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逐步口譯雙人合作模式之初探

Collaborative Dual-Person Approaches in Consecutive

Interpreting: An Exploratory Study


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# 國立臺灣大學碩士學位論文
# 口試委員會審定書
## MASTER'S THESIS ACCEPTANCE CERTIFICATE
## NATIONAL TAIWAN UNIVERSITY

逐步口譯雙人合作模式之初探

Collaborative Dual-Person Approaches in Consecutive Interpreting:

An Exploratory Study

本論文係沈業恆（R11147015）在國立臺灣大學翻譯碩士學位學程完成之碩士學位論文，於民國 113 年 6 月 13 日承下列考試委員審查通過及口試及格，特此證明。

The undersigned, appointed by the Graduate Program in Translation and Interpretation on June 13, 2024, have examined a Master's Thesis entitled above presented by SAM IP HANG (R11147015) and hereby certify that it is worthy of acceptance.

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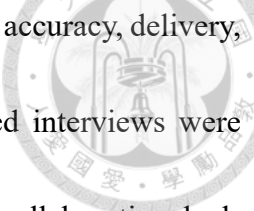
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# Abstract

This study investigated the performance and perceptions of student interpreters regarding partnership and collaborative approaches in consecutive interpreting (CI). The approaches examined included 1) conventional single-person CI mode, 2) dual-person CI mode, in which interpreter A concentrated on note-taking while interpreter B on rendering the message, and 3) simultaneous interpreting-inspired CI mode, in which interpreters A and B acted as boothmates and assisted each other when one being the passive interpreter. Eight interpreting students were recruited and randomly assigned to four groups for collaboration throughout the warm-up workshop, the experiment and the subsequent follow-up experiment. The warm-up workshop was conducted a week before the experiment to acquaint the participants with the new collaborative approach. In the initial experiment, materials were divided into two parts, each consisting of twelve long consecutive interpreting segments. Each participant interpreted one part of speech using the conventional consecutive interpreting approach and the other part using the collaborative dual-person approach, where one interpreter acted as the note-taker while the other focused on listening and rendering with the assistance of the notes provided. The interpreting output from each group was assessed by the researcher panel, considering both language (accuracy) and non-language (delivery) dimensions. However,

paired samples t-tests showed no statistically significant differences in accuracy, delivery, or the overall performance between the two modes. Semi-structured interviews were conducted to explore the interpreters' viewpoints, particularly on the collaborative dual-person approach. Results showed that note-taking habits, partner familiarity, and memory retention without notes are primary challenges in collaborative dual-person approach. A follow-up experiment, i.e., simultaneous interpreting-inspired CI mode, was conducted based on the participants' suggestions during the interviews. This second type of collaborative dual-person approach was inspired by how interpreting partners collaborate in a booth when doing simultaneous interpreting. In this mode, the two interpreters were able to collaborate with their partner in various ways beyond note-taking. For example, the active interpreter can signal for assistance, and the passive interpreter can provide written cues or help search for terminologies. This approach is more flexible and it is easier to adapt, allowing interpreters to make the most of the time between the listening comprehension phase and the speech production phase in CI. The SI-inspired CI mode received positive feedback from all the participants and changed the minds of some who originally believed that CI is inherently solo work.

Keywords: consecutive interpreting, collaborative approaches, interpreting partners,

note-taking, interpreting training

# 摘要

　　本研究旨在探討學生口譯員在逐步口譯中對於搭檔關係的看法，以及利用合作方法的口譯表現。實驗採用的方式包括一、單人模式；二、以筆記分工的雙人合作模式；三、將同步口譯方法融入逐步口譯的合作模式。研究者招募了八位口譯學生，並隨機分成四組，透過合作共同完成工作坊、實驗及後續實驗。工作坊在實驗前一週舉行，讓參與者熟悉合作方法。初始實驗的材料分為兩部分，每組分別採用傳統的單人逐步口譯和雙人合作模式（一人記筆記，另一人專心聆聽並根據提供的筆記輔助口譯）。研究者從各組產出的準確性及表達兩方面進行評估。然而，成對樣本 t 檢定顯示，無論在準確性、表達及整體表現上，兩種模式並無顯著差異。研究從半結構式訪談探討參與者對於筆記分工的雙人合作模式的看法，發現主要挑戰為個人的筆記習慣、對於搭檔的熟悉程度，以及不靠筆記的短期記憶能力。後續實驗參考訪談意見，將同步口譯搭檔的合作模式融入逐步口譯，此一方法也成為研究中第二種逐步口譯的合作模式。在這種受同步口譯啟發的逐步口譯合作模式下，合作不再限於以筆記分工；例如口譯員可以向搭檔尋求協助，搭檔也可以主動給予提示或幫忙搜尋原文中術語的對應翻譯。此模式更具靈活性，口譯員也更容易適應，把同步口譯的合作模式用於逐步口譯中，口譯員可以充分利用來源語輸入階段和產出階段之間的時間進行合作。最後，此合作模式得所有參與者的正面回饋，甚至改變了部分參與者的既定認知，不再堅信逐步口譯必為全程一人執行的工作。

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關鍵字：逐步口譯、合作模式、口譯搭檔、口譯筆記、口譯訓練

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# Chapter 1 Introduction

Consecutive interpreting (CI) and simultaneous interpreting (SI) stand as the two prevalent modes commonly employed within the realm of conference interpreting (e.g., AIIC, 1984; Diriker, 2015; Setton & Dawrant, 2016). Both interpreting approaches possess distinct advantages and limitations, thereby presenting unique challenges to interpreters. In most SI assignments, two interpreters are hired to collaboratively accomplish the task, while only one is usually recruited for CI assignments of the same duration. Furthermore, the use of expensive equipment is required for SI, CI is therefore perceived by some as a more cost-effective alternative. There are even occasions where individuals mistakenly consider CI to be an easier task than SI, leading to the oversight of fatigue experienced during CI assignments.

Interpreters consistently engage in multitasking while operating under significant pressure, and physical and mental fatigue experienced by interpreters is a frequently discussed topic. Previous studies (e.g., Chmiel, 2008; Chistova, 2020) have demonstrated the effectiveness of collaborative effort in the booth in alleviating mental exhaustion and facilitating performance. Chistova (2020) investigated the level of the interactivity among interpreters during a simultaneous task and highlighted the significance of "productive interactivity". Chmiel (2008) indicated that interpreters should acquire cooperation as a supplementary skill to effectively assist their boothmates.

While the predominant discussion on interpreters' collaboration revolves around SI, there have been limited solutions proposed for CI. Indeed, the cognitive burden experienced in CI is comparable to that of SI. This concept is in accordance with a corpus-based study conducted by Lv and Liang (2019), in which lexical simplification in various modes of interpreting for political discourse was explored. They discovered that the output of CI exhibited greater degree of reduction in information density and of simplification in lexical variety, and sophistication compared to SI. Lv and Liang (2019) concluded that CI places a greater cognitive burden than SI on interpreters, leading to the simplification of lexical choices. Under such conditions, the utilization of two interpreters in CI assignments is worth discussing, especially in situations characterized by high information density or a strong emphasis on accuracy. Since the implementation of the dual-person approach has been uncommon, exploration of collaboration in CI assignments remains limited.

While employing two interpreters for CI may be infrequent, it is not an unprecedented practice. The prevailing methods typically involve scenarios where multiple speakers engage in a bi-directional conversation, or when a challenging task is divided according to time. However, the methods of collaboration in SI extend beyond individual work for their respective tasks. In addition to a general working shift of 15 to 20 minutes, the interpreter who is not actively interpreting provides assistance to their

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boothmate. While implementing a pattern of rotating shifts can effectively reduce the workload of interpreters by half, it falls short in fully embracing the essence of joint effort. Therefore, collaboration in CI has the potential to extend beyond mere task division based on time.

During a CI task, the interpreter's primary responsibilities involve taking notes and rendering an interpretation in the target language. This is the approach by which two interpreters can distribute their tasks and engage in collaboration. In such instances, interpreters can concentrate on their respective roles and potentially deliver their optimal performance.

The study aims to conduct an investigation into the feasibility and effectiveness of a collaborative dual-person approach in CI, where the tasks of note-taking and rendering are performed separately. With this aim, this study will address the following research questions:

1. Can a collaborative dual-person approach, in which interpreter A concentrates on note-taking while interpreter B on rendering the message, enhance the quality of interpreting output?

2. How do interpreters perceive the collaborative dual-person approach in consecutive interpreting?

# Chapter 2 Literature Review
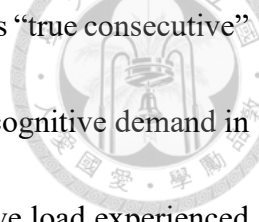
This chapter offers an examination of the cognitive demands involved in consecutive interpreting and emphasizes CI note-taking as a strategy for interpreters to navigate these cognitive challenges. Given that the collaborative dual-person approach is the focal point of the research, the chapter also delves into collaboration in interpreting. Additionally, it reviews aspects such as directionality and interpreting quality to provide insight into the rationale behind the chosen language direction and scoring methods implemented in the research.

## 2.1 Cognitive Demands in Consecutive Interpreting

In CI, the length of each segment can range from a few seconds to several minutes, depending on individual speakers' decision on when to pause and shift to the interpreter. This mode of interpreting can be further categorized based on the duration of time, resulting in two distinct types: short and long CI. In short CI, interpreters might depend solely on their memory capacity without external assistance. However, in long CI, the cognitive burden on interpreters is amplified as compared to short CI, hence a note-taking system is always employed (Setton & Dawrant, 2016).

Gile (1995a) outlined an Effort Model of CI, which comprised the comprehension phase and the reformulation phase. The application of this model is specifically relevant
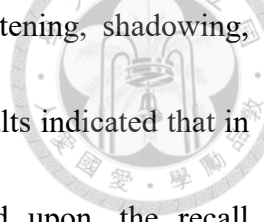
to long CI scenarios with the use of note-taking, which he referred to as "true consecutive" (Gile, 2006). Gile (2023) expanded upon the concept of the level of cognitive demand in the two phases of interpretation. Specifically, he posited that cognitive load experienced during the comprehension phase is more intense when compared to the load in the reformulation phase. This is primarily due to the cognitive and mechanical requirements associated with note-taking.

## 2.2 Note-taking

Note-taking functions as an external storage for memories (Di Vesta & Gray, 1972), and it is a technique commonly adopted by conference interpreters to augment their memory capacity. Liu (2008) provided a precise clarification of the distinct format, notation and purpose of CI notes, which are used immediately during the interpretation process. Gillies (2017) emphasized the feature of macro-thinking within the CI note-taking system, with particular attention given to the importance of structure.

Although note-taking in CI may reflect interpreters' analysis of the source speech, it has the potential to hinder comprehension. It may also lead to inferior performance in message retention when compared to relying solely on memory. Lambert (1988) conducted an experiment on 16 interpreters to evaluate their comprehension of processed content. The study compared their retention ability on lexical, semantic, and syntactic

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items after having them engaged in the following four tasks: listening, shadowing, consecutive interpretating, and simultaneous interpretating. The results indicated that in the controlled condition where only listening skills were relied upon, the recall performance surpassed that in the other three experimental conditions, namely shadowing, consecutive interpretation, and simultaneous interpretation. According to Lambert's (1988) research, he highlighted that listening promotes deeper processing when compared to dividing one's attention among multiple tasks as in shadowing, consecutive interpretating, and simultaneous interpretating. This may suggest that note-taking while listening does not necessarily strengthen the learning process. Kiewra et al. (1991) carried out a study in an academic context involving 96 undergraduate students to examine and compare the distinct functions of notes: encoding and external storage. The students were randomly divided into three groups: the first group took notes, the second group took notes and reviewed them, and the third group was absent during the lecture and reviewed borrowed notes. In the third group, the borrowed notes served as external storage without the interference of encoding process. Interestingly, despite both the first and third groups having only one exposure to the lecture content, the students who were absent and borrowed notes from others achieved better results on the test compared to those who were present and took their own notes. The experiment suggests that individuals who engage in note-taking may face challenges in simultaneously processing and recording

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the information, and the encoding process does not consistently facilitate generative processing.

The two studies contribute to the formulation of a hypothesis: the absence of note-taking during the comprehension phase can be beneficial, and an improved performance can be achieved by utilizing notes provided by note-takers. Even though CI notes are commonly perceived as personal in nature (Liu, 2008), if interpreters are instructed to collaborate with their partners and are informed that their notes will be shared, there is a possibility that the clarity and style of their note-taking could undergo changes. As a result, the notion of CI notes being seen as personal and difficult to read may not hold true in a dual-person collaborative approach. It is hypothesized that when interpreters are not burdened with the need to exert additional effort on note-taking during the listening process, they can fully devote their capacity to the aural input and comprehension analysis. In such cases, notes taken by their partners may function as visual cues that facilitate interpreters' rendition.

## 2.3 Collaborative Approach in Interpreting

Interpreting in teams during consecutive tasks is not prevalent, and there is a lack of research conducted in this specific domain. In current practice, when multiple interpreters are hired for a CI setting, they usually divide the work based on language direction, or
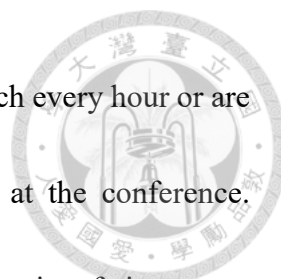
they may be hired by different parties. They often take turns and switch every hour or are assigned to specific speakers when multiple speakers are present at the conference. Existing literature on team interpreting has primarily focused on using fatigue as a justification, with a majority of studies conducted under SI settings. Interpreters are classified as active or passive, depending on whether they are currently on duty or not. Gile (1995a) considered the passive interpreter as an asset, and using boothmates as a form of assistance was seen as a strategic approach. Kalina (2001) considered team strength and team composition as factors that enhance the quality of interpreting. In the context of discussing collaboration in interpreting, mitigating fatigue and receiving support from partners emerge as potential rationales for incorporating multiple interpreters into an interpreting task. However, even when two interpreters are designated for a single task, some practitioners still adhere to a work-rest allocation pattern, which is a non-cooperative approach (Cokely & Hawkins, 2003). This implies that a turn-taking work shift approach would not be classified as a collaborative strategy within the scope of the study.

