Interpreting in the Language Classroom: Effects of Chinese-to-English Interpreting Strategy Training on EFL Undergraduates' Oral Proficiency

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Conditioned by cognitive and temporal constraints and interpreting norms, interpreters adopt strategies to solve problems, prevent problems, and enhance communicative effectiveness. Interpreters' resourcefulness and efficiency in achieving communicative goals may be what language learners can learn from. This study examines the effects of Chinese-to-English interpreting strategy training on Taiwan EFL (English as a foreign language) undergraduates' oral proficiency. A quasi-experimental pretest-posttest design and qualitative data collection methods were employed. Sixty-seven high-intermediate to advanced learners were assigned to an experimental group (EG, $n = 43$) and a control group (CG, $n = 24$). The EG received a 12-week interpreting training consisting of strategy instruction, six-step oral training, and speaking assignments. The CG received no strategy instruction but comparable oral training and speaking assignments. Statistical analysis of the mean scores and detailed aspects of the pretest and posttest was conducted. Between-group comparisons showed that interpreting strategy training led to significant improvement of the EG's fluency in descriptive/narrative task types. Furthermore, the EG saw far more extensive within-group improvements than the CG, which might have something to do with the interpreting strategy training. Qualitative analysis of the EG participants' written reflections on Worksheets and focus group interviews with lower- and higher-level speakers revealed that three major factors limited the application of interpreting strategies to English speaking: one's natural tendency to use strategies, the elusive nature of our thinking, and the extent to which Chinese appears in one's mind when speaking English. However, the participants also believed that the training enhanced their resourcefulness, accelerated their application of strategies, expanded their strategy repertoire, and induced an interlocutor-oriented mindset. Interpreting strategy training from the learners' mother tongue into English can be a practical addition to a conventional English speaking class, and will be filled with diversity and challenges as well as fun.

Keywords: Chinese-to-English interpreting, instruction in interpreting strategies, teaching methods and materials for English oral training

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語言課堂上的口譯練習：中進英口譯策略訓練對於大學部英語學習者口語能力之影響

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　　口譯員在認知限制、時間壓力及口譯規範的制約下，採用策略解決問題、預防問題及提升溝通效果，箇中訣竅值得語言學習者借鏡。本研究採前、後測準實驗設計與質性資料蒐集的研究方法，以 67 位中高級至高級程度之臺灣大學部英語學習者為研究對象，分為實驗組 43 人及控制組 24 人，檢視中進英口譯策略訓練對學習者口語能力之影響。實驗組接受 12 週的口譯訓練，包含策略教學、六步驟口語訓練及口語作業。控制組未接受口譯策略教學，但接受對等的口語訓練及口語作業。在量性資料方面，兩組前、後測的英語口試成績分為總分與細項進行統計分析。組間比較顯示，口譯策略訓練顯著提升實驗組在描述／記敘題型上的流利度。組內比較方面，實驗組顯著進步的項目遠多於控制組，此結果可能與口譯策略訓練有關。實驗組的反思工作單（Worksheets）與該組高低成就者的焦點團體訪談等質性資料顯示，三大原因限制口譯策略在英語口說上的應用：使用策略的本能、思緒的不定性，以及說英語時腦中出現中文的程度。然而，參與者也認為口譯策略訓練可提升靈活變通的能力、加快策略應用的速度、擴增能夠運用的策略，也讓他們更為聽者著想。母語譯入英語的口譯策略訓練能為英語課堂增加趣味與挑戰，也使教材教法更為多元實用。

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Introduction

Attempts to incorporate translation activities in the language classroom have experienced new momentum in recent years, with translation being regarded as a "legitimate and effective tool for learning, teaching and assessing foreign languages" (Laviosa, 2014, p. 1). Translation can be integrated into task-based activities as a communicative tool (Ali, 2012), and can be a method for teaching creative writing (Laviosa, 2007). Interpreting, on the other hand, has not received as much attention in the language classroom, probably due to high cognitive demands involved in interpreting tasks, students' insufficient second language (L2) proficiency, and large class size (Wu, 2015). Although large amount of listening and speaking practice in interpreting training may benefit foreign language pedagogy (Liu, 2002), only few empirical studies on the effectiveness of interpreting training on EFL learners' oral proficiency have so far been conducted and produced mixed results.

In a pretest-posttest experiment conducted by Liao and Hsu (2004), the experimental group with 20 undergraduate EFL learners in Taiwan took a year-long interpreting course, while the control group with 22 learners took a regular English oral training class taught by the same instructor for the same length of time. The posttest showed no significant difference between the two groups, as measured by the intermediate-level simulated speaking tests of GEPT (General English Proficiency Test). Although the interpreting course was well received by the experimental group participants (Liao & Hsu, 2004), two factors may explain their lack of significantly better performance in oral proficiency than their peers with regular oral training. First, at least half of the class time was devoted to interpreting practice in the direction of English-to-Chinese. Since receptive and productive knowledge is not completely transferable (DeKeyser, 1997), training in English listening comprehension might not lead to significant

improvement in English oral production. Second, holistic evaluation of oral proficiency might not capture the subtle changes of oral output.

A modified simultaneous interpreting (SI) drill was used in Yagi's (2000) one-time pretest-posttest experiment. The experimental group had eight Arabic college-level EFL learners practiced SI from the Arabic translation of an English passage back into English for 30 minutes, while the eight learners in the control group practiced retelling the passage in English for also 30 minutes. The posttest had all the participants retell the same English passage, and the experimental group performed significantly better in fluency (measured by speech rates and dysfluency instances), vocabulary size, idiomaticity, sentence complexity, and content density. This study showed that the SI drill, which probably engaged the learners more cognitively and motivationally than retelling the passage with one's current level of English, could enhance the learners' oral proficiency as measured by the same task. However, it is not clear how the learners perceived the drill, how the drill could be more interactive, how it could be blended regularly into the communicative language classroom, or if proficiency gains can be transferred to unpracticed tasks.

To maximize the potential benefits of interpreting training for EFL learners' oral proficiency, we should pinpoint interpreting skills that best meet learners' needs. One component relatively unique to interpreting and might facilitate EFL learners' oral output is interpreting strategies. Conditioned by cognitive and temporal constraints and interpreting norms (such as minimizing processing effort while maximizing communication effectiveness), interpreters adopt strategies to solve interlingual and intercultural problems, prevent on-line processing problems, and enhance message clarity, especially in the more adverse direction of into-B interpreting (i.e., interpreting from one's dominant A language into one's weaker B language, also called retour interpreting) (Wu & Liao, 2018). Interpreters' resourcefulness, efficiency, and effectiveness in

achieving communicative goals with strategy use may be what language learners can learn from.

Rationale for Interpreting Strategy Training in the Language Classroom

There are differences between L2 speaking and into-B interpreting. First, while L2 speakers have to plan and formulate their opinions, interpreters do not have to conceptualize the content of an utterance from scratch. Also, L2 speakers usually have to interact with an interlocutor, yet interpreters are not directly involved in the conversation with interlocutors. However, L2 speaking and into-B interpreting share similarities in speech encoding processes, resource deficits, and processing time pressure, justifying interpreting strategy training in the language classroom.

Based on Levelt's first language (L1) speech production model, Kormos (2006) proposes an L2 speech production model consisting of the conceptualizer, the formulator, and the articulator. The conceptualizer generates the intended message; in the formulator, three encoding processes (lexico-grammatical, morpho-phonological, and phonetic) are activated; and the internal speech is finally realized through the articulator.

The mental processing during interpreting is undeniably very complicated, involving coordination among comprehension, analysis, transformation, production, and monitoring of both verbal and non-verbal messages. Also based on Levelt's speech model, Setton's SI model replaces the conceptualizer with the mechanism of source speech comprehension and that of the Executive, while the formulator goes through the process of microplanning units in the target language, followed by grammatical and phonological encodings; finally, the phonetic plan is articulated through the articulator (Setton, 1999). In other words, L2 speaking and interpreting, although having

different mechanisms in the conceptualizer, go through similar processes in the formulator and the articulator.

During the phases of the formulator and the articulator, resource deficits pose a major challenge for both L2 speakers (Dörnyei & Scott, 1997) and interpreters (Wu & Liao, 2018). L2 speakers often get stuck in their speech because of irretrievable lexical items and insufficient syntactic knowledge (Kormos, 2006). Similarly, interpreters engaging in into-B interpreting might get hung up on words because of interlangauge and intercultural differences between two languages (A≠B), and of being less resourceful in one's B language (B<A), yet they use general or similar terms, explanation, or paraphrasing to get their messages across (Wu & Liao, 2018).

