the notes' functions in consecutive interpreting, being both descriptive and analytical (Gillies, 2005, 2014). In addition, the findings underlined the importance of notes as a tool in identifying the core information and analysing the links between messages. Gillies (2005, p. 6) also suggested that notes should 'become the visual representation of your analysis of the source speech'.

In contrast with the result that TL is positively correlated with the quality of interpretation, Dam (2007) found that the use of TL corresponded to more inaccurate transformations. Unlike the popular status of SL in the current study, TL was in preference to use when she examined the relationship between the quality of interpreting and the number of note units, abbreviations and SL/TL. Of the five subjects, two even used no SL at all. The inter-subjective analysis suggested that more inaccurate renditions were produced from the TL notes, indicating a negative correlation between the TL notes and the quality of interpreting. Nevertheless, intra-subjective analysis did not support such a relationship. This discrepancy between the inter-subjective and intra-subjective analyses prevented Dam from drawing any conclusion. The inter-subjective analysis was also conducted with only five students, so the finding cannot be extrapolated to a wider group of interpreters. More importantly, the current study adopts a holistic rating descriptor to grade the students' interpretation performance so that criteria include more constructs (such as fluency, pronunciation, intonation, vocabulary and other pragmatic criteria) that differ from Dam's (2017) study, in which accuracy is the main criterion. Therefore, the difference in quality metrics between the current study and Dam's study should not be ignored when comparing the findings.

5. Conclusion

This paper offers fresh insights into the choice of language in Chinese student interpreters' notes. Analysis of the data demonstrates that SL is more marked in both directions than TL, especially when working from Chinese (A language) to English (B language). The difference in the percentage of SL in the two directions also indicates the influence of A language. In accordance with Dam (2004), the current study shows that A language plays an important role in trainee interpreters' language choice in note-taking, which may be explained by the compactness, simplicity, and pictographic nature of Chinese writings.

SL is most frequently used in the notes, which is in line with findings drawn from other language combinations. More proficient trainee interpreters tend to use TL in the notes, suggesting a possible continuum of shift from SL to TL for most interpreters as their interpreting ability and skills improve. The finding coincides with past literature that more advanced trainee interpreters are found to be inclined to use TL in notes (Dam, 2004b; Abuín, 2012). Abuín (2012) suggests of a possible continuum of shift from SL to TL for interpreters as their interpreting ability and skills improve. Such an observation seems to be endorsed by more evidence from the current study.

One major finding is that SL had a statistically negative correlation with the quality of interpreting, although the statistical correlation is only moderate. Such a result does not suggest that the use of SL is not as effective as either TL or a mixture of language use; rather, it underpins the tendency for trainee interpreters to use SL in their early stage of training. More importantly, the tendency among the trainee interpreters to use SL in their notes highlights the significance of analytic listening skills in training. When the cognitive workload is intense, it is only natural for trainee interpreters to opt for the easier route of processing information at the surface lexical level. It is, therefore, no surprising to find that they take the approach of jotting down whatever they hear, with the trade-off of dropping the important operation of analytical information processing when listening to the spoken text.

Cognitive psychology could lend great support in understanding the rationale that underlies the use of different languages. Short-term memory has limited processing capacities that unavoidably restrain trainee interpreters' multi-tasking abilities in both listening and reformulation stage in consecutive interpreting. Their language structure in long-term memory can only provide limited access to their working memory in processing the information. On the contrary, professionals have quick access to their long-term memory, so they have multiple cues accessible to them. Therefore, it seems rational for them to note down whatever 'retrieval cues' that provide the quickest activation to the information stored in their long-term memory, either in the form of SL, TL, symbols or abbreviations so that the long-term memory can step in to 'help' in digesting and structuring the information in the source passage. Past research shows that working memory allows for direct and fast retrieval operation for cues in short-term memory from long-term memory (Kintsch et al., 1999). Therefore, I feel it might be our task as teachers to help students to identify their individualised 'link' between the working memory and the long-term memory. As to which language to use in the notes, it might completely depend on how information is processed individually with the co-ordination of different memories, such as sensory memories, short-term and long-term working memory, in the interpreting process. Future research on interpreter's memory may help enlighten us further of how to develop appropriate strategies to getting at long-term memory. Current research, however, suggests that strategies of noting down 'ideas' with the use of TL seem to work with quite a number of students.

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