Hoza (2010) illustrated a team approach that combines both collaborative and interdependent effort. The focus has been directed towards enhancing accuracy while simultaneously reducing interpreter fatigue during assignments, which effectively leverages the benefits of team interpreting. In such approach, interpreters engage in turn-

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taking, monitoring, and working interdependently on their respective tasks, while also functioning as a cohesion unit through collaboration. While CI and SI differ in nature, this team interpreting approach can serve as a valuable point of reference.
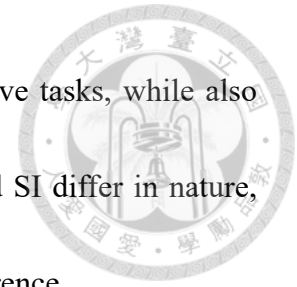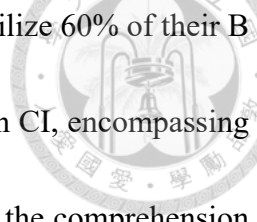
In previous sections, listening and note-taking are identified as two essential tasks that interpreters engage in during the comprehension phase of CI. If team interpreting is employed in a CI setting, interpreters would have the opportunity to alternate and work interdependently on either of these tasks to which they would be able to devote their full attention. The collaborative approach in this study aims to explore whether interpreters can combine their efforts and function as a unified unit during the reformulation phase.

## 2.4 Directionality

Interpreters possess varying language combinations for their work, and they are usually proficient in both directions between their two active languages, referred to as their A language and B language. However, in this study, which focuses on adopting a new collaborative interpreting approach, only one direction is selected for experimentation as an initial attempt. Previous researches have highlighted distinct challenges and variations in interpreters' performance based on the chosen directionality.

In Gile's (2005) research, two assumptions were proposed regarding the effort required for the A and B languages, as well as the deviation in effort between the two

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phases of interpreting. Gile (2005) suggested that interpreters only utilize 60% of their B language processing capacity when working from their A language in CI, encompassing both the comprehension and speech production phases. Specifically, the comprehension phase accounted for 30% of the overall effort, while the production phase required 70% of the effort. In paraphrasing those assumptions, it can be expressed that interpreters encounter reduced cognitive load when they interpret into their A language or native language. This concept aligns with findings from other studies in the field (e.g., Chen, 2017; Chen, 2020).

In a study conducted by Chen (2020), the performance of interpreters during the note-taking phase and the speech production phase while working from A to B and from B to A were compared. The findings indicated a notable difference in the ear-pen span of interpreters across the two interpreting directions. When interpreting into their A languages, interpreters exhibited faster note-taking. Additionally, interpreters tended to use languages instead of symbols and preferred writing full forms rather than abbreviations while taking notes. Languages in CI notes is more intelligible than symbols, therefore potentially facilitating effective communication and cooperation among interpreters in the collaborative approach. Yet it should be noted that interpreters' performance may not always excel when working from B to A. Chen (2020) highlighted in the same study that when interpreting into the A language, there was a lower level of

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information completeness. However, interpreters demonstrated a higher level of fluency, with a decreased proportion of pauses during the interpreting process.
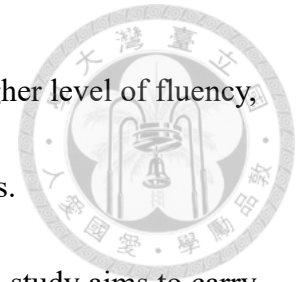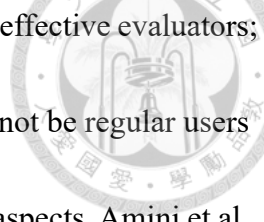
Taking into account the factors of different directionalities, this study aims to carry out an experiment focusing on interpretation into the A language. The rationale behind this choice is to minimize additional burdens on interpreter pairs, especially when employing a collaborative dual-person approach for an extended duration task.

## 2.5 Interpreting Quality
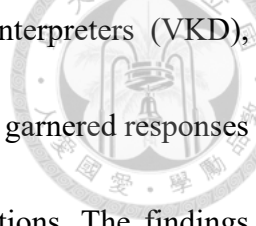
The evaluation of interpreting quality can be approached from multiple viewpoints, with the most prevalent ones being the perspectives of interpreters, users, clients and fellow interpreters (Moser-Mercer, 1996). Pöchhacker (2001) recommended that researchers evaluate interpreting quality by considering the viewpoints of interpreters, speakers, users, while also gaining additional insights from clients and colleagues. Setton and Dawrant (2016) also emphasized that conference interpreting is inherently user-oriented. Users' perspective may therefore be a crucial factor in measuring interpreting quality and a priority in evaluation. While judging from different perspectives may serve a variety of purposes, it is imperative to acknowledge that assessments may differ when viewed from different perspectives.

Seleskovitch (1986) proposed that individuals who depend on interpretation to

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comprehend the speech, often referred to as end-users, might serve as effective evaluators;

in contrast, delegates tasked with evaluating the interpretation might not be regular users

of such services and might predominantly focus on language-related aspects. Amini et al.

(2013) similarly characterized interpreting quality as the extent of user satisfaction,

wherein users are primarily influenced by the fluency and delivery. User expectations

may still carry drawbacks, as the criteria that users consciously or unconsciously employ

or prioritize during assessment can differ. An apparent limitation of user-based

assessment lies in the potential oversight or misjudgment of specific message components.

In a study conducted by Gile (1995b), 13 interpreting students participated, assuming

roles as the speaker, the interpreter, and listeners. Gile (1995b) subsequently revealed that

only 20% of the errors made by the interpreter were identified by nearly half of the users,

while 30% of the errors went unnoticed. Surprisingly, the speaker could only detect two

errors out of ten. Moreover, both the speaker and the users falsely accused the interpreter.

This underscores that both evaluating from interpreters' and users' perspectives entail

both advantages and disadvantages. Consequently, it is recommended that when assessing

interpreting quality, a balanced consideration of both language and non-language factors

is warranted.

Zwischenberger (2010) conducted a survey study on quality criteria in interpreting

by recruiting interpreters affiliated with the International Association of Conference

Interpreters (AIIC) and the German Association of Conference Interpreters (VKD), representing both international and national perspectives. The survey garnered responses from over 800 interpreters within these two professional organizations. The findings indicated that the interpreters from these two populations attributed similar levels of importance to quality criteria. Notably, consistency with the original speech emerged as the most significant criterion concerning content, followed by logical cohesion and completeness. Regarding delivery, fluency held the highest importance, followed by intonation and voice.

Liu et al. (2008) conducted a study that unveiled the criteria used to assess interpreting quality across 11 interpreting programs in different countries. The findings highlighted that accuracy held a predominant position, constituting 50% or more of the evaluation criteria in the majority of the selected institutions, particularly in Taiwan. Other criteria related to delivery included style, word choice, and voice, with fluency being specifically mentioned as a crucial factor alongside content. In instances where institutions did not assign specific weights, they either divided the material into distinct scoring units using a five-point scale or engaged in panel discussions for evaluation. The judging panels typically comprised one or more raters with a background in interpreting. Consequently, it can be inferred that an effective judging panel should include raters with interpreting expertise, and a balanced consideration of accuracy up to 50% and delivery

is essential. The segmentation of material into various scoring units and panel deliberation

can further enhance the validity and reliability of the evaluation process.

# Chapter 3 Methods

This study intended to utilize an experimental design to examine the feasibility of a collaborative dual-person approach in consecutive interpreting (CI). The data gathered encompass both quantitative and qualitative elements. Quantitative data involved the assessment of interpretations, whereas qualitative data were acquired through interviews. The subsequent sections provide a depiction of the participants, materials, and experimental procedures.

## 3.1 Participants

The participants in the study were recruited from graduate students in the interpreting track at a university in Taiwan. The experiment involved a total of eight interpreting students, including one male and seven female participants. Each of them had completed a minimum of one year of CI training. They were randomly assigned into teams of two to collaborate on the tasks. To foster a cohesive working dynamic, the randomization process took into account the participants' years of training, ensuring that they were paired with their classmates, a partner from the same year of study. This approach allowed them to collaborate with individuals they were already familiar with, as they had been learning within the same system and utilizing the same resources. Similar to the interpreting industry, interpreters may opt to collaborate with a partner of

their choosing or someone they have previously worked with. Hence, teaming up with an interpreting colleague familiar to the participants aligns with actual practice.
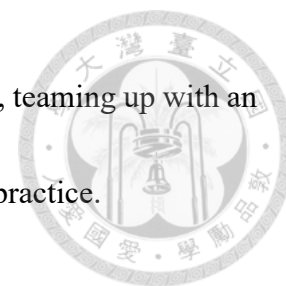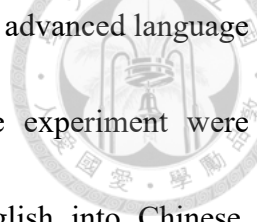
Table 3.1

*Participant Demographics*

|  | N | Language Combination |
|---|---|---|
| Year 3 | 3 | Chinese A |
|  |  | English B |
|  | 1 | Cantonese/Chinese A |
|  |  | English B |
| Year 2 | 4 | Chinese A |
|  |  | English B |

In the participant selection process, a deliberate effort was made to ensure diversity and representation among the eight participants. The distribution was evenly split, with half being Year Two students and the other half were Year Three students, contributing to a mix of experiences and perspectives among student interpreters in the department. All participants had taken the following three courses in their first year of training: "Introduction to Consecutive Interpretation," "Basic Consecutive Interpreting (English to Chinese)" and "Basic Consecutive Interpreting (Chinese to English)." And at the time of the experiment, they either had completed or were in the process of enrolling in "Advanced Consecutive Interpreting (Chinese to English)" and "Advanced Simultaneous

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Interpreting (English to Chinese),", indicating a shared foundation in advanced language interpretation skills. Additionally, the language dynamics of the experiment were considered, as the interpreting direction was specified from English into Chinese. Consequently, a preference was given to participants with a Chinese A-English B language combination. This decision aimed to optimize the participants' familiarity and proficiency with the language pair, enhancing the reliability and effectiveness of the interpreting tasks.

## 3.2 Materials

The participants were organized into teams of two for the purpose of collaboratively interpreting two tasks for the experiment. These tasks involved the collaborative dual-person approach and the conventional CI approach. Since the participants were working from English into Chinese for all tasks in this study, all materials were in English. Given that interpreters usually have a work shift lasting around 15 minutes in SI, completing a full round – where both interpreters fulfill their duties – would take approximately 30 minutes. In order to ensure consistency within the experimental context, a 55-minute speech delivered by a single speaker was chosen as the material for interpretation. This speech was divided into two parts, consisting of twelve segments each. These two parts served as separate tasks for the interpreters, allowing them to employ different approaches

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in the experiment. The links to all the materials used in the study and their transcripts are

available in Appendix I.

Table 3.2

*Lengths of the Experiment Material (Minutes)*

| Interpreting Segment | Part 1 | Interpreting Segment | Part 2 |
|---|---|---|---|
| Segment 1 (min) | 2:30 | Segment 13 (min) | 2:15 |
| Segment 2 (min) | 2:14 | Segment 14 (min) | 2:02 |
| Segment 3 (min) | 2:00 | Segment 15 (min) | 1:58 |
| Segment 4 (min) | 2:18 | Segment 16 (min) | 2:15 |
| Segment 5 (min) | 2:08 | Segment 17 (min) | 2:10 |
| Segment 6 (min) | 2:12 | Segment 18 (min) | 2:19 |
| Segment 7 (min) | 2:06 | Segment 19 (min) | 2:35 |
| Segment 8 (min) | 2:30 | Segment 20 (min) | 2:26 |
| Segment 9 (min) | 2:23 | Segment 21 (min) | 2:28 |
| Segment 10 (min) | 2:21 | Segment 22 (min) | 2:26 |
| Segment 11 (min) | 2:24 | Segment 23 (min) | 2:14 |
| Segment 12 (min) | 2:05 | Segment 24 (min) | 2:30 |
| Total (min) | 27:11 | Total (min) | 27:38 |

Each of the twelve segments had a duration of around two to two and a half minutes,

with the average speaking rate of 162 words per minute. While the speech focused on

business and leadership concepts, it was expected that domain-specific knowledge would

have a minimal impact on the quality of interpretation, as few specialized terminologies

were involved.
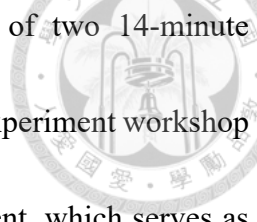
A single extended speech was preferred over two shorter ones due to the intention to maintain consistency in terms of the topic, the speaker's pace, accent, and delivery style. Additionally, the speech was presented in an authentic scenario, potentially containing minor grammatical errors or self-corrections. These aspects provided interpreters with an authentic context that pre-recorded audios created under controlled conditions could not replicate.

After the initial experiment, a follow-up experiment was conducted to investigate additional alternatives for collaboration. The participants continued working in their original teams, adopting a third approach that differed from both the conventional CI approach and the collaborative dual-person method. Further details and the rationale behind this approach will be elaborated on in the relevant section of the paper.