Processing time pressure is another challenge for both L2 speakers (Dörnyei & Scott, 1997) and interpreters (Pöchhacker, 2016). Time pressure exacerbates the problem of resource deficits and conditions serial and linear processing in both L2 speaking and interpreting. Created online, informal speech consists of "clausal and phrasal units linked together linearly like the cars on a train" (McCarthy & O'Keeffe, 2014, p. 274). When we speak in L1, the language production process is "incremental, parallel, and automatized" (De Bot, 1992, p. 6) to achieve natural speed of delivery. This is because lexical, grammatical, morphological, and phonological encodings are largely automatic, allowing us to allocate more attention to conceptualizing the intended message (De Bot, 1992). When we speak in L2, however, both the formulator and the articulator require attention, and thus the processing is serial, at least partially (Kormos, 2006). Interpreting, especially SI, is similar to spontaneous L2 speech production because incoming messages come linearly. Interpreters usually resort to such strategies as chunking and padding to deal with the linearity of incoming messages and processing time pressure (Wu & Liao, 2018).

Research Purpose and Questions

We hypnotize that L2 learners could learn from interpreters' flexibility in dealing with resource deficits, efficiency in handling the linear nature of speaking under time pressure, and effectiveness in maximizing message clarity. The present study, therefore, aims to examine how Chinese-to-English interpreting strategy training integrated into Taiwan undergraduate EFL classroom may affect learners' oral proficiency. The major research questions to be addressed are as follows:

1. How does Chinese-to-English (C-to-E) interpreting strategy training affect EFL learners' oral proficiency?

2. What are the possible connections between proficiency gains (if any) and interpreting strategies?

3. How do learners apply interpreting strategies to their English speaking?

4. From learners' perspectives, to what extent can they apply interpreting strategies to English speaking?

Three features set this study apart. Firstly, the training singles out the strategic component of interpreting and focuses solely on the direction of Chinese-to-English (L1-to-L2/A-to-B). Furthermore, the elicitation tasks are unpracticed open-questions, examining whether the benefits (if any) of interpreting training can be transferred to unfamiliar contexts. Third, componential assessment should capture the changes in learners' proficiency profiles in greater detail than holistic evaluation.

Research Methods

This study proposes that the similarities between L2 speaking and into-B interpreting in mental processing and potential problems may justify

interpreting strategy training in a college-level EFL classroom. The strategies interpreters employ to deal with cognitive and temporal constraints and to enhance communication effectiveness might benefit L2 learners. A quasi-experiment was conducted to examine how Chinese-to-English interpreting strategy training affected undergraduate EFL learners' oral proficiency. Both quantitative and qualitative data were collected and analyzed. Quantitative data in the form of pretest and posttest scores were subjected to statistical analysis to examine the effect of interpreting training on the participants' oral proficiency. Qualitative data were analyzed to examine learners' actual use of strategy in their English speaking and to understand their perceptions of strategy application.

Participants

The participants of this study were 67 non-English-majored freshmen, 31 males and 36 females, from three intact classes taught by the first author at one of the top-ranked universities in Taiwan. Forty-three students from two classes (22 and 21 students each) constituted the experimental group (EG) because of fewer students in each class, while the class with 24 students constituted the control group (CG). About 70% of them achieved the top scaled score of 15 in the subject of English in General Scholastic Ability Test (college entrance examination), while 27% achieved 14. Therefore, the population these participants represented was high-intermediate to advanced EFL undergraduates who grew up in Taiwan and received similar compulsory secondary education.

Pretest and Posttest

At the beginning of the semester, both groups' participants were informed of the experiment. After signing consent forms, they were introduced to the

format of pretest and posttest, which were based on IELTS Speaking.

IELTS Speaking contains three parts. Part 1 contains questions related to one's life. In Part 2, test takers are given a topic card; after a one-minute preparation, they speak for a maximum of two minutes. Part 3 is an extension of the topic in Part 2, but the questions are more abstract and complicated. The three parts of IELTS Speaking tap into test takers' ability to provide personal information, explain, narrate, describe, compare, speculate, summarize, as well as express and justify opinions and preferences (Taylor, 2011).

In the present study, the pretest and posttest were standardized with pre-recorded procedure and questions to ensure consistent sentence structures and prosodic features heard by all participants. Since the participants could give their responses as fully as they liked in Part 1 and Part 3, the length of a test ranged from 10 to 20 minutes. To reduce practice effect, two equivalent sets of test questions were administered.[1] In both the EG and the CG, half of the participants received Test A while the other half Test B in the pretest, and vice versa in the posttest (see Appendix A for Test A and Appendix B for Test B).

Teaching Procedures of Interpreting Strategy Training

All three classes lasted 150 minutes weekly, featuring oral and writing training. The classes were conducted under the spirit of communicative language teaching and task-based learning, highlighting meaning negotiation through discussions, role plays, pair work, and group work. For 12 weeks, the EG received C-to-E interpreting strategy training, consisting of strategy instruction, six-step oral training, and 10 speaking assignments. The CG did not

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[1] With regard to equivalent forms reliability, independent t-tests showed that there was no significant difference between Test A and Test B in either the pretest ($M = 70.99$, SD = 9.32, $n = 32$ for Test A; $M = 72.69$, SD = 9.87, $n = 35$ for Test B; $t(65) = .72$, $p = .474$) or the posttest ($M = 74.94$, SD = 9.27, $n = 35$ for Test A; $M = 72.79$, SD = 9.17, $n = 32$ for Test B; $t(65) = .95$, $p = .345$).

receive interpreting strategy instruction, but received comparable oral training and speaking assignments. The writing training was identical for both groups.

Interpreting strategy instruction. The interpreting principles and strategies taught to the EG were based on Wu and Liao's (2018) into-B interpreting strategy model and taxonomy, with slight modification and extension to fit the needs of teaching speaking in the EFL classroom. Table 1 shows an overview of the strategies taught. Strategies under PRINCIPLE 1. BE FLEXIBLE mainly deal with resource deficits; strategies under PRINCIPLE 2. ONE CHUNK AT A TIME are ways to counter processing time pressure and the linear nature of spontaneous speech processing; strategies under PRINCIPLE 3. BE CLEAR and PRINCIPLE 4. BE CONCISE are skills that enhance discourse level clarity.

The strategies were divided into five instructional units: (a) Strategies 1-1 to 1-3; (b) Strategy 1-4; (c) PRINCIPLE 2; (d) PRINCIPLE 3; and (e) PRINCIPLE 4. There were two rounds of strategy instruction, with each unit being taught twice with different demonstrating examples and practice items. The first round took place before mid-term and followed the above order, while the second round took place after mid-term and was arranged to match the theme, activities, and materials of each week. Each instructional unit was taught with PowerPoint presentation containing four phases: [2]

1. Why strategies were used. Interpreting norms, such as getting the meaning across, bearing the audience/listeners in mind, avoiding long pauses, producing self-contained sentences, and producing concise and clear message, were explained to justify strategy use. The application of interpreting norms to L2 speaking was also pointed out explicitly.

2. How to use strategies. For illustration of strategy use, examples were

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[2] See Wu and Liao's (2018) supplemental materials for an example of PPT for interpreting strategy instruction.

selected from professional interpreters' SI or consecutive interpreting (CI) output in authentic contexts, and from other spoken sources such as TV shows and lectures. Some of the examples were converted into "practice items" for phase four.

3. How to apply strategies to L2 speaking. Examples from both groups' speaking assignments were selected to demonstrate strategy application in tackling expression difficulties, reducing production effort, and maximizing speech clarity.

4. Practice. The participants brainstormed answers to "practice items" in pairs, followed by a whole-class review on each item.

The CG received no interpreting strategy instruction as a treatment, and therefore they had longer time for small group discussions or for other in-class speaking activities. However, when the CG participants got stuck due to lexical retrieval or other kinds of problems, they were still encouraged to use alternatives, such as explaining and paraphrasing, to get their meaning across.