Table 3.3

*Lengths of Materials for the Follow-up Experiment (Minutes)*
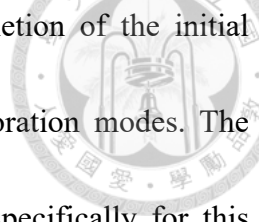
| Interpreting Segment | Video 1 | Video 2 |
|---|---|---|
| Segment 1 (min) | 2:20 | 2:05 |
| Segment 2 (min) | 2:00 | 2:09 |
| Segment 3 (min) | 2:41 | 2:22 |
| Segment 4 (min) | 2:16 | 2:14 |
| Segment 5 (min) | 2:02 | 2:11 |
| Segment 6 (min) | 2:35 | 2:23 |
| Total (min) | 13:54 | 13:24 |

The materials used for the follow-up experiment consisted of two 14-minute speeches delivered by the identical speaker featured in both the pre-experiment workshop and the initial experiment. In the context of this follow-up experiment, which serves as an extension, the study also takes into consideration that interpreters operate within a work shift model, with each interpreter being active for approximately 15 minutes. The consideration is reflected in the choice of the length of the materials. Each video was divided into a total of six segments, with the majority of segments lasting approximately two to two and a half minutes, with the average speaking rate of 160 words per minute. This duration mirrored the materials used in both the pre-experiment workshop and the experiment. While the subject matter remained consistent, focusing on leadership, none of the specific content was identical.

## 3.3 Experimental Procedure and Data Collection

The experiment undertaken in this study centered around assessing the viability of a collaborative dual-person approach in CI. Given the relative uncommon nature of this approach within the interpreting domain, a pre-experiment workshop was organized to introduce participants to the new method. Subsequently, the actual experiment was conducted a week following the workshop. Furthermore, interviews were carried out among the participants to gather direct insights from interpreters. A follow-up experiment

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as well as interviews were conducted two weeks after the completion of the initial

experiment and the interviews to further explore different collaboration modes. The

researcher and a rater with an interpreting background, enlisted specifically for this

purpose, assessed the data collected during the experiment to offer perspectives on

interpreting quality, considering both accuracy and delivery. Each participant signed a

consent form (see Appendix II) before the workshop, demonstrating their understanding

of the experimental procedures. They were informed that the entire process would be

recorded to facilitate data collection and analysis for the study.

### 3.3.1 Pre-experiment workshop

To familiarize the interpreters with the relatively uncommon collaborative dual-

person approach used in the task, a pre-experiment workshop was conducted for each

team separately one week before the formal experiment. The workshop lasted for

approximately 1 hour, and a speech given by the same speaker was given to interpreter

pairs as practice materials. The speech was edited with a duration of around 14 minutes,

consisting of six segments. While both the practice material and experiment material

focus on leadership, the contents of the two do not overlap. Interpreter pairs were free to

choose their preferred methods and the number of times they wish to practice with the

provided material. At the beginning of the workshop, interpreters were informed about

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how they would work together during the actual experiment. This approach of revealing

the working method beforehand was considered acceptable since interpreters in real-life

scenarios typically know their partners in advance and are aware of the client's

requirements.

The workshop aimed to provide the interpreters with an opportunity to become

familiar with, or at least gain some experience in, interpreting from their partners' notes

and taking notes for their partners. This practical experience was intended to help

interpreter pairs adjust their collaboration techniques. However, no specific instructions

or comments was provided to avoid influencing the experiment itself.

Table 3.4

*Lengths of the Material for the Pre-experiment Workshop (Minutes)*

| Interpreting Segment | Video |
|:---:|:---:|
| Segment 1 (min) | 2:03 |
| Segment 2 (min) | 2:20 |
| Segment 3 (min) | 2:29 |
| Segment 4 (min) | 1:48 |
| Segment 5 (min) | 2:32 |
| Segment 6 (min) | 2:40 |
| Total (min) | 13:52 |

Each segment of the material employed in the pre-experiment workshop spanned

approximately two to two and a half minutes, closely resembling the material used for the
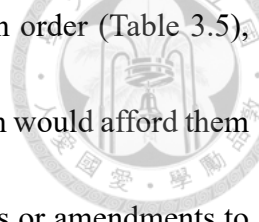
actual experiment. The participants were encouraged to experiment with the collaborative

dual-person approach, given its unconventional nature. In addition to segment duration,

the content employed in the workshop also aligned in terms of subject matter with the

material utilized in the actual experiment. The speech was delivered by the same speaker,

ensuring consistency in elements like pace, intonation, and style. This approach

minimized disparities between the two materials and maximizes their utility. However,

the participants were informed that the material used in the workshop would not be

identical to that in the actual experiment. They were told that both the topic and the

speaker may differ from those provided in the pre-experiment, ensuring that the

participants did not become overly prepared.

Table 3.5

*Suggested Order of Interpreting Tasks for the Pre-experiment Workshop*

|  | Attempt 1 | Attempt 2 |
|---|---|---|
| Segment 1 | Note-taking: | Note-taking: |
| Segment 2 | Participant A | Participant B |
| Segment 3 | Rendering:<br>Participant B | Rendering:<br>Participant A |
| Segment 4 | Note-taking: | Note-taking: |
| Segment 5 | Participant B | Participant A |
| Segment 6 | Rendering:<br>Participant A | Rendering:<br>Participant B |

While each group was provided with a suggested interpretation order (Table 3.5), they had the flexibility to make adjustments. Following the suggestion would afford them two attempts—one for an initial trial and another for any adjustments or amendments to their collaborations. The participants were permitted to discuss between two attempts in order to adjust their strategies for enhanced collaboration. This adaptability was essential as the workshop's primary objective was to acquaint participants with a novel interpreting method. The participants, all of whom were graduate students following an interpreting track, had mandatory interpreting courses along with supplementary practice sessions on a weekly basis. However, their exposure to the collaborative dual-person approach was limited to the experiment itself. Additionally, the participants were granted the opportunity to utilize the pre-experiment material for further practice, employing either method as often as they prefer. Hence, the purpose of this workshop was to establish a platform for the participants to gain familiarity with the dual-person mode and remain impartial to both approaches, ensuring an unbiased experience.

### 3.3.2 The experiment

During the experiment, each team was assigned a total of two CI tasks, in which the participants implemented the designated approach for each task. Both tasks involved interpreting from English into Chinese. This study intended to conduct an experiment

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centered on interpreting into the A language. The reasoning for this choice was to reduce

the extra workload on the interpreter pairs, particularly when utilizing a collaborative

dual-person approach for tasks of extended duration.

The duration of each task was approximately 30 minutes, and the materials had been

meticulously chosen to maintain similarity in terms of the speaker, topic and syntactic

context. Furthermore, these materials were aligned with the content presented in the pre-

experiment workshop. The participants adopted two different approaches for the two

tasks: the conventional single-person approach and the collaborative dual-person

approach, where one interpreter focuses on listening while the other performs note-taking.

The sequencing of interpretation in the experiment had also been randomized and would

be elaborated upon in the subsequent section (Table 3.6). This randomization was

intended to avoid potential biases, as well as practice effects and fatigue effects, stemming

from a specific order.
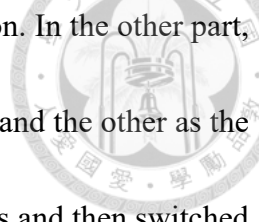
Table 3.6

*Order of Interpreting Tasks for the Experiment*

| | | Group 1 (Participants 1A, 1B) | Group 2 (Participants 2A, 2B) | Group 3 (Participants 3A, 3B) | Group 4 (Participants 4A, 4B) |
|---|---|---|---|---|---|
| Part 1 | Segment 1<br>Segment 2<br>Segment 3<br>Segment 4<br>Segment 5<br>Segment 6 | 1A | 2A | Note-taking: 3A<br>Rendering: 3B | Note-taking: 4B<br>Rendering: 4A |
| | Segment 7<br>Segment 8<br>Segment 9<br>Segment 10<br>Segment 11<br>Segment 12 | 1B | 2B | Note-taking: 3B<br>Rendering: 3A | Note-taking: 4A<br>Rendering: 4B |
| Part 2 | Segment 1<br>Segment 2<br>Segment 3<br>Segment 4<br>Segment 5<br>Segment 6 | Note-taking: 1B<br>Rendering: 1A | Note-taking: 2A<br>Rendering: 2B | 3A | 4A |
| | Segment 7<br>Segment 8<br>Segment 9<br>Segment 10<br>Segment 11<br>Segment 12 | Note-taking: 1A<br>Rendering: 1B | Note-taking: 2B<br>Rendering: 2A | 3B | 4B |
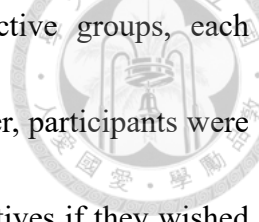
The participants were paired with the same partner throughout both parts of the experiment. In one part, they took turns independently interpreting six segments

consecutively, which included both note-taking and speech production. In the other part, the participants divided their tasks, with one acting as the note-taker and the other as the interpreter. They worked collaboratively for six consecutive segments and then switched roles. The order in which each pair started with a specific approach was randomized to ensure fairness throughout the experiment, as shown in Table 3.6. The materials used had a duration of 55 minutes, and the participants engaged in continuous work throughout the two-hour experiment. No breaks were incorporated between segments or parts, replicating a real-life setting with the intention of enabling participants to experience a continuous half-day CI task in the experimental condition. Also, the participants were interviewed promptly after the experiment to capture their responses while their memories of the experience were still fresh.

3.3.3 Interviews

Semi-structured interviews were conducted after the experiment. The participants were interviewed in pairs to gather their insights and perspectives on the collaborative dual-person approach, based on their firsthand experience as the interpreters. The interview process of each group was approximately 30 minutes. The participants were interviewed alongside their partners, providing an opportunity for them to reference specific incidents from the experiment and engage in discussions about them if desired.

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Even though the interviews were conducted within their respective groups, each participant provided individual responses to every question. However, participants were permitted to react to their partners' opinions and share their perspectives if they wished to do so.

A total of ten interview questions were prepared for the post-experiment interviews during the 30-minute interview (See Appendix III). These questions were designed to explore the participants' viewpoint on consecutive interpretation, identify areas that could be enhanced within a consecutive interpretation framework, acquire a deeper understanding of their experiences during the experiment, as well as their views on how the audience may perceive interpretation services using the approach employed in the experiment. The primary goal was to assess the practicality and challenges associated with a collaborative dual-person approach in consecutive interpretation tasks, with the intention of exploring the potential for establishing an effective interpreting method and implementing any necessary adjustments. When the participants raised specific topics, additional questions were posed to elicit further details. They were also encouraged to share anything related to the experiment, even if it wasn't included in the predetermined question list.

3.3.4 Follow-up experiment and interviews

The original experiment design incorporated two methods: a conventional CI approach and a collaborative dual-person approach, where note-taking and rendering were assigned to different participants within a team. This setup aimed for a theoretically ideal scenario where one interpreter could focus entirely on listening while the other provided notes as a visual cue.

Despite the participants collaborating within the prescribed dual-person method, their cooperation was limited to the predefined roles and did not extend beyond those boundaries. In the experiment, the participants were constrained to follow specific instructions, leaving no room for them to explore alternative methods of collaboration. Additionally, concerns arose regarding note-deciphering, potentially leading to interventions. While observing the experiment process, a significant challenge became apparent as the participants faced difficulty fully embracing the dual-person approach, particularly when lacking prior experience beyond the pre-experiment workshop. The confidence levels of some participants were impacted as they were used to relying on their own notes. This observation was validated during interviews, where participants shared their thoughts and experiences in the experiment. Moreover, the turn-taking approach, where two interpreters worked under the conventional single-person mode, lacked true collaboration as its primary purpose was to serve merely as a comparative
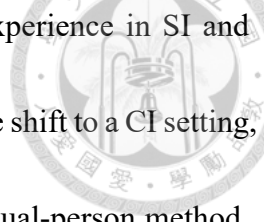
counterpart to the collaborative dual-person approach. The passive interpreter had limited engagement when off-duty. Consequently, the notion of introducing a more easily adopted collaborative approach gained traction.

During the interview, the four groups shared their opinions and preferences on collaborative methods in CI, as well as potential enhancements. One participant in the final group suggested that having a partner to assist in checking information would be beneficial. However, this could only be accomplished during turn-taking, as both interpreters are occupied with different tasks (listening and note-taking) in dual-person CI. This idea closely resembled SI.

Therefore, the research introduced the idea of implementing an SI-inspired mode in CI in a follow-up experiment. It was initially accepted by one group during the interview and was subsequently proposed to the remaining groups. They showed willingness to try this new method in the follow-up experiment. In this modified method, interpreters took turns interpreting during the task, allowing the passive interpreter to offer any form of assistance. This included partners helping with note-taking, searching for terminologies, providing written cues during interpretation, or even whispering corrections when needed.

In essence, participants had access to the same resources and collaboration they would have in the booth while performing a simultaneous interpreting task. The only difference was that they were engaged in CI in this follow-up experiment. This approach

proved familiar to the participants, given their prior interpreting experience in SI and working with a boothmate in both active and passive roles. Despite the shift to a CI setting, it did not represent an entirely new approach like the collaborative dual-person method. Hence, the participants did not require additional training sessions to become familiar with it. Also, true collaboration was evident in the SI-inspired CI mode, where the passive interpreter actively contributed to supporting their partner, extending beyond mere note-taking as seen in the collaborative dual-person approach. The participants may find this mode more comfortable and confidence-inspiring, given that they were interpreting independently with additional support.