Table 1

List of Interpreting Strategies for the Experimental Group

PRINCIPLES and Strategies	Examples
PRINCIPLE 1. BE FLEXIBLE （靈活變通）	
1-1.**Use a more general term （往上搜詞）:** Use a term of higher rank or broader category to replace a word or a list of items/concepts.	1. 聯合國安理會 (UN Security Council) →an international organization 2. 她幫新家買了桌椅、床和沙發 (She bought tables, chairs, beds, and a sofa for her new house.) →She bought furniture for her new house.
1-2. **Use a similar term (橫向搜詞):** Use an approximation, a synonym, or a near equivalent term, which may be followed by synonymic phrases, examples, or explanatory remarks to enhance accuracy.	習俗 (custom) →tradition

Table 1

List of Interpreting Strategies for the Experimental Group (continued)

PRINCIPLES and Strategies PRINCIPLE 1. BE FLEXIBLE （靈活變通）	Examples
1-3. **Explain (解釋):** Describe one or more traits of a concrete concept/item.	配套措施 (supporting measures) → Measures that support the main policy
1-4. **Paraphrase (換句話說):** Put ideas in other words...	轉移注意力 (divert one's attention) → change one's focus/do something else
1-4-1. Paraphrase **from the opposite angle (反向操作):** A term, phrase, or clause opposite from the intended message is used after "not" or "no."	麵包不新鮮了 (The bread is stale.) → The bread is not fresh.
1-4-2. **Use plain but clear English** to disambiguate the meaning of metaphors, idioms, slangs, four-character idioms, euphemisms, quips, figures of speech, etc. **(淺白至上)**	我只不過是一個小螺絲釘 (I'm just a cog in the machine.) → I'm nobody./I'm not very important.
PRINCIPLE 2. ONE CHUNK AT A TIME（分段處理）	Examples
2-1. **Chunk** the source text. **(斷句)** 2-2. **Preserve linearity.**（順譯）	(1) 我們可以看到在紐奧良 /(2) 風災的時候，/(3) 那個時候美國政府 /(4) 因為沒有辦法幫助紐奧良的居民 ((1)We can see that when New Orleans (2) was hit by the hurricane, (3)at that time because the US government (4)could not help the residents of New Orleans) → (1)We can see in New Orleans, (2)during and after the storm, (3)the US government, (4)they couldn't help the people of New Orleans (a)

Table 1

List of Interpreting Strategies for the Experimental Group (continued)

PRINCIPLES and Strategies	
PRINCIPLE 2. ONE CHUNK AT A TIME（分段處理）	Examples
2-3. **Produce short, simple, direct, and self-contained sentences** in the target language.（簡單句）	多數人需要少數賴以生存的資源被少數人把持的時候 (When the scarce resources for survival that the majority needs are in the hands of the few . . .) →A lot people will need it...need the essentials, and the essentials are in the hands of the few . . . (a)
PRINCIPLE 3. BE CLEAR（條理分明）	Examples
3-1. **(Re) structure** messages from main idea to supporting details or from general to specific.（重整思路）	我從小在全世界，走來走去，從 11 歲走到現在，到過非洲、到過中東 . . . (I've been travelling around the world since I was 11 years old. I've been to Africa, the Middle East . . .) →Since I was 11 years old, I've traveled around the world, going from the Middle East to Africa. (b)
3-2. **Add cohesive words** to explicate the logical relationships between ideas.（加銜接詞）	當然也希望能夠建立英文的網站 (Of course we also hope to set up an English website.) →And another task we want to have is to create this English website. (c)
PRINCIPLE 4. BE CONCISE（簡潔扼要）	Examples
4-1. **Omit** redundant, secondary, superfluous, or repetitive parts of speech.（去蕪）	我們目前在網絡世界裡建立起、註冊的支持的人數已經超過了 100 萬 (So far we have established in the online world...the number of registered users who support us has exceeded one million.) →The online registered users exceeded about one million. (c)

Table 1

List of Interpreting Strategies for the Experimental Group (continued)

PRINCIPLES and Strategies	Examples
PRINCIPLE 4. BE CONCISE （簡潔扼要）	
4-2. **Select important messages. (存菁)**	86.6% 的案例涉及女性，而 13.4% 涉及男性 (86.6% of the cases involved women, while 13.4% involved men.) →The majority of cases involved women.

Note. Adapted from Wu and Liao's (2018, p. 194) into-B interpreting strategy taxonomy, (a) = simultaneous interpreting from Taiwan Public Television Service Online Live Channel (2012); (b) = consecutive interpreting from Song (2009a); (c) = consecutive interpreting from Song (2009b).

Furthermore, the CG was also introduced to similar norms and strategies in the form of problems and solutions, which were listed on two PPT slides only, and were illustrated with the same examples from both groups' speaking assignments. In other words, strategies to overcome communication breakdown or to facilitate communication were not taught or practiced systematically in the CG, but were mentioned sporadically.

To make it even fairer, structuring one's ideas and use of cohesive words, the two strategies under PRINCIPLE 3. BE CLEAR, as well as the skill of summarizing, similar to the two strategies under PRINCIPLE 4. BE CONCISE, were taught consistently throughout the semester to both groups. The EG only had the advantage of the extra two times of interpreting strategy instruction on BE CLEAR, during which the participants watched video recordings of professional interpreters achieving discourse level clarity by restructuring ideas and adding cohesive devices before engaging in practice, and the additional two times of interpreting strategy instruction on BE CONCISE,

during which the participants watched video recordings of interpreters transforming wordy Chinese into clear and concise English before engaging in practice.

Although interpreting strategy instruction was offered exclusively to the EG, the CG was exposed to similar concepts and skills. The CG even regularly learned and practiced structuring ideas, using transitional words, and summarizing others' opinions from English to English, all of which might also be taught in a conventional language class.

Oral training. In the phase of oral training, both groups used the same teaching materials, which were mostly authentic audio-visual sources with transcripts and featured both academic and non-academic English. Both groups followed identical steps of practice, except Steps 1 and 6. Table 2 is a comparative overview of the oral training procedures for the two groups.

The first difference was Step 1. The EG practiced Chinese-to-English back-interpreting to apply strategies taught. In terms of the materials for back-interpreting practice, each week before class, a segment from the English video clip to be played in that particular week was first translated into Chinese. In class, students interpreted the Chinese translation back into English. Two back-interpreting task types were created: role plays and chain games. Both task types had students work in pairs to enhance collaborative learning and to mimic authentic interactive conversation or debate.[3] On the other hand, the CG practiced in pairs English-to-English paraphrasing or retelling of the same segment of the video clip watched each week for similar amount of time.

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[3] Please refer to Wu (2019) for explanation of how back-interpreting practice provides learning opportunities, description of back-interpreting tasks design, and analysis of learners' perceptions.

Table 2

A Comparative Overview of the Oral Training Procedures for the Experimental Group (EG) and the Control Group (CG)

	EG	CG
Step 1	**Chinese-to-English back-interpreting practice**	**English-to-English paraphrasing or retelling practice**
Step 2	Watch video clips	
Step 3	Read along with or repeat after the speakers in the video clips	
Step 4	Highlight useful chunks of words on transcripts	
Step 5	Discuss relevant topics in small groups	
Step 6	**Reflect on strategy application to English speaking**	×

Note. The between-group differences are boldfaced.

Steps 2-5 were the same for both groups. With regard to Step 4, both groups were introduced to the concept, importance, and functions of formulaic chunks at the start of the semester. Each week, after Steps 1-3, both groups were given the exact same amount of time (eight minutes on average) to highlight formulaic chunks on transcripts they deemed worth memorizing for speaking.

Two reasons may justify the adoption of back-interpreting practice, as opposed to interpreting from authentic Chinese speeches into English. First, the teaching and practice materials could be controlled to be the same for the two groups, reducing confounding variables. Second, Chinese-to-English back-interpreting practice may cognitively engage learners more than English-to-English retelling practice. As illustrated by Yagi's (2000) study, those who engaged in Arabic-to-English back-interpreting practice significantly improved in fluency, vocabulary size, idiomaticity, sentence complexity, and content density. Similarly, through back-interpreting practice and subsequent steps in

oral training, the EG participants in the present study might be more aware of the gap between their interpreting output and the original English. This awareness might motivate them to pay closer attention to expressions worth memorizing, which in turn might facilitate language acquisition.

The second difference was Step 6. After small group discussions or at the end of the class, the EG participants reflected on their strategy application to English speaking by completing Post-task Self-evaluation Worksheets. They were given the Worksheets six times (mostly 10 minutes each time) in this 12-week training to give examples of their strategy application or the lack of it, and to reflect upon the difficulties or ease of strategy application.

The entire interpreting strategy training for the EG took about half of the 150-minute class time. Strategy instruction was given 10 times with an average of 25 minutes, and the six-step oral training was conducted 12 times with an average of about 55 minutes. Within the oral training, close to 20 minutes were devoted to back-interpreting practice.

Speaking assignments. Throughout the semester, both groups had 10 comparable weekly speaking assignments. Six of the assignments were conducted in the following steps: The participants recorded their one-minute response to a topic, transcribed their oral output, and revised their grammar, word choice, structure, and coherence in accordance with instructions. Individual feedback were given to these six assignments. For the EG, however, there was an additional step to four of these six assignments: They gave their one-minute response in Chinese before self-interpreting it into English.

With the other four assignments, the CG watched three-minute English TED talks, read along with the speakers while recording themselves, and then highlighted useful expressions on English transcripts. The EG interpreted three-minute segments of Chinese TED talks sentence by sentence. They were reminded to use interpreting strategies to overcome difficulties, and were

guided to type out alternative ways of interpreting to some parts of the talks after recording their interpreting practice.

In sum, the 10 speaking assignments for the two groups were controlled to be identical in terms of topics and procedures with only slight variations.

Data Analysis

Both quantitative and qualitative data were collected and analyzed to examine the effects of interpreting training on learners' oral proficiency, their actual application of interpreting strategies to English speaking, and their perceptions of the strategy training.

Rating of the pretest and posttest. The judging criteria and rating scale followed the band descriptors of IELTS Speaking. [4] However, several adjustments were made as follows:

1. To enhance rating validity and reliability, two raters judged the participants' pretest and posttest oral output based on audio recordings. The first author was one of the raters. The other rater was a veteran English teacher and a trained rater for GEPT Speaking tests.

2. The audio recordings of the participants' pretest and posttest performance were cut into a total of 402 speech segments (67 participants × 3 parts × 2 tests), randomly numbered for rating on the basis of parts and tests. This randomized, anonymous, segment-based rating should reduce the first author's bias as the instructor/researcher/ test-administer/rater in this study. To enhance rating consistency, the raters rated the speech samples in the following order: Part 1_Test A, Part 1_Test B, Part 2_Test A, Part 2_Test B, Part 3_Test A, and Part 3_ Test B.

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[4] Band descriptors of the official IETLS Speaking test (public version) is available at http:// www.ielts.org/researchers/score_processing_and_reporting.aspx#speaking

3. IETLS Speaking contains four judging criteria—"Fluency and Coherence," "Lexical Resource," "Grammatical Range and Accuracy" and "Pronunciation." To be more in tune with the oral proficiency dimensions targeted by the interpreting training in the present study, "Pronunciation" was removed, and "Fluency" and "Coherence" were separated as two independent judging criteria. IELTS Speaking band descriptors are distinctive enough for this separation.

4. The 9-band scale of IELTS Speaking was viewed as 9-point scale in this study. In other words, interval scales in the form of points and scores were used. The score of each criterion under each part was the average score given by the two raters. The maximum score of each criterion under each part was 9. The overall score of each criterion was 9×3 (parts) = 27. The overall score of each part was 9×4 (criteria) = 36. The total score of the entire speaking test was 36×3 (parts) = 108.

Interrater reliability. The most conservative and best measure of interrater reliability for interval data is intraclass correlation coefficients (ICC) (Salkind, 2010, p. 627). With regard to ICC interrater agreement measures, the guidelines given by Cicchetti (1994) state that when the value is "between .60 and .74, the level of clinical significance is good" (p. 286). Intraclass correlation in this study showed an excellent consistency in the two raters' differences (ICC = .92), and a good agreement between the two raters (ICC = .66). This means that the two raters were highly consistent and systematic in their differences in the application of the scoring rubric, and their interpretations of the descriptors of the four judging criteria were similar.

Analysis of the pretest and posttest scores. The three parts of the speaking tests represent different task types (conversational, narrative/descriptive, and argumentative), and the four judging criteria tap into different dimensions of oral proficiency. To capture the full spectrum of interpreting

training's potential impact, both descriptive (means and standard deviations) and inferential statistics (two-tailed t-tests) were conducted using SPSS software to examine the two groups' pretest and posttest scores in great detail: total test score, the overall score of each criterion, the overall score of each part, and the score of each criterion under each part.

Between-group differences were examined with independent samples t-tests on all the above-mentioned aspects of the pretest and then on the same aspects of the posttest. The purpose was to establish if the two groups' participants were from the same population with similar oral proficiency before the treatment, and if interpreting training was the direct cause of the EG's significant improvement.

With regard to within-group differences, dependent samples t-tests were conducted to compare the two groups' posttest scores with their respective pretest scores on all the above-mentioned aspects. Potential relationships between proficiency gains and interpreting strategies were then explored.

Collection and analysis of learners' strategy use. To examine learners' actual use of interpreting strategies in their English speaking, nine EG participants were selected. Three of them were lower-level speakers, two were intermediate-level speakers, and four were higher-level speakers. Transcriptions of their self-interpreting speaking assignments and posttest oral output served as the sources for strategy use identification. Strategy use was then triangulated with these nine participants' remarks from retrospective interviews and individual interviews, which were conducted by the first author in Chinese right after their individual posttest to probe into their difficulties and thought processes during the speaking test.

Collection and analysis of learners' perceptions. At the end of the semester, 12 lower-level speakers and 11 higher-level speakers of the EG identified based on their pretest performance participated in semi-structured

focus group interviews. Lasting 70-80 minutes each, the four interview sessions (two for the lower-level speakers and two for the higher-level speakers) were conducted by the first author in Chinese to explore the learners' perceptions of the entire interpreting training. This paper only reports their perspectives on interpreting strategy application to English speaking.

The other source of qualitative data came from written reflections on Post-task Self-evaluation Worksheets, which shed light on the learners' perceived difficulties or ease of each interpreting strategy application. The participants' interview comments were transcribed, analyzed, and translated into English, and their English written reflections on Worksheets were pruned.

The learners' perceptions were analyzed following Dörnyei's (2007) four phases of content analysis: (a) transcribing the data, (b) pre-coding and coding, (c) growing ideas, and (d) interpreting the data and drawing conclusions. Four categories of perceptions emerged from the analysis: the learners' English speaking difficulties, their mental processes during English speaking, how Chinese figured in their English speaking processes, and how they applied interpreting strategies to English speaking.

Results and Discussion

Quantitative results from speaking tests will be reported, followed by a discussion on the potential relationships between proficiency gains and interpreting strategies. Three cases of strategy application to English speaking will then be illustrated, followed by a discussion on learners' perceptions of interpreting strategy training.

Oral Proficiency Test Results

This section answers research question 1 "How does the C-to-E interpreting strategy training affect EFL learners' oral proficiency?" For easy

comparison of the two groups' proficiency gains, Table 3 shows an overview of the significant between-group differences in the pretest and posttest, while Table 4 gives an overview of the two groups' respective significant within-group improvements. As for more specific statistical analyses, Appendix C details the EG's and CG's pretest and posttest statistical results, including the means, standard deviations, and t-values of the following items: total score, the overall score of each judging criterion, the overall score of each part, and the score of each criterion under each part. Between-group comparisons of test results will be reported, followed by within-group comparisons.

Between-group comparisons. As can been seen in Table 3 and Appendix C, in the pretest, there was no significant difference in the mean total scores between the EG ($M = 73.22$, SD = 9.51) and the CG ($M = 69.47$, SD = 9.42); $t(65) = 1.55$, $p = .125$. Also, no significant differences were found in the mean overall scores of the four judging criteria ($t(65) = .98$, $p = .333$ for Fluency; $t(65) = 1.63$, $p = .109$ for Coherence; $t(65) = 1.82$, $p = .073$ for Lexical Resource; and $t(65) = 1.69$, $p = .095$ for Grammatical Range and Accuracy).

However, the EG significantly outperformed the CG on three items, all within Part 2: Part 2 mean overall score ($t(65) = 2.02$, $p = .048$), Part 2 Lexical Resource ($t(65) = 2.42$, $p = .018$), and Part 2 Grammatical Range and Accuracy ($t(65) = 2.54$, $p = .013$). This indicated that the EG started off with a slight edge in narrative/descriptive task type with one-minute planning time, but in the more spontaneous Q&A format like Part 1 and Part 3, the two groups showed no significant difference at the starting point. In other words, the two groups were mostly equivalent at the outset of the experiment, suggesting that although this was a quasi-experiment with participants from intact classes, the condition was close to a real experiment with randomly-assigned participants.

In the posttest, on the other hand, the EG significantly outperformed the CG on only one item: Part 2 Fluency, $t(65) = 2.24$, $p = .029$. This result

suggested that the interpreting treatment was the direct cause of improved fluency, but only in a less spontaneous condition with narrative/descriptive task type.

Table 3

Between-group Comparisons of Proficiency Gains

Test	Total	F	C	L	G	1-F	1-C	1-L	1-G	2-F	2-C	2-L	2-G	3-F	3-C	3-L	3-G
		Criteria				Items											
						P1				P2				P3			
Pre									●	●	●						
Post										●							

Note. Aspects where the experimental group (EG) significantly outscored the control group (CG) in the pretest (Pre) and posttest (Post) are marked. The CG did not significantly outperform the EG in any aspect. Total = total scores. F = Fluency; C = Coherence; L = Lexical Resource; G = Grammatical Range and Accuracy. P1 = Part 1; P2 = Part 2; P3 = Part 3.