All participants expressed their willingness to take part in the follow-up experiment, which was conducted two weeks after the initial experiment. The objective of the follow-up experiment was to enable the participants to contrast the various approaches they had encountered during the initial experiment. Two videos were selected as the materials for the follow-up experiment, each containing six interpreting segments. By maintaining control over the material, featuring the same speaker and topic, only a single collaborative approach was utilized. None of the preceding methods were replicated in the follow-up experiment. Serving as an extension of the initial study, this follow-up experiment offered the participants the opportunity to experience the assistance traditionally available exclusively in a booth, where two interpreters collaborate on the same task—now in a CI

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setting. One participant served as the active interpreter, while their partner assumed the role of the passive interpreter, offering assistance in any form throughout the entire process.
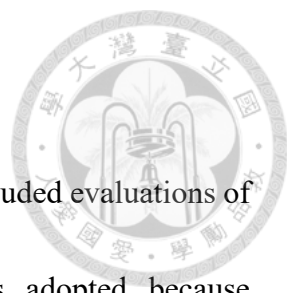
Following the follow-up experiment, in which a modified collaborative method was suggested and tested, the participants were invited to reflect on their experiences during the task and express their preferences for the working mode in CI tasks after experiencing the alternative collaborative method. The follow-up experiment and interview had a duration of approximately one hour, maintaining a format similar to the previous experiment and interview. The interviews were conducted immediately after the experiment, and the participants were interviewed within their respective groups. The aim of the follow-up experiment and interview was to assess whether the participants held distinct opinions regarding collaborative work with a partner in the context of CI.

## 3.4 Data Analysis

The data analysis encompassed both quantitative and qualitative data. Quantitative data was examined through a comprehensive assessment of interpreting output collected from the experiment, providing insights into the quality of interpretation. In parallel, qualitative data was analyzed through an in-depth exploration of post-experiment interviews to capture interpreters' perspectives.

3.4.1 Analysis of interpreting outputs

The assessment of the interpreting quality in the experiment included evaluations of both language and non-language elements. This approach was adopted because individuals in various roles may place varying degrees of importance on different aspects of interpreting quality. Liu (2013) provided the rating scales for accuracy and delivery of Taiwan's Chinese and English Translation and Interpretation Competency Examinations (ECTICE). The two rubrics encompass both language and non-language dimensions, corresponding with the focuses of this research during the evaluation process.

The researcher together with another rater with interpreting background formed a judging panel responsible for assessing the accuracy and delivery of interpreting outputs using the ECTICE rating scales (Table 3.7 and Table 3.8). Both accuracy and delivery carried equal weight in the evaluation process, aligning with the rubric commonly employed in exams across most interpreting programs in Taiwan. Notably, scores of 3 and below were categorized as a failure in the ECTICE rating scales. This classification pertained to interpreting output characterized by major errors and noticeable pauses or hesitations.

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Table 3.7
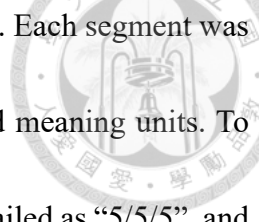
*Rating Scales for Accuracy of Taiwan's ECTICE Interpretation Exam (From Liu, 2013,*

*p.177)*

| Level | Description |
|-------|-------------|
| 5 | The message in the interpretation is the same as that in the original speech. It contains no errors. |
| 4 | The message in the interpretation is similar to that in the original speech. It contains one or two minor errors. |
| 3 | The message in the interpretation is slightly different from that in the original speech. It contains one major error or many minor errors. |
| 2 | The message in the interpretation is very different from that in the original speech. It contains two or more major errors. |
| 1 | The message in the interpretation is completely different from that in the original speech. |
| 0 | No interpretation is produced. |

Table 3.8

*Rating Scales for Delivery of Taiwan's ECTICE Interpretation Exam (From Liu, 2013,*

*p.177)*

| Level | Description |
|-------|-------------|
| 5 | The interpretation is fully comprehensible and very coherent with few instances of hesitation, repetition, self-correction, and redundancy. It contains few inappropriate usages of grammar or terms. |
| 4 | The interpretation is mostly comprehensible and coherent with some instances of hesitation, repetition, self-correction, and redundancy. It contains some inappropriate usages of grammar or terms. |
| 3 | The interpretation is generally comprehensible but is not very coherent and has many instances of hesitation, repetition, self-correction, and redundancy. It contains many inappropriate usages of grammar or terms. |
| 2 | The interpretation can be understood with great difficulty. |
| 1 | The interpretation cannot be understood at all. |
| 0 | No interpretation is produced. |

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In the experiment, there were a total of 24 interpreting segments. Each segment was divided into three scoring units, taking into account both length and meaning units. To elaborate, the maximum accuracy score for each segment was 15, detailed as "5/5/5", and the same scoring applied to the delivery aspect. The overall score was calculated as the average of the accuracy and delivery scores. Emphasizing the importance of both accuracy and delivery in the interpreting output during the evaluation process, non-linguistic factors contributing to effective interpretation were taken into account. This division facilitated a thorough analysis of each segment, ensuring a comprehensive approach for a holistic evaluation that considers both linguistic accuracy and effective communication in interpreting.

The raters on the judging panel initially scored the interpreting output individually, following the guidance and descriptions provided by the rating scales. In instances where interpreters combine ideas from different sentences or alter the sequence in the speech, or when raters held differing opinions, the judging panel engaged in discussions to deliberate on the discrepancies. Ultimately, a unanimous and final decision was reached through thorough discussion. The preference for discussions over calculating inter-rater reliability stemmed from the presence of a clear rubric with descriptions and the involvement of only two raters. This approach aimed to prevent potential bias or misjudgment in the evaluation process by ensuring a comprehensive understanding
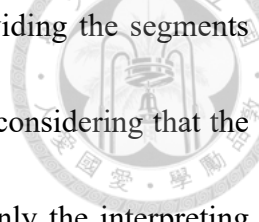
between the raters.

Figure 3.1

*Example of Scoring Units in A Segment*

| | Source Speech | Accuracy (0-5) | Delivery (0-5) |
|---|---|---|---|
| Scoring Unit 1 | Leadership is the ability to stand on the street corner with your own red hat and simply talk about what you believe. Got red hat? Got red hat? Got red hat here. And all the other people wearing red hats, whether they know their own "why" or not, whether they can see their own red hat or not, are eerily drawn to you because what you're able to do is put into words the way they see themselves. What you're able to do is put into words the values and beliefs that they hold dear. And they're drawn to you because they feel that they can trust you and they can start to form community around you. This is what leadership is. | | |
| Scoring Unit 2 | Leadership puts our own desires and our own values and our own beliefs into words. There's an inextricable link between leadership and communication. Those who lead are the ones who can clearly talk about what they believe, and those who can clearly talk about what they believe are the ones who lead. Let's imagine that we're out on a on a tour, a three-hour tour on a boat. And we get stranded on a desert island. Here we are all stranded on the desert island. The question is, how will we get off the island? Well, one of us stands up and says I will lead. We like that we're social animals. We appreciate leadership. And he stands up and says, Okay. Who's got ideas? You. You think we should build a fire? I like it. Good. You. You think we should look for food? Good, good, good. You. You think we should build a boat? Good. I like it. OK, let's take a vote. | | |
| Scoring Unit 3 | At the same time, someone else stands up and says, as we were coming into the beach, I saw some mosques over on the west side of the island and I saw some smoke, which means there's a fishing village over there and if we can get to that fishing village, we can find help. Now we're gonna have to get through this forest to get there, and I don't know how to get through the forest. I'm gonna need some help. But if you want to help, I'll welcome it. And if you don't want to help, don't worry. When we get help, we'll come back and get you. The question I have for you is who do you want to follow? Who do you want to follow? | | |

The raters were provided with both the video of the speech and the transcript for scoring the interpreting output of the participants in the experiment. This provision enabled the raters to gain a more comprehensive understanding of the material used in the experiment and facilitated the rating process. Each segment was further divided into three scoring units for both accuracy and delivery, as illustrated in Figure 3.1. The division

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was based on meaning and the approximate number of words. Dividing the segments allowed raters to adopt a more comprehensive approach in scoring, considering that the participants might excel in one part and miss the other. Notably, only the interpreting output in the initial experiment was scored, excluding the follow-up experiment. The rationale for this decision lies in the fact that the follow-up experiment, applying the SI-inspired CI mode, served as a comparison to interpreting under conventional CI mode and the collaborative dual-person approach used in the initial experiment. The goal was to explore the participants' preferences. Additionally, the follow-up experiment only employed one approach, omitting turning-taking and the collaborative dual-person approach. Therefore, even though the material was presented by the same speaker on a similar topic, directly comparing the scores of the interpreting output may not be appropriate. Consequently, the focus in the follow-up experiment was on investigating the interpreters' experiences.

Descriptive statistics of interpreting performance (including accuracy, delivery, and overall performance) were calculated. The analysis involved examining the performance of participants in groups and as individuals to explore potential patterns in the data. Individual performance was examined as it was crucial to identify any extreme data or special cases that could have a significant impact on group performance. Furthermore, paired-samples t-tests were conducted separately for accuracy, delivery, and overall

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performance to determine whether any statistically significant differences were observed between the two CI modes.

### 3.4.2 Analysis of interview data

The interview questions were designed to gather the participants' perspectives on the collaborative dual-person working mode implemented in the experiment. These participants had firsthand experience with two distinct modes of CI during the experiment, enabling them to make meaningful comparisons regarding their own performance. The participants' insights and comments could be triangulated with their CI performance scores to see if their perceptions and performance were aligned.

In addition to exploring the participants' experiences, there were questions aimed at delving into the challenges posed by the collaborative approach. These inquiries sought to uncover the difficulties interpreters may encounter while working in a dual-person collaborative mode. Moreover, the interview questions also investigated into the participants' levels of interest and their perceived need for a partner in a CI task. By gathering common preferences and responses from the participants, these insights could serve as valuable indicators for recommendations on potential improvements or adjustments to the CI working mode, particularly the dual-person collaborative mode.

# Chapter 4 Results
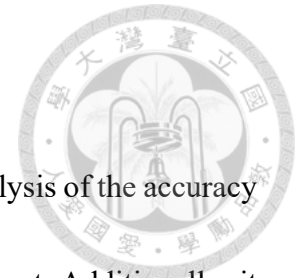
This chapter presents the study's findings, encompassing an analysis of the accuracy level, delivery quality, and overall performance of interpreting output. Additionally, it provides an in-depth examination of the participant interviews.

## 4.1 Analysis of Interpreting Output

The scores of interpreting output were jointly determined by the researcher and another rater possessing a background in interpretation. The experiment comprised 24 segments, each further divided into three parts. Each part received separate scores for accuracy and delivery in accordance with Taiwan's ECTICE interpretation exam rating scales, where the highest score is 5. As per the scoring rubrics, parts scoring 3 or below indicated significant errors in accuracy and noticeable hesitations in delivery.

### 4.1.1 Accuracy in interpreting output

The accuracy scores for each segment are presented in their respective boxes in Table 4.1. Each participant in every segment received three scores, as each segment was divided into three scoring units. For a clearer understanding, a normalized score is enclosed in parentheses, with the highest value set at 100. As a result, the highest attainable score for a participant in a segment would be "5/5/5 (100.0)."

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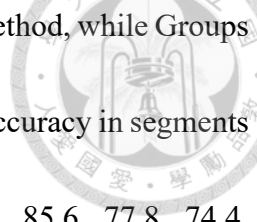
Table 4.1