Table 4

Within-group Comparisons of Proficiency Gains

Group	Total	F	C	L	G	1-F	1-C	1-L	1-G	2-F	2-C	2-L	2-G	3-F	3-C	3-L	3-G
		Criteria				Items											
						P1				P2				P3			
EG	●	●	●		●	●								●		●	●
CG			●	●								●					

Note. Aspects where the two groups' respective posttest scores were significantly higher than their respective pretest scores are marked. The pretest scores were not significantly higher than the posttest scores in any aspect. EG = the experimental group. CG = the control group. Total = total scores. F = Fluency; C = Coherence; L = Lexical Resource; G = Grammatical Range and Accuracy. P1 = Part 1; P2 = Part 2; P3 = Part 3.

Within-group comparisons. As shown in Table 4 and Appendix C, the CG's posttest mean total score ($M = 71.54$, SD = 9.27) exceeded its pretest counterpart ($M = 69.47$, SD = 9.42), but the difference did not achieve a significant level set at .05, $t(23) = -1.94$, $p = .065$. However, two judging criteria saw significant improvement in their mean overall scores: Lexical Resource ($t(23) = -2.21$, $p = .037$) and Grammatical Range and Accuracy ($t(23) = -2.57$, $p = .017$). Highlighting useful chunks on transcripts regularly throughout the semester might have something to do with these improvements. In terms of the detailed aspects, the only item that saw significant improvement was Part 2 Grammatical Range and Accuracy ($t(23) = -3.76$, $p = .001$), indicating that the CG's improvement was limited to the grammar and accuracy dimension of narrative/descriptive task type with one-minute planning time, but the improvement did not extend to impromptu Part 1 or Part 3.

On the other hand, the EG showed more promising results in within-group comparisons. First, its posttest mean total score ($M = 75.23$, SD = 9.02) was significantly higher than its pretest counterpart ($M = 73.22$, SD = 9.51); $t(42) = -2.38$, $p = .022$. Furthermore, three out of four judging criteria saw significant improvement in their mean overall scores: Fluency ($t(42) = -2.58$, $p = .013$), Coherence ($t(42) = -2.22$, $p = .032$), and Grammatical Range and Accuracy ($t(42) = -2.48$, $p = .017$). Since the CG also improved significantly in the overall Grammatical Range and Accuracy, these results indicated that classes with an interpreting twist might be more effective in enhancing learners' general fluency and coherence.

In terms of the more refined aspects of speaking tests, the EG significantly improved on four items in the posttest: Part 1 Fluency ($t(42) = -2.19$, $p = .034$), Part 3 mean overall score ($t(42) = -2.20$, $p = .034$), Part 3 Coherence ($t(42) = -2.68$, $p = .010$), and Part 3 Grammatical Range and Accuracy ($t(42) = -2.02$, $p = .050$). As can be seen, the EG's within-group

improvements were mainly in Part 3, the argumentative task type, while none of the CG's within-group improvement was in Part 3. This pattern might indicate that the effects of interpreting strategy training were more salient in complicated topics requiring speedy and longer responses, as those in Part 3.

In sum, the CG's improved aspects, which were only from within-group comparisons, were limited to the judging criteria of Lexical Resource and Grammatical Range and Accuracy, and to the narrative/descriptive task type. The EG's proficiency gains from both between-group and within-group comparisons were more extensive, covering three out of four judging criteria and all three task types.

Potential Relationships between Proficiency Gains and Interpreting Strategies

The possible connections between the EG's significant proficiency gains and interpreting strategies (research question 2) are explored in the following order: Fluency, Lexical Resource, Grammatical Range and Accuracy, and Coherence. This order corresponds to the sequence of the four groups of interpreting strategies taught in the experiment: BE FLEXIBLE, ONE CHUNK AT A TIME, BE CLEAR, and BE CONCISE.

Fluency. Fluency was the judging criterion that saw obvious differences between the two groups. While the CG did not see any significant improvement in Fluency, the EG showed significant within-group improvement in the overall Fluency and Part 1 Fluency. Most importantly, there was significant between-group improvement in Part 2 Fluency, which could be directly attributed to interpreting training.

Strategies under PRINCIPLE 1. BE FLEXIBLE may contribute to fluency, as they were designed to help learners get their meaning across with alternatives, thus reducing long pauses. In fact, all the strategies under BE

FLEXIBLE have been identified as problem-solving mechanisms used by L2 learners (Kormos, 2006), implying that L2 learners in general possess the instinct to use alternatives to solve communication problems. However, the fact that the CG did not see any significant improvement in Fluency suggests that explicit instruction on these strategies is beneficial, or even necessary. Having said that, the EG did not see significant improvement in Part 3 Fluency. It is possible that strategies under BE FLEXIBLE are harder to be applied to English speaking seamlessly when it comes to spontaneous speech elicited with more complex topics. The limitations of strategy application will be discussed later.

Lexical resource. Lexical Resource is about flexible, natural, and precise use of vocabulary and idiomatic language, and about effective paraphrasing. In theory, one's lexical resource may be enhanced through highlighting formulaic chunks and through the use of *Strategy 1-4. Paraphrase*. However, it was the only judging criterion where the EG did not see any significant improvement, while the CG saw significant within-group improvement in the overall Lexical Resource.

Since both groups practiced paraphrasing throughout the semester (the CG practiced intra-lingual paraphrasing and retelling, while the EG practiced both intra-lingual and inter-lingual paraphrasing), preciseness of word choice might be the deciding factor in this criterion. It is possible that *Strategy 1-1. Use a more general term* and *Strategy 1-2. Use a similar term*, while enhancing fluency, compromised lexical preciseness.

Grammatical range and accuracy. The EG's significant within-group improvement in the overall and Part 3 Grammatical Range and Accuracy may be related to strategies under PRINCIPLE 2. ONE CHUNK AT A TIME, designed to help learners deal with processing time pressure of speaking by using shorter, simpler, and self-contained sentences to reduce production effort. This group of strategies may not enhance syntactic complexity (or

Grammatical Range), but may enhance accuracy.

The CG also did well in this dimension, witnessing significant within-group improvement in the overall and Part 2 Grammatical Range and Accuracy. Highlighting useful chunks of words throughout the semester may play a role in the improvement.

Coherence. Coherence was the other judging criterion where the EG outshined the CG in within-group comparisons. The EG's significant within-group improvement in the overall Coherence and Part 3 Coherence was expected, since the two strategies under PRINCIPLE 3. BE CLEAR targeted this dimension of speech. PRINCIPLE 4. BE CONCISE, which is about accentuating important messages while pruning redundancies or off-topic details, may enhance coherence as well.

On the other hand, it is intriguing that the CG did not improve significantly in Coherence. Both groups learned and practiced the same speaking structure, the use of transitional words, and summarizing skill consistently throughout the semester, so the EG was not learning anything new in this regard. Therefore, the improved Coherence on the part of the EG but not the CG may imply that interpreting training more effectively raised the learners' awareness of speech at discourse level, and that this enhanced awareness was successfully transformed into actual speech behavior.

This shows that even though strategies under BE CLEAR and BE CONCISE can be taught, demonstrated, and practiced entirely in English, going through the route of strategy instruction and back-interpreting practice is not unnecessary. Seeing how professional interpreters reorganize the content of the original speech segments, use additional cohesive devices, and reduce verbosity to enhance message clarity might leave stronger impressions in leaners' minds. Furthermore, as can be inferred from Yagi's (2000) study, L1-to-L2 inter-lingual practice may engage learners more intensively than L2-to-L2

intra-lingual exercise, leading to salient verbal manifestation.

Figure 1 illustrates the potential relationships between the four judging criteria of oral proficiency tests and the four groups of interpreting strategies. The EG's improved aspects are listed. "Part 2" under Fluency is italicized and boldfaced, representing significant between-group improvement. Lexical Resource is in grey because the EG did not see significant improvement in this criterion. The "overall" under Grammatical Range & Accuracy is put in parenthesis because the CG also had significant within-group improvement in this aspect.
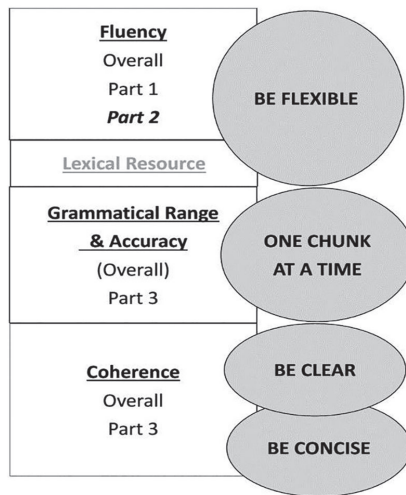

Fig. 1 The potential relationships between the EG's proficiency gains and interpreting strategies.

Learners' Application of Interpreting Strategies to L2 Speaking

To answer research question 3, three illustrative examples are selected to demonstrate learners' application of interpreting strategies to English speaking.

Example 1 is from S58-L's[5] Self-interpreting Assignment 9 on the topic of "Is technology a blessing or a curse?" Paraphrasing was applied twice. First, the idea of "isolating people" was paraphrased (Strategy 1-4) into "enlarging the gap between people." And the idea of "shortening the distance between people" was paraphrased from the opposite angle (Strategy 1-4-1) as "improving the bond between us."

Example 1

S58-L's response in Chinese: 有些人可能會說，<u>科技的發展</u>**使人與人之間變得疏離**⋯⋯但是<u>科技也</u>**縮短了人與人之間的距離**。

(Some might say that <u>the development of technology</u> **isolates people** . . . But <u>technology has also</u> **shortened the distance between people**.)

Her English interpretation: Some might say that <u>the development of technology</u> **enlarges the gap between people** . . . But the truth is that <u>we can also use technology to</u> **improve the bond between us.**

Example 2 is from S30-L's Self-interpreting Assignment 10 on the topic of "Do you think online courses will replace classroom-based learning in the future?" This example demonstrates how S30-L broke the idea of "3D movies provide stronger sensory stimulation" down into two sentences. He got stuck in the middle of this sentence: ". . . we think 3D's movie is more. . . ." However, he then tried to finish it with a similar term (Strategy 1-2) ". . . interesting" before adding another short and simple sentence (Strategy 2-3) to enhance clarity: ". . . because it can stimulate you."

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[5] The participants were randomly numbered. "S" stands for "student," followed by their designated numbers and their levels of oral proficiency based on their pretest scores (H=High; M=Middle; L=Low).

Example 2

> S30-L's response in Chinese: 我覺得線上課程並不會取代實體教室的上課方式，就像我們平常在看電影的時候，<u>我們會覺得 3D 的**更有感官上的刺激**</u>，覺得更能身歷其境。
>
> (I think online courses will not replace classroom-based learning. It is just like when we go see a movie, <u>we feel that 3D [movies] **provide stronger sensory stimulation**</u>, and we feel we're personally on the scene.)
>
> His English interpretation: I think it su-surely online courses will not replace classroom-based learning in the future. Take the movie for example, when we go to see the movie, and <u>we think 3D's movie is more . . . uh **is more interesting, because it can sti-stimulate you**</u> and make you feel better in this kind of situation.

Example 2 demonstrates how S30-L applied two interpreting strategies by finishing his sentence with a similar term before starting another short and simple sentence to clarify his intention. In his individual interview after posttest, S30-L expressed that his most obvious improvement this semester was being more flexible, which could be attributed to using a more general term, using several short and simple sentences, and finishing the half-completed sentence before starting another one. He said:

> We were reminded that if we can't find the right word, just say something more general. Also, we were reminded to finish our current sentence before starting another one, as well as to break [our thoughts or longer sentences] into several smaller sentences. Speaking becomes easier this way. . . . I learn to finish what I want to say in a more general way first, and then rephrase the parts that are not clear. (Individual interview)

Example 3 is from S49-H's posttest (Speaking Test B, Part 1, Question 1). It is a well-structured and well-elaborated answer to a simple question: "What would you suggest a visitor should see and do in your country?" The structure of his response is labeled and cohesive devices are underlined.

Example 3

> *(Main idea)* I will suggest the visitor to visit Kaohsiung, which is my hometown. *(Supporting point 1)* And in Kaohsiung, we have an tall building called 85. *(Elaboration)* And it's a famous place for scenery over the night view of Kaohsiung. *(Supporting point 2)* <u>And another spot</u> I would recommended would be um . . . Sun-Moon Lake in Nantou. *(Elaboration)* It's <u>also</u> a beautiful scene place. *(Supporting point 3)* <u>And one more place</u> I think would be Taipei 101, *(Elaboration)* which is the most famous scene in Taiwan, I think, for foreign tourisms tourists. Um Taipei 101 has complete . . . department store and other kind of things, and you can just try to visit the highest floor on Taipei 101. And you will still give you a fa- a beautiful scene at all. *(Conclusion)* <u>So</u> above three points are the three spots I would recommended to visit in Taiwan.

Example 3 illustrates the use of three strategies. First, the "department store" of Taipei 101 was a similar term (Strategy 1-2) for *shangquang* 商圈 (commercial district), which was the intended message of S49-H according to his retrospective interview. Furthermore, Example 3 is well-structured because the main idea is supported by three points and ended with a conclusion (Strategy 3-1). It contains cohesive devices (Strategy 3-2), such as "and another spot . . ." as well as "and one more place. . . ."

The three supporting points are logical in that they follow the order from south to north. However, this was not S49-H's original plan, as he revealed in

his retrospective interview:

> [After the first example (a "tall building called 85")] I wanted to say
> *lianchitan* 蓮池潭 (Lotus Pond), but I forgot the English word for
> "lotus," so with the last character *tan* 潭 (pond; lake) [as the source of
> inspiration], I tried to find another spot to talk about. (Retrospective
> interview)

Perhaps this sudden change of plan was the reason why there was a pause
before the second supporting point "Sun-Moon Lake" (日月潭), which in
Chinese also ends with the character *tan* 潭 . S49-H continued to describe his
thought process:

> I talked about [examples] from south to north. Now when I answer
> questions, I always use the structure or organization that the teacher
> taught us. I try to find patterns as much as I can. Originally, all the
> supporting details I wanted to talk about were [tourist spots] in
> Kaohsiung. But because [the original plan] was cut off, so I tried to find
> another spot in the middle of Taiwan [i.e., Sun-Moon Lake], and then
> another one in the north. At that moment I had this thought: Find one
> in Taipei. So I talked about Taipei 101. (Retrospective interview)

Retrospective interviews revealed how complicated the mind was when
learners engaged in planning, formulating, and articulating their ideas in
English. The three examples above illustrate the application of interpreting
strategies to L2 speaking, helping learners get their ideas across flexibly and
coherently. However, the process of application was not without difficulties, as
we shall see in the next section.

Learners' Perceptions of Interpreting Strategy Application to L2 Speaking

With regard to research question 4 "From learners' perspectives, to what extent can they apply interpreting strategies to English speaking," the EG participants' reflections and comments revealed that three major causes complicated the application of interpreting strategies to L2 speaking: one's natural tendency of strategy use, the elusive nature of thoughts, and the extent to which Chinese appears in one's mind when speaking English.

One's natural tendency of strategy use. One's natural tendency might limit the extensive application of interpreting strategies to L2 speaking. For example, while a couple of learners claimed a stronger tendency to use *Strategy 1-3. Explain* to get their meaning across, certain participants' instinct was to adopt *Strategy 1-1. Use a more general term*. It seems that in times of real action, learners still use the strategies they are most comfortable with. As S49-H commented:

> When I'm talking with foreigners, no matter how hard I've practiced the strategy of "explaining," I still wouldn't use it. I would still use a more general term instinctively like I normally do. It's just that right now I know there's a strategy called "using a more general term;" right now it has come to my awareness that the thing I already know how to do is called "using a more general term." (Group Interview)

S14-H, a basketball pro, backed the above comment with the following simile:

> It is just like playing basketball. You've learned various ways to dribble a ball, but when you're in a real game, just like when you're speaking English, you'd still use the methods you're most accustomed to. (Group interview)

Research on learning strategies may indirectly support this perception. It was found that in the EFL context in China, the undergraduates' choices of learning strategies were significantly influenced by their learning styles (Li & Qin, 2006). It is possible that learners' application of interpreting strategies to English speaking is conditioned by their learning styles, previous experience, personality traits, among other factors.