*Accuracy Scores of The Participants' Interpretations by Segments*

| | 1A (Conventional CI) | 2A (Conventional CI) | 3B (Dual-person CI) | 4A (Dual-person CI) |
|---|---|---|---|---|
| S1 | 4/5/2 (73.3) | 5/4/4 (86.7) | 4/3/4 (73.3) | 4/4/3 (73.3) |
| S2 | 4/4/4 (80.0) | 4/4/4 (80.0) | 4/3/2 (60.0) | 5/4/3 (80.0) |
| S3 | 3/4/3 (66.7) | 4/4/4 (80.0) | 4/4/3 (73.3) | 4/2/3 (60.0) |
| S4 | 5/5/5 (100.0) | 5/4/4 (87.6) | 4/4/4 (80.0) | 4/3/4 (73.3) |
| S5 | 5/4/4 (80.0) | 5/5/4 (93.3) | 5/5/3 (86.7) | 3/4/5 (80.0) |
| S6 | 5/5/4 (93.3) | 4/5/4 (86.7) | 5/4/5 (93.3) | 4/3/5 (80.0) |
| Avg | 82.2 | 85.6 | 77.8 | 74.4 |

| | 1B (Conventional CI) | 2B (Conventional CI) | 3A (Dual-person CI) | 4B (Dual-person CI) |
|---|---|---|---|---|
| S7 | 4/4/3 (73.3) | 5/5/5 (100.0) | 4/3/3 (66.7) | 4/4/3 (73.3) |
| S8 | 2/5/4 (73.3) | 4/5/5 (93.3) | 4/4/4 (80.0) | 4/4/3 (73.3) |
| S9 | 3/3/4 (66.7) | 5/4/4 (86.7) | 2/2/5 (60.0) | 3/3/4 (66.7) |
| S10 | 4/4/4 (80.0) | 5/5/4 (93.3) | 4/5/4 (86.7) | 4/3/3 (66.7) |
| S11 | 3/3/4 (66.7) | 5/4/4 (86.7) | 5/4/4 (86.7) | 5/5/4 (93.3) |
| S12 | 4/5/5 (93.3) | 4/5/5 (93.3) | 2/5/4 (73.3) | 3/5/4 (80.0) |
| Avg | 75.6 | 92.2 | 75.6 | 75.6 |

|     | 1A<br>(Dual-person CI) | 2B<br>(Dual-person CI) | 3A<br>(Conventional CI) | 4A<br>(Conventional CI) |
|-----|-----|-----|-----|-----|
| S13 | 5/4/5 (93.3) | 5/4/5 (93.3) | 5/4/5 (93.3) | 5/5/5 (100.0) |
| S14 | 5/5/4 (93.3) | 5/5/5 (100.0) | 5/5/3 (86.7) | 5/5/5 (100.0) |
| S15 | 4/3/5 (80.0) | 3/5/1 (60.0) | 3/1/3 (46.7) | 4/4/5 (86.7) |
| S16 | 5/5/5 (100.0) | 4/5/5 (93.3) | 2/5/5 (80.0) | 5/5/4 (93.3) |
| S17 | 5/4/4 (86.7) | 5/5/4 (93.3) | 4/3/3 (66.7) | 4/4/4 (80.0) |
| S18 | 4/4/4 (80.0) | 5/5/5 (100.0) | 5/3/2 (66.7) | 5/3/3 (73.3) |
| Avg | 88.9 | 90.0 | 73.3 | 88.9 |

|     | 1B<br>(Dual-person CI) | 2A<br>(Dual-person CI) | 3B<br>(Conventional CI) | 4B<br>(Conventional CI) |
|-----|-----|-----|-----|-----|
| S19 | 1/4/3 (53.3) | 5/4/4 (86.7) | 5/5/4 (93.3) | 3/3/3 (60.0) |
| S20 | 5/4/5 (93.3) | 5/5/4 (93.3) | 5/4/5 (93.3) | 5/5/5 (100.0) |
| S21 | 4/3/4 (73.3) | 5/4/5 (93.3) | 5/4/5 (93.3) | 4/5/5 (93.3) |
| S22 | 3/3/5 (73.3) | 5/5/4 (93.3) | 5/5/4 (93.3) | 5/4/4 (86.7) |
| S23 | 4/4/5 (86.7) | 4/3/5 (80.0) | 5/4/4 (86.7) | 4/4/3 (73.3) |
| S24 | 4/3/4 (73.3) | 5/4/3 (80.0) | 5/4/4 (86.7) | 4/3/3 (66.7) |
| Avg | 75.6 | 87.8 | 91.1 | 80.0 |
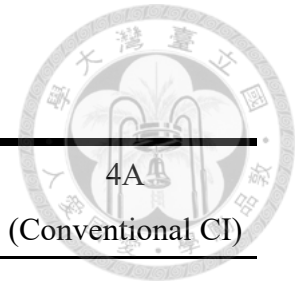
In segments 1-12, Groups 1 and 2 utilized the conventional CI method, while Groups 3 and 4 employed the collaborative dual-person method. In terms of accuracy in segments 1-6, both Groups 1 and 2 outperformed Groups 3 and 4 (82.2, 85.6, 77.8, 74.4, respectively). However, in segments 7-12, Group 2 was the only one to achieve a higher overall score (92.2), as Groups 1, 3, and 4 received identical scores (75.6, 75.6, 75.6, respectively).

Groups utilizing partners' notes, particularly Group 4, exhibited a higher frequency of major errors (scored 3 or below) across the 12 segments. Group 2, on the other hand, stood out as the only group with no major errors. Interestingly, Groups 1 and 3, composed of Year 2 students, demonstrated a similar number of major errors, while Groups 2 and 4, consisting of Year 3 students, displayed a notable difference. This raised questions about whether interpreting from others' notes proved more challenging for more experienced interpreters. Yet, this pattern did not persist in the second half of the experiment.

In segments 13-24, the four groups switched their interpreting methods. In segments 13-18, Groups 1, 2, and 4 achieved comparable scores (88.9, 90.0, 88.9, respectively), while Group 3 (73.3) lagged behind with lower accuracy and more major errors. In segments 19-24, Groups 2 and 3 (87.8, 91.1, respectively) surpassed Groups 1 and 4 (75.6, 80.0, respectively) in accuracy, revealing no discernible pattern to conclusively determine which method enhanced overall accuracy. However, two other noteworthy observations

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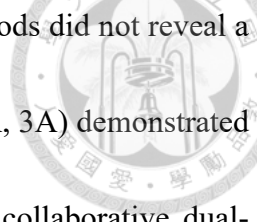
were made. On three occasions, participants received a score of 1, indicating that they missed a significant portion of the segment. Notably, two instances involved participants interpreting from their partner's notes under dual-person CI (1B in segment 19 and 2B in segment 15). In both cases, they received high scores before or after the part with a score of 1, suggesting they may have skipped a section due to difficulty recalling and interpreting from their partners' notes, leading them to make a decision to omission.

Conversely, two participants consistently displayed inaccuracies throughout an entire segment. Participant 3A in segment 15 and Participant 4B in segment 19, both interpreting from their own notes under conventional CI, exhibited a tendency to stay on the wrong track. It was noteworthy that no more than two consecutive scores were below 3 for all eight participants throughout the 24 segments when they focused on listening under dual-person CI.

Table 4.2

*Overall Accuracy Performance of The Participants (Normalized Score)*

|  | 1A | 1B | 2A | 2B | 3A | 3B | 4A | 4B | Avg. |
|---|---|---|---|---|---|---|---|---|---|
| Conventional CI | 82.2 | 75.6 | 85.6 | 92.2 | 73.3 | 91.1 | 88.9 | 80.0 | 83.6 |
| Dual-person CI | 88.9 | 75.6 | 87.8 | 90.0 | 75.6 | 77.8 | 74.4 | 75.6 | 80.7 |

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The participants' performance under different interpreting methods did not reveal a consistent pattern, according to Table 4.2. Three participants (1A, 2A, 3A) demonstrated improved accuracy when utilizing their partner's notes under the collaborative dual-person method, Participant 1B maintained consistent accuracy, and four participants (2B, 3B, 4A, 4B) exhibited better accuracy with their own notes under the conventional CI method.

However, an interesting observation emerged when considering the order of interpreting assigned to the participants (see Table 3.6). Participants 2B and 3A were both tasked with continuously interpreting segments 7-12 and segments 13-18, spanning a duration of one hour. Participant 2B employed conventional CI in segments 7-12 and was assigned the rendering role under dual-person CI in segments 13-18. On the other hand, Participant 3A was assigned the rendering role using dual-person CI in segments 7-12 and used conventional CI in segments 13-18. The other six participants did not continuously perform the rendering role.

Both Participants 2B and 3A experienced a decline in accuracy during this extended period of interpreting. Participant 2B's accuracy dropped from 92.2 to 90.0, and Participant 3A dropped from 75.6 to 73.3. In contrast, the remaining participants, who had the opportunity to rest either as note-takers or during turn-taking, demonstrated an improvement or maintained their accuracy compared to their initial performance.

4.1.2 Delivery in interpreting output

The participants might excel in fluently conveying the message despite some inaccuracies, or vice versa. Audience appreciation may vary based on their emphasis on either quality. Therefore, by incorporating both accuracy and delivery scores, the analysis aims to provide a well-rounded evaluation. The delivery scores for each segment are presented in their respective boxes in Table 4.3, utilizing the same format as in Table 4.1, where the highest attainable score for a participant in a segment would be "5/5/5 (100.0)."

Table 4.3

*Delivery Scores of The Participants' Interpretations by Segments*

|  | 1A (Conventional CI) | 2A (Conventional CI) | 3B (Dual-person CI) | 4A (Dual-person CI) |
|---|---|---|---|---|
| S1 | 5/5/4 (93.3) | 4/4/4 (80.0) | 5/5/5 (100.0) | 4/5/3 (80.0) |
| S2 | 3/4/3 (66.7) | 3/3/5 (73.3) | 4/3/3 (66.7) | 4/4/3 (73.3) |
| S3 | 5/4/3 (80.0) | 4/4/4 (80.0) | 4/4/4 (80.0) | 3/2/2 (46.7) |
| S4 | 4/3/4 (73.3) | 4/4/4 (80.0) | 5/3/3 (73.3) | 4/3/4 (73.3) |
| S5 | 3/3/4 (66.7) | 5/4/4 (86.7) | 4/4/4 (80.0) | 4/3/4 (73.3) |
| S6 | 4/3/4 (73.3) | 5/4/4 (86.7) | 4/5/4 (86.7) | 4/4/4 (80.0) |
| Avg | 75.6 | 81.1 | 81.1 | 71.1 |

45
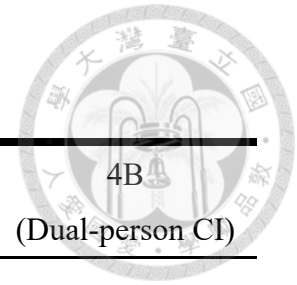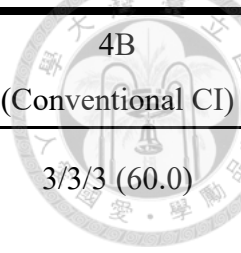
|  | 1B (Conventional CI) | 2B (Conventional CI) | 3A (Dual-person CI) | 4B (Dual-person CI) |
|---|---|---|---|---|
| S7 | 5/4/4 (86.7) | 4/5/4 (86.7) | 4/3/4 (73.3) | 5/4/4 (86.7) |
| S8 | 4/5/5 (93.3) | 4/4/4 (80.0) | 5/4/3 (80.0) | 4/3/4 (73.3) |
| S9 | 4/4/4 (80.0) | 4/4/4 (80.0) | 3/2/4 (60.0) | 4/2/3 (60.0) |
| S10 | 4/4/4 (80.0) | 5/5/4 (93.3) | 4/5/4 (86.7) | 4/3/4 (73.3) |
| S11 | 4/4/4 (80.0) | 5/5/4 (93.3) | 5/5/4 (93.3) | 5/4/4 (86.7) |
| S12 | 4/4/4 (80.0) | 3/4/5 (80.0) | 4/5/5 (93.3) | 2/4/4 (66.7) |
| Avg | 83.3 | 85.6 | 81.1 | 74.4 |

|  | 1A (Dual-person CI) | 2B (Dual-person CI) | 3A (Conventional CI) | 4A (Conventional CI) |
|---|---|---|---|---|
| S13 | 5/4/5 (93.3) | 5/4/4 (86.7) | 5/4/5 (93.3) | 5/5/5 (100.0) |
| S14 | 4/4/4 (80.0) | 4/4/4 (80.0) | 5/3/3 (73.3) | 4/4/4 (80.0) |
| S15 | 4/4/5 (86.7) | 3/5/5 (86.7) | 4/4/4 (80.0) | 5/4/5 (93.3) |
| S16 | 4/4/5 (86.7) | 4/4/5 (86.7) | 4/4/4 (80.0) | 5/4/4 (86.7) |
| S17 | 4/4/4 (80.0) | 4/4/3 (73.3) | 4/2/3 (60.0) | 4/4/4 (80.0) |
| S18 | 4/4/4 (80.0) | 4/5/4 (86.7) | 4/2/3 (60.0) | 4/3/4 (73.3) |
| Avg | 84.4 | 83.3 | 74.4 | 85.6 |

|      | 1B<br>(Dual-person CI) | 2A<br>(Dual-person CI) | 3B<br>(Conventional CI) | 4B<br>(Conventional CI) |
|------|------------------------|------------------------|-------------------------|-------------------------|
| S19  | 4/4/4 (80.0)           | 4/4/5 (86.7)           | 5/4/4 (86.7)            | 3/3/3 (60.0)            |
| S20  | 5/4/4 (86.7)           | 4/4/4 (80.0)           | 5/4/4 (86.7)            | 4/3/4 (73.3)            |
| S21  | 4/4/4 (80.0)           | 4/5/4 (86.7)           | 5/5/5 (100.0)           | 3/4/3 (66.7)            |
| S22  | 4/4/4 (80.0)           | 3/4/4 (73.3)           | 4/4/5 (86.7)            | 4/3/3 (66.7)            |
| S23  | 4/5/5 (93.3)           | 3/4/4 (73.3)           | 4/4/4 (80.0)            | 3/3/3 (60.0)            |
| S24  | 4/4/4 (80.0)           | 4/4/3 (73.3)           | 4/4/4 (80.0)            | 3/2/3 (53.3)            |
| Avg  | 83.3                   | 78.9                   | 86.7                    | 63.3                    |

In segment 1-12, Participants 1B and 2B demonstrated superior delivery performance (83.3, 85.6, respectively). Both interpreted with their own notes under the conventional CI method, with 2B achieving the highest overall score, and 1B being the sole participant with no scores of 3 or below. Notably, only three participants (1A, 4A and 4B) had normalized score for delivery performance below 80.0 (75.6, 71.1, 74.4, respectively), and two of them interpreted with their partner's notes under dual-person CI.

In segment 13-24, three participants (2A, 3A and 4B) also received a normalized delivery score below 80.0 (78.9, 74.4, 63.3, respectively). Interestingly, two of them used their own notes, and the participant with the lowest score (4B) also utilized their own notes under conventional CI. On a positive note, three participants (1A, 1B and 3B)

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achieved delivery scores without any scores of 3 or below, and two of them adopted the collaborative dual-person approach.