The elusive nature of thoughts. We have justified into-B interpreting training in the language classroom by comparing interpreting process with L2 speech process, claiming that the two go through similar processing in the formulator and the articulator, although not in the conceptualizer. In the conceptualizer, interpreters do not need to generate content from scratch, but to listen to and analyze the incoming messages, while L2 speakers have to formulate ideas themselves. It turns out that the process of formulating ideas may be different from learner to learner, and from topic to topic, complicating the application of interpreting strategies to L2 speaking. Take the application of *Strategy 3-1 (Re)structuring* as an example. For some, simply planning one's response in accordance with the structure was easy. S41-H said that one could easily use it without much practice:

> (Re)structuring is the most useful [strategy] for me. I think it's similar to the skill of "organizing your thoughts." It doesn't require much practice; the teacher taught us the method, and you just do it accordingly. You can't go wrong with it; it is immediately applicable. . . . I think BE CLEAR is the easiest and the most practical [principle]. (Group interview)

When topics were not complicated, or when one had relevant experiences or already held certain opinions towards an issue, *(Re)structuring* seemed less difficult. As S17-L wrote after discussing a topic on pets and stray dogs in class:

The topic was not that difficult for me to develop. Besides, there are a few examples related to this topic from my life experience. I can think faster and build a better construction than usual. (Worksheet)

On the other hand, unfamiliar topics plus processing time pressure of speaking might impede the application of *(Re)structuring*. As S41-H commented:

It was hard to structure my ideas because I barely had time to think about the topic thoroughly. I had to think and construct ideas at the same time. But sometimes, I don't even have answers to some topics. I need more time to deal with some topics. (Worksheet)

S46-M also described the juggling mental process of L2 speaking, leading to the difficulty of *(Re)structuring* one's response:

I would get stuck in all the things I want to say and change what I want to say immediately after I have a new idea. Therefore, it's difficult for me to remember what I have said and structure all of the ideas. (Worksheet)

The interpreting strategies taught in this experiment seem to mainly target the situation when one has specific ideas in mind, or when one's preverbal message has formed. In other words, when one's thoughts are messy, or when one's attitude towards an issue is unclear, it is harder to apply these strategies. In sum, the elusive nature of thoughts, exacerbated by unfamiliarity with discussion topics, time pressure of speaking, and lower oral proficiency, might compromise the extent of applying certain interpreting strategies to L2 speaking.

The extent to which Chinese appears in one's mind when speaking English. In addition to one's habitual tendency of strategy use and elusive nature of thoughts, the third major theme was the complicated relationship between the extent to which Chinese appears in one's mind and strategy application. Since L1 influences can be seen across all layers of L2, including information structure, discourse choices, and pragmatic choices (Ortega, 2009), we assumed that whenever Chinese occurred in learners' minds when speaking English, some interpreting strategies facilitating inter-lingual transformation could be applied. However, the participants' remarks showed that whether Chinese appeared in mind or not, seamless application of interpreting strategies was not always the case.

Some learners, usually those with lower oral proficiency, expressed that Chinese occurred in mind very often, so speaking English was indeed very similar to interpreting because mental translation was involved, and thus interpreting strategies were beneficial, as S40-L explained:

> These strategies are like the last life-saving ropes . . . I myself don't have enough vocabulary at my disposal, so no matter how hard I try to search [for the precise word], I still cannot find one. But [interpreting strategies] provide another way out. In the past, I only had one path available, now I have three or four paths. If one alternative turns out to be unfeasible, I can still try another one. (Group interview)

Others, usually those with higher oral proficiency, commented that in the context of easier, daily-life conversation, Chinese occurred less in mind, but with more complicated topics, Chinese occurred more frequently, and therefore interpreting strategies were more useful during in-depth discussions. As S10-H commented:

> The English that comes out intuitively is shallower . . . when we discuss topics that require deeper reasoning, Chinese still comes out and I'd get stuck, not knowing how to express it in English, so [interpreting strategies] are more effective when it comes to in-depth discussions. (Group interview)

A few argued that even if Chinese occurred more frequently in mind in the context of more controversial, abstract topics, like issues related to morality and justice, it did not mean that those strategies could be easily applied in these cases. S41-H explained the predicament:

> The more academic and professional the issues are, the more frequent it is that Chinese appears [in my mind]; the more conversational the topics are, the more frequent it is that English appears [in my mind]. But here is the problem: All these [strategies] can be applied in everyday conversation, but when it comes to in-depth questions related to morality, it's harder to apply these skills. For example, how do you use "a more general term" to replace "utilitarianism"? It's really ard [to apply these strategies] when it comes to professional topics. But with everyday conversation, I use English more [directly], so it's a bit conflicting. (Group interview)

It seems that even if Chinese appears more frequently in one's mind when issues are more complicated, smooth application of interpreting strategies is not guaranteed because the intended ideas are too abstract or philosophical to be restructured syntactically or semantically without considerable effort.

To make seamless application of interpreting strategies to L2 speaking more complicated, the Chinese appearing in a learner's mind may not be clear

linguistic items, but a vague concept or a preverbal message. In Kormos' (2006) bilingual speech production model, the shared knowledge stores imply that "L1 and L2 concepts, lemmas, lexemes, syllable programs, and procedurlized rules are stored together, and therefore they compete for selection" (p. 174). [6] It is thus understandable that L1 may appear in L2 learners' minds to various extents, such as a concept, a word, a phrase, a part of a sentence, and/or a complete sentence, depending on topic familiarity and complexity, one's proficiency level, among other factors.

According to Kormos (2006), the selected concept that a learner wants to encode "activates not only the matching lexical item but also semantically related lemmas including lemmas in the nonselected language" (p. 170). In other words, when Chinese-speaking EFL learners speak English, not only the English lexical item that matches the intended concept is activated, but the non-selected syntactic information of the corresponding Chinese item can be simultaneously activated as well. This may be especially true for lower level learners (Kormos, 2006). The participants in this study described this phenomenon as English and Chinese co-occurring or switching back and forth in their minds. As S49-H mentioned:

> I would translate [my thoughts] from English into Chinese and then into English again. I would get stuck for a period of time. (Group interview)

This constant co-activation of and switching between the two languages may add further challenges to the seamless application of interpreting strategies to L2 speaking. It seems safe to conclude that the frequency of Chinese

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[6] Lemmas refer to the "syntactic and morphological features" (Kormos, 2006, p. 171) of lexemes—word forms.

appearing in one's mind when speaking English is not positively correlated with strategy use. It is not necessarily the case that the higher the frequency of Chinese appearing in one's mind when speaking English, the larger the extent that one can apply these strategies to solve or prevent communication problems, or to enhance message effectiveness. Interpreting strategies may help one deal with Chinese appearing in mind, but not in all cases.

The value of interpreting strategy training. The value of interpreting training should not be dismissed, however. The learners described four main benefits. First, the training enhanced their flexibility and resourcefulness in getting their ideas across. As S3-L explained:

> I don't know a lot of vocabulary. Now I've learned that with "a more general term," "a similar term," and "paraphrasing," I can still get my meaning across. When I speak [in English], I'm not that nervous anymore. I can somewhat explain [my ideas]. (Group interview)

Second, the training accelerated the application of some strategies. As S30-L said:

> Now [when I get stuck on words], I would spend two seconds searching for the right word, and then I would know that I can't find it, so I'd try to find a similar term as fast as possible, whereas in the last semester, it took me ten more seconds before I tried to use alternatives. (Individual interview)

Furthermore, the training expanded their strategy repertoire. Take *Strategy 3-2 Add cohesive words* as an example. Learners may have learned to use a variety of transitional words for English writing back in high school, but they

rarely use these cohesive devices in speaking. S63-H expressed that the use of transitional words to enhance coherence was the most useful skill for her:

> In class, [the teacher] mentioned that we could use longer transitional words to buy ourselves more time to think about what to say next. I think this is very useful. Like when we were doing [self-interpreting] assignments, we only had one minute to talk. When you were producing that sentence [longer transitional chunk], you could really give yourself more time to make the subsequent sentence clearer. Also, you wouldn't use "and and and" all the time. So I think transitional words are useful in business English, English composition, formal English, and conversational English. Furthermore, it [using transitional words] serves the purpose of organizing your thoughts. After you use cohesive words, you know where you are right now [in your response], and you know when to summarize [as a conclusion]. (Group interview)

Most importantly, the training induced an interlocutor-oriented mindset. As S58-L explained:

> The major difference [before and after the training] lies in the mindset. I'd remind myself not to have long pauses, and to quickly find a term. . . . Although I'm not sure if I've become faster at coming up with an alternative, at least now, mentality-wise, I'd remind myself to paraphrase more often. (Group interview)

Bearing interlocutors in mind, learners learned to focus more on the clarity, comprehensibility, and smoothness of their speech, rather than deliberate on the most precise words or sophisticated syntactic structures at the expense of adequate fluency. As S26-L described:

> In the past, I tended to use a lot of "where" and "which," and then I would get lost and forget where I was. Others [interlocutors] might also get lost, because they didn't know what those "where" and "which" referred to. (Group interview)

Due to this mindset change, as well as seeing professional interpreters using these strategies, the learners no longer dismissed the ideas of plain and simple English, or short and direct sentences. This suggests that the entire interpreting training facilitated the transformation of implicit knowledge into explicit knowledge on strategy application, expanded individuals' repertoire of strategies, and changed their mindset about effective communication.

Conclusions

This study highlights the strategic component of interpreting, proposing that the similarities between L2 speaking and into-B interpreting in terms of mental processing and potential problems may justify interpreting strategy training in the college-level EFL classroom. The training initiated learners to strategies designed to enhance their flexibility, efficiency, and effectiveness with their existing L2 resources for communicative purposes.