Table 4.4

*Overall Delivery Performance of The Participants (Normalized Score)*

|  | 1A | 1B | 2A | 2B | 3A | 3B | 4A | 4B | Avg. |
|---|---|---|---|---|---|---|---|---|---|
| Conventional CI | 75.6 | 83.3 | 81.1 | 85.6 | 74.4 | 86.7 | 85.6 | 63.3 | 79.5 |
| Dual-person CI | 84.4 | 83.3 | 78.9 | 83.3 | 81.1 | 81.1 | 71.1 | 74.4 | 79.7 |

When comparing the overall delivery performance of the participants under two different CI methods in the experiment, as shown in Table 4.4, half of the participants (2A, 2B, 3A, and 4A) demonstrated a decline in delivery when using their partners' notes under dual-person CI, even when they were expected to be more attentive without the burden of note-taking. However, despite the argument that deciphering others' notes could be challenging or even impossible, the remaining half of the participants (1A, 1B, 3A, 4B) either improved or maintained their delivery with the assistance of their partners' notes.

4.1.3 Overall performance

The overall score for each participant was calculated as the average of their accuracy scores (see Table 4.2) and delivery scores (see Table 4.4). In Table 4.5, the overall performance of the four groups was the average of the two participants in the respective groups. Individual performance was assessed for each participant during the experiment, with evaluations and scores assigned individually. However, the reason why overall group performance was also examined alongside individual performance in accuracy and delivery is that the participants received assistance from their partners in dual-person CI. Additionally, they could be regarded as a cohesive unit when both were hired for a single task and collaborated together. Therefore, investigating overall group performance was considered valuable and could offer a more comprehensive perspective.

Table 4.5

*Overall Performance by Groups (Normalized Score)*

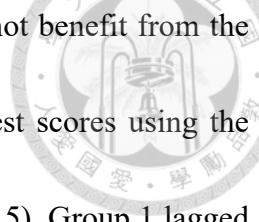|  | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|
| Conventional CI | 79.2 | 86.1 | 81.4 | 79.5 |
| Dual-person CI | 83.1 | 85.0 | 78.9 | 73.9 |

To offer a visualized comparison, Figure 4.1 illustrates the overall performance of the four groups under the two different CI methods: conventional CI and dual-person CI.

Figure 4.1

*Overall Performance by Groups in Different CI Methods*
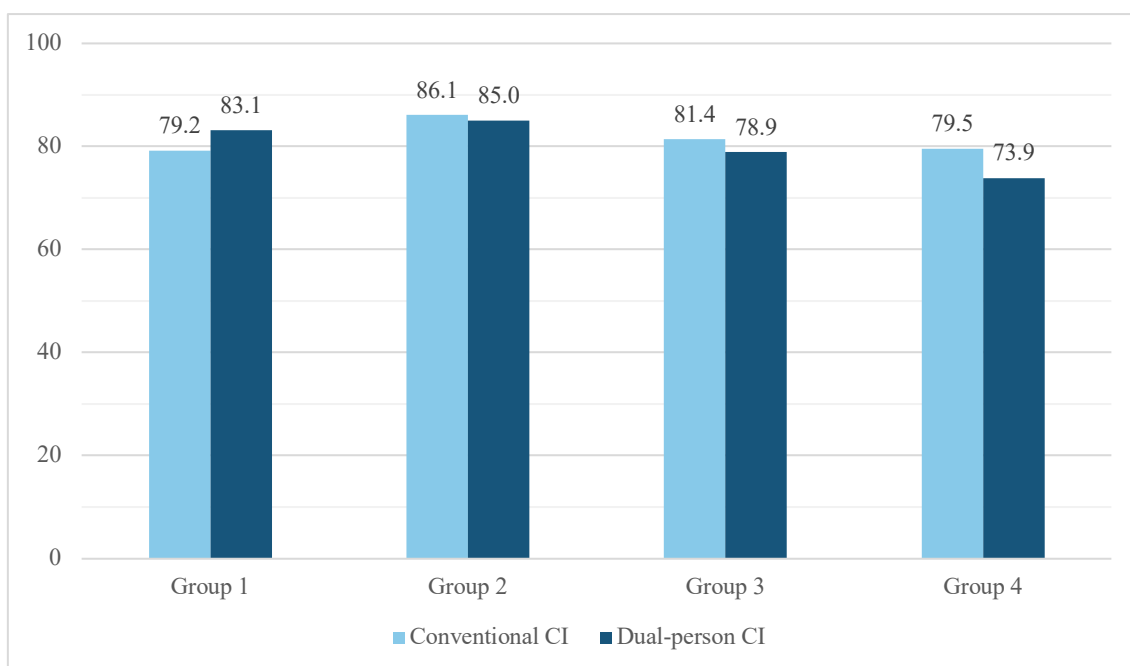


Among the four groups, three groups (Groups 2, 3, and 4) witnessed a decrease in their overall performance under the collaborative dual-person method, while Group 1 was the only group that successfully improved their performance. Although the groups that did not enhance their performance with the dual-person CI outnumbered the group who did, the difference in performance under the two methods in some groups was not substantial, especially for Group 2, with only a 1.1-point difference (86.1 in conventional

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CI and 85.0 in dual-person CI). Notably, the three groups that did not benefit from the collaborative dual-person approach were the groups with the highest scores using the conventional CI method (Group 2: 86.1, Group 3: 81.4, Group 4: 79.5). Group 1 lagged behind with 79.2 under the conventional CI method but later became the only group with a noticeable 3.9-point improvement with the collaborative dual-person method (from 79.2 to 83.1). This raises the question about whether the impact of the method may differ among interpreters with different skill levels and experience with the existing conventional CI method.

Also, Groups 1 and 2 initially conducted the experiment using conventional CI before transitioning to dual-person CI in the second half, while Groups 3 and 4 followed a different order. Group 1 may have been underprepared at the outset, resulting in underperformance in conventional CI during the first half. However, their performance improved in the second half when they switched to dual-person CI, possibly due to the practice effect. Conversely, Group 2's performance dropped under the same order, indicating that they did not benefit from the practice effect. However, their performance in dual-person CI showed the smallest difference compared to other groups who also experienced a decline.

On the other hand, Groups 3 and 4 began with dual-person CI. The order of interpreting modes may have influenced their performance, especially considering that
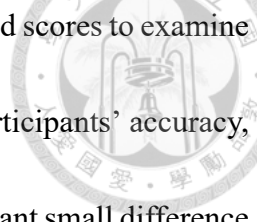
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dual-person CI was relatively new to them. As they became more familiar with the task

and benefited from the practice effect, both Group 3 and 4 showed improved performance

in the latter half of the experiment when they utilized conventional CI.

Table 4.6

*Results of Paired T-test on Accuracy, Delivery and Overall Performance*

|  | *M* | *SD* | *df* | *t* |
|---|---|---|---|---|
| **Accuracy** |  |  | 7 | 1.086 |
| Single-person | 83.61 | 7.04 |  |  |
| Dual-person | 80.71 | 6.87 |  |  |
| **Delivery** |  |  | 7 | -0.084 |
| Single-person | 79.45 | 7.99 |  |  |
| Dual-person | 79.70 | 4.70 |  |  |
| **Overall** |  |  | 7 | 0.509 |
| Single-person | 81.53 | 6.79 |  |  |
| Dual-person | 80.20 | 5.08 |  |  |

Paired-samples t-tests are employed in quantitative data analysis to compare two sets

of data derived from the same group of participants (Dornyei, 2007). The paired t-tests

conducted in this research aimed to determine whether there was any statistically

significant difference between the two CI methods employed by the eight participants.

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A total of three paired t-tests were conducted using the normalized scores to examine whether there was a significant difference in the statistics of the participants' accuracy, delivery, and overall performance. All results suggested a non-significant small difference between the conventional CI method, implemented in turn-taking during the experiment, and the collaborative dual-person method for accuracy ($t(7) = 1.086$, $p = .313$), delivery ($t(7) = -0.084$, $p = .935$), and overall performance ($t(7) = 0.509$, $p = .626$).
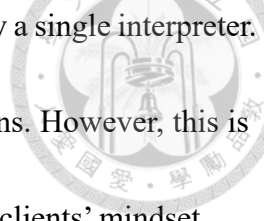
## 4.2 Analysis of Interview

The 10 interview questions centered around the participants' perspectives on CI, the collaborative dual-person method, and their overall experience in the experiment. The interviews were conducted in the participants' respective groups, allowing the participants to discuss and share their perspectives along with their partners. This approach facilitated conversations, especially when referring to specific events during the experiment, with a particular focus on collaboration.

### 4.2.1 Perceptions of consecutive interpreting

The participants' general perceptions of CI were formed and influenced by what they had been taught during interpreting training in school and how the public or the clients usually view interpreting. When asked about their perceptions of the current model of CI,

all eight participants asserted one feature: CI is typically carried out by a single interpreter. Their agreement with this idea will be explored in subsequent sections. However, this is certainly a longstanding impression prevalent in the public and most clients' mindset.

The participants typically prepared independently before a CI task, given that they often worked as the sole interpreter in their respective work settings. Even in classroom settings, they operated independently during performances, leaving little opportunity to explore potential collaborative approaches in CI. They demonstrated their understanding of the training design and its underlying methodology, noting its alignment with the conference interpreting market for CI. Hence, the perspectives of clients influence the direction of training sessions, shaping how interpreters perceive the nature of interpreting services.

When only one interpreter is hired for a CI task in work settings, the cost is significantly lower than the cost of hiring two interpreters. Gradually, cost becomes the dominant factor when choosing the number of interpreters hired, or even the mode of interpreting. CI has generally been viewed as the simpler and more cost-effective mode of interpreting compared to SI. Participant 3A underscored that there was a higher prevalence of untrained interpreters in CI tasks compared to SI in the market, further substantiating the perception that people consider CI to be the easier of the two modes. Also, Participant 4B pointed out that clients might consider shifting to SI if they opted to

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hire two interpreters.

This indicates that when selecting the mode of interpreting and determining the number of interpreters needed, the decision is often driven by cost and time considerations rather than by assessing which interpreting mode best fits the event and prevents interpreter fatigue.

Despite the prevailing perception of CI held by both interpreters and clients, when questioned about potential enhancements in CI tasks, seven out of eight participants voiced their dissatisfaction with the current working model of CI. Only one participant expressed satisfaction with the current state of CI. Several participants conveyed their real-life experiences with CI, typically lasting one to three hours with only one interpreter employed. Notably, 3 participants (1A, 1B, and 4B) highlighted the exhaustion associated with CI, attributing it to the solitary nature of the work.

Participants 1A and 1B specifically pointed out that the two-hour experiment in this research, featuring a 55-minute material divided between two interpreters, was already fatiguing. They noted a decline in their listening comprehension and interpreting quality over the course of the task. Participant 1B further suggested a 30-minute period as the ideal duration for CI while maintaining quality. While acknowledging the ability to complete a three-hour conference in CI, they cautioned that the quality would likely become unstable. Additionally, three participants (1A, 1B, and 2A) shared the view that
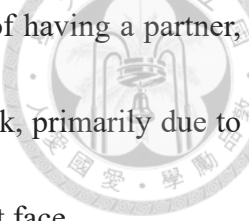
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having a partner could be advantageous, offering an extra layer of support.

Apart from having a partner in CI tasks, two participants (3A and 3B) expressed a desire for interpreters to be less visible in CI. They proposed the idea of not interpreting on stage facing the audience but rather broadcasting to minimize unnecessary attention and pressure. It could also facilitate cooperation if two interpreters are hired. Two participants (1A and 3B) noted that if one interpreter appears idle during the shift or engages in conversations with their partner during the assignment, even if it is work-related, the clients or the audience members may perceive it as unprofessional behavior, assuming they are not actively working.

Typically, considerable attention is drawn to interpreters when performing, whether on stage or not, given that the interpreter's presentation becomes the sole focus. Also, three participants (1A, 1B, and 2A) mentioned being advised that interpreters should strive for invisibility. Hence, allowing interpreters to work from less visually prominent positions could help reduce their stress levels and facilitate smoother collaboration, particularly when partnering with another interpreter, all without risking any perception of unprofessionalism.

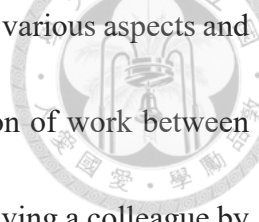4.2.2 Partnership and collaboration in consecutive interpreting

While seven out of eight participants recognized the areas for optimization in the

working in the CI working mode and some recognized the benefits of having a partner, not all of them preferred working with another interpreter in a CI task, primarily due to the unfamiliarity with the concept and potential challenges they might face.

Participants 1B, 4A, and 4B opted for a solitary interpreter in CI, despite acknowledging the benefits a partner could provide and the potential risk of fatigue and decreased performance that may arise when working solo. The participants who chose to work alone cited uncertainties associated with having a partner, such as potential differences in interpreting terms and challenges in maintaining consistency if it conflicts with one's accustomed approach. Additionally, concerns were raised about potential conflicts arising if interpreter partners have divergent understandings of the source speech. Some participants also questioned whether a partner could provide immediate assistance, as is common in SI. While expressing a preference for working alone, Participant 1B acknowledged that a partner could be beneficial in longer conferences, such as half-day or one-day events, as there are still advantages to partnership in CI. The participant suggested that having a partner could help reduce fatigue and contribute to maintaining stable interpreting quality throughout extended periods of work.