Quantitative analysis of pretest and posttest scores showed that interpreting strategy training led to the EG's significant improvement in Fluency in the descriptive/narrative task type. Furthermore, the EG's significant within-group improvements were far more extensive than the CG's. Compared with its own pretest performance, the CG significantly improved in the following three aspects: overall Lexical Resource, overall Grammatical Range and Accuracy, and Grammatical Range and Accuracy in the descriptive/narrative task type. On the other hand, compared with its own pretest performance, the EG significantly

improved in the following eight aspects: the mean total score, overall Fluency, overall Coherence, overall Grammatical Range and Accuracy, Fluency in conversational task type, the mean overall score of argumentative task type, and Coherence as well as Grammatical Range and Accuracy in argumentative task type. The EG's significant within-group improvements might have something to do with interpreting strategy training.

Qualitative analysis of focus group interviews and written reflections on Worksheets revealed that three major causes complicated the application of interpreting strategies to English speaking: one's natural tendency of strategy use, the elusive nature of thoughts, and the extent to which Chinese appears in one's mind when speaking English. It may be easy to conclude that more training is needed to ensure seamless application. However, interpreting intervention should not be the center of a language class. If more class time and more assignments are devoted to interpreting training, it may be perceived as a grueling drill. Therefore, rather than suggesting EFL teachers to add more interpreting practice, we would like to underscore the importance of more practice in English speaking. Students can be encouraged to do self-talk in English whenever and wherever possible. During self-talk, they are encouraged to apply interpreting strategies such as explaining or paraphrasing to deal with L1 popping up in their minds, and to summarize the main idea of their favorite movies or books several times in both their L1 and English, with each time being clearer in structure and coherence.

Interpreting training initiates language learners to the idea that interpreting is also a form of communication, and their future jobs may involve interpreting tasks to varying degrees. According to the EG participants' perceptions, the value of interpreting training included enhanced resourcefulness, accelerated strategy application, expanded strategy repertoire, and the development of interlocutor-oriented mindset.

For further pedagogical applications, EFL teachers are encouraged to use the teaching materials and procedures of this study as foundation and create a training that has their own personal touch. Teachers are encouraged to bring the class to life by blending in their own training background, work experience, and life experience in their teaching, and by using materials that they deem relevant, interesting, and inspiring to a particular group of students. For example, teachers may select scenes from English movies and TV shows with subtitles in learners' L1, and have learners interpret subtitles from L1 into English in pairs before acting out the selected scenes in the original English. In this way, leaners engage in dialogue interpreting before learning native-like expressions.

Although the present study has yielded pedagogical implications for incorporating interpreting training in English speaking classes, its research design is not without limitations. First, the interpreting strategies taught in this study did not capture the full spectrum of human communication. The interactive elements, such as appeals for help or asking for confirmation, or some socially appropriate language elements in certain speech acts, have to be taught and measured separately. In terms of oral proficiency measures, although the scoring rubric used in this study was relatively refined, certain subtle elements of learners' proficiency profiles might still escape human perceptions. Future research can include more objective measures, such as articulation rate and length of pauses, to further examine learners' oral proficiency changes.

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Appendix A

Speaking Test A

Part 1

1. How easy is it to travel around your country?

2. What are the main industries in your country?

3. How has your country changed since you were a child?

Part 2

> Describe a well-known person you like or admire.
>
> You should say:
>
> who this person is
>
> what this person has done
>
> why this person is well known
>
> and explain why you admire this person.

Part 3

1. What kind of people become famous these days?

2. How is it different from the kind of achievement that made people famous in the past?

3. What are the good things about being famous? Are there any disadvantages?

4. How does the media in your country treat famous people?

Adapted from "Test 1" (p. 31) in Cambridge ESOL. (2006). *Cambridge IELTS 5 with answers: Examination papers from University of Cambridge ESOL examinations.* Cambridge, UK: Cambridge University Press.

Appendix B

Speaking Test B

Part 1

1. What would you suggest a visitor should see and do in your country?

2. Why do foreign visitors go your country?

3. In what ways has tourism changed your country?

Part 2

Describe a memorable event in your life.

You should say:

> when the event took place

> where the event took place

> what happened exactly

and explain why this event was memorable for you.

Part 3

1. What roles do ceremonies play in our lives?

2. How have attitudes to marriage changed in recent years?

3. In what ways do men and women feel differently about marriage, in your opinion?

4. Does the media in your country pay more attention to global or national events? Why?

Adapted from "Test 3" (p. 75) in Cambridge ESOL. (2002). *Cambridge IELTS 3 with answers: Examination papers from the University of Cambridge local examinations syndicate*. Cambridge, UK: Cambridge University Press.

Appendix C

Statistical Analyses of Oral Proficiency Tests

Table 5

Means (M), Standard Deviations (SD), and t-values of the Experimental Group's (EG) and the Control Group's (CG) Pretest and Posttest Total Scores and Detailed Scores

Item	Test	EG (*n*=43)		Within-group	CG (*n*=24)		Within-group	Between-group
		M	SD	*t*	*M*	SD	*t*	*t*
Total score (max: 108)								
	pre	73.22	9.51	-2.38*	69.47	9.42	-1.94	1.55
	post	75.23	9.02		71.54	9.27		1.59
Overall score of each criterion (max: 27)								
F	pre	17.80	2.59	-2.58*	17.18	2.39	-.88	.98
	post	18.44	2.44		17.49	2.60		1.49
C	pre	18.23	2.54	-2.22*	17.17	2.59	-1.56	1.63
	post	18.72	2.36		17.64	2.47		1.78
L	pre	18.51	2.37	-1.39	17.42	2.33	-2.21*	1.82
	post	18.84	2.42		17.98	2.45		1.39
G	pre	18.68	2.25	-2.48*	17.71	2.25	-2.57*	1.69
	post	19.24	2.06		18.44	2.03		1.54
Overall score of each part (max: 36) and score of each criterion under each part (max: 9)								
P1	pre	24.09	4.02	-1.32	22.92	3.88	-1.22	1.16
	post	24.72	3.82		23.69	2.76		1.67
1-F	pre	5.88	1.11	-2.19*	5.77	.96	-.59	.42
	post	6.14	.97		5.88	.85		1.11
1-C	pre	5.95	1.11	-.92	5.54	1.07	-1.11	1.48
	post	6.08	1.03		5.75	.78		1.37
1-L	pre	6.08	1.01	-.07	5.73	.99	-1.43	1.38
	post	6.17	1.06		5.98	.76		.87
1-G	pre	6.17	.98	-1.08	5.88	.97	-1.17	1.20
	post	6.33	.91		6.08	.60		1.31

(continued)

Table 5

Means (M), Standard Deviations (SD), and t-values of the Experimental Group's (EG) and the Control Group's (CG) Pretest and Posttest Total Scores and Detailed Scores (continued)

Item	Test	EG (n=43)			CG (n=24)			Between-group
				Within-group			Within-group	
		M	SD	t	M	SD	t	t
P2	pre	25.56	2.41	-.91	24.22	2.95	-1.05	2.02*
	post	25.92	2.89		24.64	2.77		1.78
2-F	pre	6.17	.75	-1.60	5.93	.82	.40	1.22
	post	6.33	.81		5.88	.78		2.24*
2-C	pre	6.40	.74	-.21	6.13	.83	.16	1.41
	post	6.43	.78		6.10	.77		1.65
2-L	pre	6.49	.63	-.05	6.07	.74	-1.16	2.42*
	post	6.49	.76		6.22	.81		1.39
2-G	pre	6.51	.60	-1.51	6.09	.70	-3.76***	2.54*
	post	6.67	.73		6.44	.57		1.34
P3	pre	23.56	4.45	-2.20*	22.33	3.70	-1.30	1.15
	post	24.59	3.52		23.22	4.32		1.41
3-F	pre	5.75	1.13	-1.57	5.48	.91	-1.52	1.00
	post	5.97	.96		5.74	1.09		.88
3-C	pre	5.87	1.21	-2.68**	5.50	1.05	-1.44	1.26
	post	6.21	1.03		5.78	1.18		1.54
3-L	pre	5.94	1.10	-1.85	5.61	.94	-.95	1.23
	post	6.17	.89		5.78	1.12		1.56
3-G	pre	6.00	1.09	-2.02*	5.74	.90	-.99	.99
	post	6.24	.80		5.92	1.03		1.45

Notes. *= $p \leq .05$, **= $p \leq .01$, ***= $p \leq .001$. P1=Part 1; P2=Part 2; P3=Part 3. F=Fluency; C=Coherence; L=Lexical Resource; G=Grammatical Range and Accuracy. Pretest significant between-group differences are in light grey. Posttest significant between-group and within-group differences are in dark gray.