The five remaining participants (1A, 2A, 2B, 3A and 3B) favored having two interpreters in CI. Participants 1A and 3A highlighted the reassurance that a partner can provide, whether through written or spoken language, or a confirming glance. This

suggests that collaboration between partners in CI can extend beyond various aspects and has rooms for exploration. Participant 2A mentioned that the division of work between two interpreters allows them to allocate their strengths effectively. Having a colleague by the interpreter's side not only facilitates collaborative work but also offers mental support and comfort. Participant 3A suggested that partners could also allocate tasks based on language direction, allowing interpreters to focus better and work collaboratively. Additionally, Participant 3A suggested that interpreters could collaborate in a manner similar to SI. Participant 3B shared a similar viewpoint, emphasizing that interpreters can assist each other in information retrieval, similar to an SI task. 3B added that with more time available in a CI task, the information obtained is more likely to be utilized and beneficial. This discussion further served as the inspiration and foundation for the follow-up experiment conducted after the initial experiment and interviews.

When the concept of partnership between two interpreters in a CI setting was first introduced before the experiment, most participants could only envision a division of interpreting segments as collaboration in CI was a relatively novel concept to them. Turn-taking was also a more favored approach when two interpreters were assigned to one task. There was a significant contrast, as seven out of the eight participants preferred the turn-taking approach if two interpreters were hired. However, turn-taking in CI lacks genuine collaboration, as evidenced by several participants stating that they were unsure what they
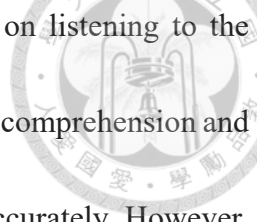
could do when they were the passive interpreter in the experiment during the turn-taking segments.

Participants 1A and 1B expressed worries about the consistency of different interpreters, noting that even with controlled tones and terms, differences in voice might be distracting to the audience. However, when asked why two interpreters with distinct voices were acceptable in SI, even the participants acknowledged that CI is no less challenging than SI but cited the traditional standard they were educated with—that CI is typically performed by one person, and collaboration was not a part of their training from the classroom setting.

Within the context of partnership in CI, the collaborative dual-person approach proposed in this research was even more unfamiliar to all the participants. They had never entirely used others' CI notes as a cue when performing CI before participating in this study, and they acknowledged the personal nature of CI notes since this was what they had been told during interpreting training. Therefore, it is worth investigating the participants' opinions on the feasibility of the dual-person approach in CI and whether their opinions had changed after the experiment.

Some participants were intrigued by the experimental approach, and their expectations aligned with the theoretical underpinnings of this CI model's design. During interpreting training, they were advised to rely less on notes and instead prioritize active

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listening when working in CI. They believed that focusing solely on listening to the source speech, without the burden of note-taking, could enhance their comprehension and potentially improve their ability to convey the speaker's message accurately. However, since the collaborative dual-person approach, where note-taking and interpretation tasks are divided between two interpreters, had never been implemented in any CI settings, whether in a classroom or a real-life conference, its feasibility remained uncertain. As a result, the participants expressed diverse opinions on the approach.

Among the participants who were less certain about this unfamiliar approach, some expressed concerns about the potential challenges it might pose. However, within this group, while some believed it would be impossible to implement, others considered it worth experimenting with. The participants were specifically asked to indicate whether their opinions on the feasibility of the approach changed after the experiment, taking into account their individual experiences when they attempted it. The challenges highlighted by the participants are further discussed in the subsequent session.

4.2.3 The challenges of the collaborative dual-person approach

The major challenges faced by the participants primarily revolved around note-taking, given that the changing role of the note-taker represented the most significant departure from conventional CI in the dual-person CI setup used in this experiment. These

challenges can be further categorized into note-taking habits, methods of collaboration,

and difficulties encountered during rendering.

The challenges related to note-taking extend beyond the symbols typically used in

CI notes. Since all participants had undergone training in consecutive interpreting for at

least a year prior to the experiment, many had already developed their own note-taking

habits.

Figure 4.2

*Example of Shared Symbols: Participants 3A and 3B's Shared Symbols (Left) and Notes*

*in the Experiment (Right)*
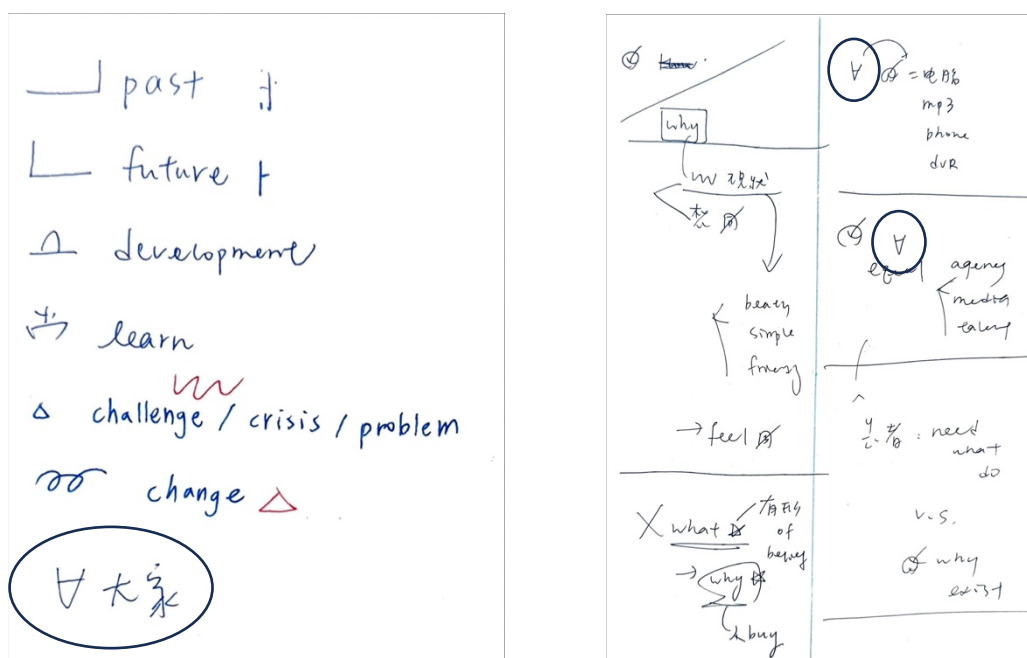


In an attempt to align their note-taking methods with those of their partners, some
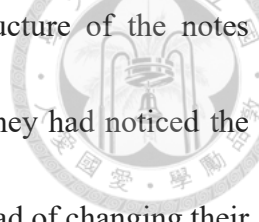
participants shared their commonly used symbols during pre-experiment workshops. Participants 3A and 3B, along with some other groups, shared a list of symbols with their partners before the experiment, as in the left-hand picture in Figure 4.2. During the experiment, the symbol Participant 3A used to represent "everyone" appeared twice in one segment when they took notes for their partner, as indicated by the circles in the right-hand picture in Figure 4.2. Additionally, some participants opted to write more words in their notes to facilitate comprehension for their partners. While some differences in note-taking were easily identified and resolved, others, particularly those related to the structure of the notes, proved more challenging to adjust.

Figure 4.3

*Example of Structure Difference in Notes: Notes of Participants 3A (Left) and 3B (Right).*
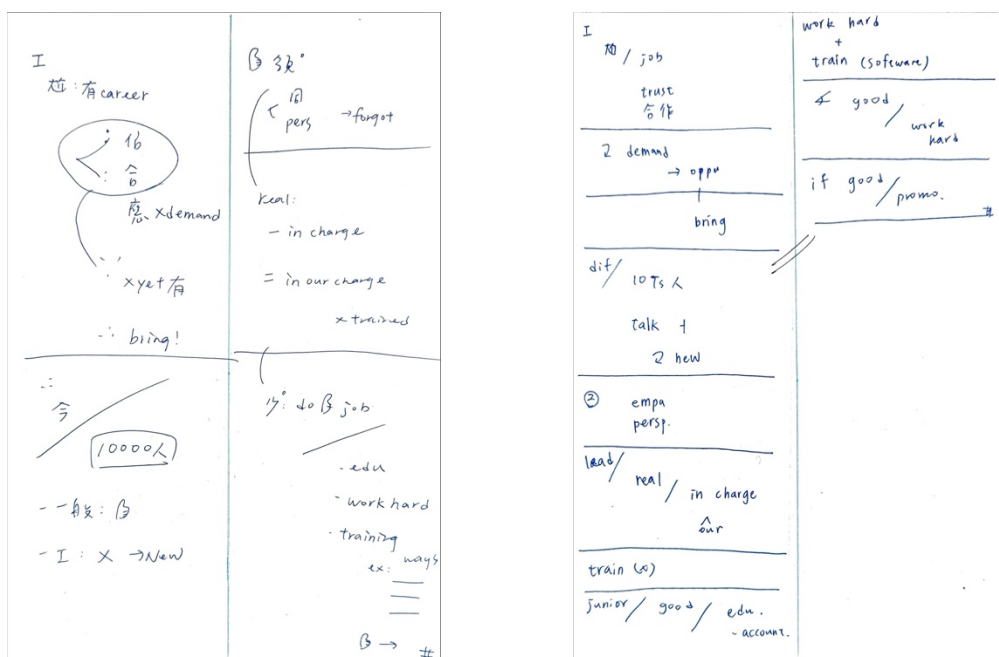
Participants 3A and 4A also observed differences in the structure of the notes between themselves and their partners. Participant 3A shared that they had noticed the difference during the workshop, so they decided to work with it instead of changing their note-taking styles in such a short time. The two images in Figure 4.3 display the notes taken by Participants 3A and 3B on the same segment during the pre-experiment workshop. This comparison provides a clear illustration of the differences in their note-taking styles when both participants were noting for the same segment.

Participant 3A's notes contained larger chunks of information grouped together in one box, while their partner, Participant 3B, was accustomed to distributing information across multiple boxes. This led to a notable difference in how they organized messages and the amount of information they relied on memory for. Participant 3B mentioned that they typically put the information of one sentence in one box. While altering the use of full forms or reducing the use of self-invented symbols might be relatively easy, changing the structure of their notes, which was directly impacted from their comprehension of the source speech, proved to be more challenging within the limited time frame of the experiment. Gile (1995a) outlined the Effort Model of the speech production phase in CI, which combines remembering, note-reading, and production. Participant 3A addressed the challenge by adjusting their note-reading approach to cater to their partner's note-taking style. They read more boxes at a time. Conversely, Participant 4A only realized the

difference during the experiment, presenting a challenge for them to adjust on the spot.

When serving as the note-taking interpreter for their partner, many participants expressed concerns about their partners being unable to decipher their notes. All the participants mentioned attempting to change or at least consider changing their note-taking styles to make it easier for their partners to decipher their notes. Common challenges for the participants when taking notes for others include using symbols, managing their handwriting, and determining if their partner can rely on memory. As a result, many participants shared their commonly used symbols or adjusted their note-taking habits to help their partners become familiar with their notes. Also, some participants chose to write out entire words or even phrases occasionally, aiming to offer a more complete picture to aid their partner's memory recall during interpretation.

Participants 2B and 4B mentioned their intention to write complete words for their partners, but often time constraints prevented them from doing so. Participants 3A and 3B expressed a similar desire during the workshop but later realized that changing their usual note-taking habits might negatively impact the quality of the notes and their attention to the source speech.

During the experiment, most participants utilized the symbols they had learned in their interpreting classes. Given that they had all received instruction from the same instructors in the same classroom environment, there was a shared understanding of

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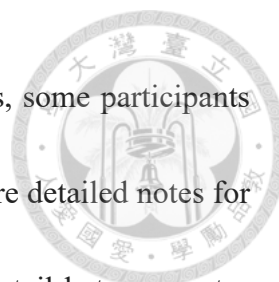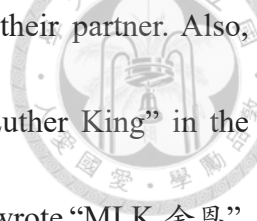
certain symbols among them. Apart from the use of shared symbols, some participants

also expressed their desire to write in complete forms or provide more detailed notes for

their partner. An example illustrating the disparity in the level of detail between notes

taken for oneself and the notes provided for a partner can be observed in Figure 4.4 below.

Figure 4.4

*Example of Notes for Oneself and for A Partner: Participant 1A's Notes for Themselves*

*(Left) and for Their Partner (Right).*
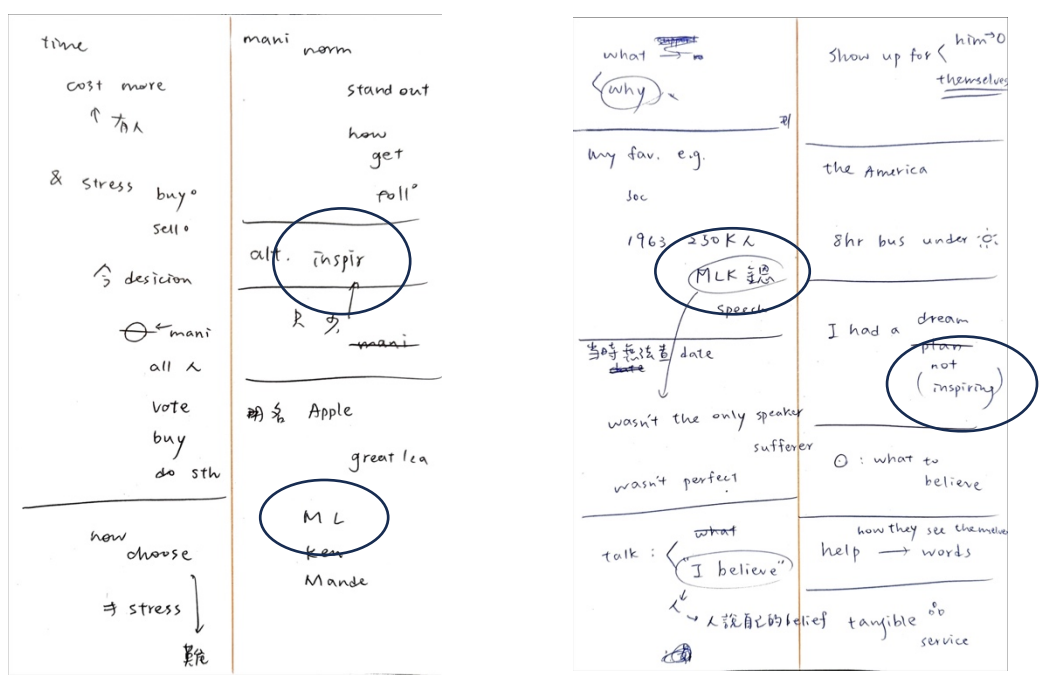


Participant 1A, for instance, frequently utilized abbreviated forms when jotting

down notes for themselves, but chose to use more comprehensive forms and longer

phrases when taking notes for their partner. In one instance, Participant 1A wrote "inspire"

on their notes and spelled out "inspiring" when taking notes for their partner. Also, Participant 1A wrote "ML" for themselves, referring to "Martin Luther King" in the source speech. However, when providing notes for their partner, they wrote "MLK 金恩". Interestingly, this difference occurred even though the segment for which Participant 1A assisted in note-taking for their partner came after the segment they had taken notes for themselves. Therefore, this indicated that Participant 1A wrote in more detail not because the terms or ideas appeared for the first time, but rather because they intended to provide more detailed notes for their partner, knowing that their partner would read from their notes.

Another significant challenge of the collaborative dual-person CI approach was its heavy reliance on trust. Participants 3A and 3B emphasized the importance of being familiar with their partner or practicing in advance. They highlighted that the pre-experiment workshop, despite being only 1 hour with a 14-minute material provided, helped them understand their partners' notes better, even though they had different note-taking habits. It is worth noting that there was no extra practice conducted in the week between the workshop and the experiment. Hence, it could be feasible if interpreters establish a long-term partnership, or alternatively, with additional training to adapt and refine their collaboration under this model. Participants 4A and 4B added that such an approach would be more effective with the cultivation of a long-term partnership. They

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suggested that if a partner was needed, taking turns or directly asking for help verbally might be easier to carry out than relying on reading each other's notes.
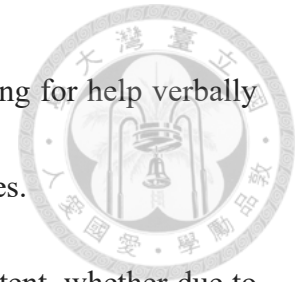
When trust between interpreting partners is not at its fullest extent, whether due to uncertainty about the interpreting approach or greater trust in oneself over one's partner, cracks can appear in the collaboration, ultimately hindering the effectiveness of the collaborative dual-person approach. Participant 4B mentioned that when note-taking is done by a partner, interpreters have less control over variables in the task, leading to increased stress and the need to divert attention to accommodate someone else. Participant 2B also emphasized the level of trust in this working mode, noting that even if they did not comprehend, they would resist reading from the notes.

When there was a lack of trust or discrepancies in the information noted and memorized by the two interpreters during the task, decision-making became an immediate challenge. Participant 1A shared that even if they could not read the notes, they made quick decisions, and the notes did not affect the output.
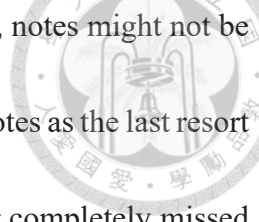
An interesting point raised by Participants 2A and 2B was the challenge of finding where the notes of the segment started. 2A added that their partners might insist on writing the last few words or drawing a line to indicate the end of a segment when the speaker had stopped, leading to a potential delay in rendering. While not explicitly mentioned in the interviews, Participants 4A and 4B numbered the segments and directly pointed to the

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start when handing the notes over to their partner.

Although the majority of challenges discussed pertained to note-taking styles and collaboration strategies, Participant 1B, 3A and 4B identified a more significant challenge: retaining information when serving as the "listener" during the experiment. This difficulty could have a heightened impact under the collaborative dual-person approach, as their memory retention is crucial for utilizing their partners' notes effectively. They viewed taking notes individually as a tool to facilitate information processing and internalizing the information while encoding it into notes, so when listening and note-taking were combined, it actually helped retain the information.

Participants 2A, 2B, 4A, and 4B perceived reading others' notes during the reproduction phase as a distraction. While there were instances where they gained assurance through their partners' notes, the overall impact of distraction outweighed the assistance. Participant 2A noted being easily drawn to the notes in CI, and if the notes were not taken by themselves, it required extra time to read them, potentially causing panic. 2A initially believed that the note-taking dual-person approach could be helpful in enhancing listening comprehension. However, upon further reflection after the experiment, they discovered that if they had comprehended the content well, notes would only serve as a reinforcement and not become a distraction as long as their partner's notes strongly aligned with what they remembered or their partner's note-taking style was
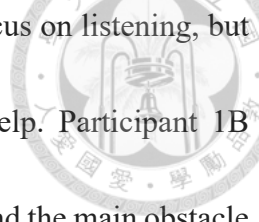
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similar to theirs. On the other hand, if they did not fully comprehend, notes might not be as effective. However, Participant 2A still considered their partners' notes as the last resort and admitted to turning to the notes if they could not comprehend or completely missed a specific segment.

Participant 1A was the only one who claimed not to find any difficulty in the experiment when adopting the collaborative dual-person approach. While some participants expressing opposing views highlighted uncertainties or potential conflicts in involving two interpreters in a task, Participant 1A offered a positive perspective. Participant 1A emphasized that the assistance provided by a partner could be viewed as optional, causing no inconvenience when not needed but proving valuable when necessary. This suggests a flexible and supportive approach to collaboration, acknowledging the potential benefits of a partner's assistance without imposing it as a constant requirement.

While challenges arose due to differences in interpreters' note-taking habits, the participants' varying perspectives on the importance and reliance on notes proved to be a significant factor. Participant 1A initially believed that using a partner's notes for assistance was impractical due to potential vast differences in note-taking habits. However, upon experiencing enhanced focus on listening and improved comprehension, they found that notes served as helpful cues. In contrast, Participant 1B held a different

perspective. They initially believed in the possibility of complete focus on listening, but if comprehension was insufficient, notes did not provide much help. Participant 1B emphasized that listening comprehension held greater significance, and the main obstacle for them was not others' notes.

Considering the challenges of the collaborative dual-person approach and comparing it with conventional CI, the participants expressed their preferences and provided their analysis of why the approach did not work in their favor during the experiment. Participant 1B noted that the method was pleasantly successful for them during the workshop. Group 1, assigned to use the collaborative dual-person approach in the second half of the speech according to the predetermined order, might have experienced fatigue after interpreting many segments in the experiment. It was suggested by 1B that if they had adopted the method at the beginning of the task, their opinion and performance might have changed.

Initially, one of the purposes of suggesting the CI method adopted in the experiment was to alleviate interpreters' fatigue. Regarding whether the collaborative dual-person approach allowed interpreters to rest, Participant 1A and 1B believed that even when focusing on one task, full attention was required, making the method still tiring. However, 3A and 3B expressed that they felt they could rest. Thus, opinions on whether the collaborative dual-person approach could help ease interpreters' burden and provide
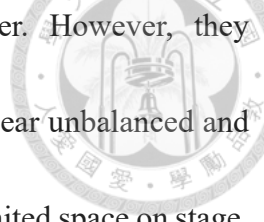
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relaxation varied among participants.

Despite differing opinions on the collaborative dual-person approach employed, the viewpoints from most participants further suggest that interpreters performing CI for an extended period could experience fatigue and highlights the importance of having two interpreters for tasks with long durations.

In addition to the challenges encountered during the experiment, all participants consistently highlighted the clients' perspective as a significant factor in the acceptance of the new method employed in CI and the hiring of two interpreters for a task. This consideration particularly revolves around cost considerations since clients are the stakeholders who pay the interpreters.

The participants noted the prevalent stereotype of hiring one interpreter for CI and two for SI, with the misconception that CI is perceived as easier. Participant 4A and 4B expressed concerns that clients might contemplate switching from CI to SI if two interpreters are required. Participant 3B suggested the possibility of introducing the practice of hiring two interpreters to new clients, fostering a new norm that clients are more likely to accept and recognize the benefits.
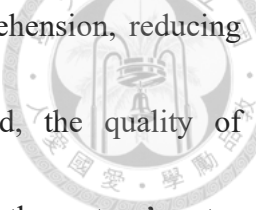
Participant 3A recommended employing two interpreters for two different language directions, suggesting that this approach could enhance acceptability for clients. In a similar vein, Participant 1A proposed leveraging enhanced quality as a persuasive

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argument for clients to consider hiring an additional interpreter. However, they acknowledged that hiring two interpreters for one speaker might appear unbalanced and peculiar. Participant 2A also raised the practical concern related to limited space on stage, which may not always be conducive to accommodating two interpreters. Additionally, Participant 1B also highlighted the potential challenge of different voices and expressed uncertainty about how clients and audiences might perceive a switch between interpreters, noting potential concerns about unpleasantness and inconsistency.

Several other participants emphasized the importance of maintaining a professional image for interpreters on stage. Participant 1B, 2B, and 3B noted that if one interpreter is taking notes while the other is not, and notes are being passed between them, it could create the impression for those unfamiliar with interpreting or this collaborative approach that one interpreter is not actively engaged. Both Participant 1A and 1B shared the view that interpreters are allowed to be more disorganized in the booth during SI, but in CI, they are more exposed to the audience. Participant 2B added that some people perceive interpreters as professionals because of their ability to multitask, so if they appear less active from the audience's perspective, it may diminish their perceived professionalism.

Anticipating that cost is the primary driving factor for most clients' decisions, some participants believed that if the interpreting quality under the collaborative dual-person approach proved to be enhanced, it could be a persuasive factor. Participant 1A

experienced increased concentration and improved listening comprehension, reducing their reliance on notes. As their comprehension level increased, the quality of interpretation improved, and nothing was intentionally fabricated from the partner's notes. As revealed in the previous section, Participant 1A's accuracy score and delivery score improved when switching to dual-person CI (Accuracy: from 82.2 to 88.9; Delivery: from 75.6 to 84.4). Participant 1A also observed various non-verbal features from the speaker during the speech, including gestures that conveyed meanings without verbal cues. For instance, the speaker used gestures to represent concepts like "face-to-face communication" or "interaction", and at other times, pointed to objects while only saying "this". They emphasized that if only one interpreter is working and occupied with taking notes or not fully focusing on the speaker for a moment, crucial non-verbal information could be missed or potentially misunderstood.

There were additional benefits for non-language aspects in the dual-person mode. Participant 2A derived mental comfort from the constant presence of the partner, who offered assistance consistently. Participant 3A felt a decrease in tension when working with a partner, allowing them to avoid remaining in a heightened alert mode throughout the task. Even when they missed a portion, they had a second chance by listening to their partner's rendition. Likewise, 3B emphasized the feeling of having moments for relaxation when employing the dual-person approach, whether in the role of the note-

taker or the listener.

Also, the preferences of the audience may play a significant role on clients' decision making. Yet, Participant 1A was the sole believer that the audience would rate the output higher under the collaborative dual-person approach. Three participants (2A, 3A, and 4B) believed that the audience might not discern a significant difference in the output quality. 4B expressed facing challenges in both parts of the experiment, regardless of the approach used. For 3A, the primary challenge revolved around reading from the notes, be it their own notes or those of their partner. This led to a perception that the output might appear similar from the audience's perspective. 2A emphasized the importance of presentation, suggesting that the audience might not distinguish the approaches.

The remaining participants (1B, 2B, 3B, and 4A) anticipated that the audience would prefer their performance when taking turns working individually. They expressed greater confidence in interpreting with their own notes, citing fewer uncertainties. While 2B acknowledged the significance of presentation in audience judgment, they also highlighted the potential impact of deciphering notes on interpreters' presentation. Additionally, they believed that having more people might lead to more conflict and less assertiveness. Therefore, they anticipated a better rating from the audience for their performance when taking turns interpreting on their own.

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4.2.4 SI-inspired CI mode

When discussing the turn-taking approach under the conventional single-person CI, Participant 3A specifically mentioned feeling unsure about what they could do as the passive interpreter, as it seemed like they were just sitting and doing nothing. The current study also noted that turn-taking might not be considered a true collaborative method if no actual assistance is provided beyond allocating work based on time periods. Participant 1A commented on the benefits of having a boothmate during SI, where instant help can be provided. In contrast, providing such assistance, particularly during the comprehension phase, seemed challenging in CI. The participants were not accustomed to collaborating in CI, as the norm was to have only one interpreter in a CI task. However, 3B strongly advocated for applying an SI working model in CI, leading to a follow-up experiment to allow all the participants to experience a different and potentially more effective mode of collaboration in CI.

In the initial experiment, the participants held divergent opinions on various aspects, including the preferred number of interpreters, the preferred collaborative method, and the feasibility and effectiveness of the collaborative dual-person approach in CI. After experiencing a third method in the follow-up experiment, where the participants primarily adopted the SI-inspired method in a CI task, alongside the conventional single-person mode and the collaborative dual-person approach, all eight participants unanimously
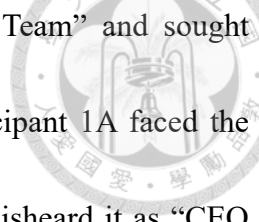
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agreed that the method used in the follow-up experiment was the most favorable among all options.

Remarkably, there was a unanimous consensus among the participants that this method was superior to working individually. Notably, even those who initially expressed a preference for working alone during the interview changed their stance after experiencing the new collaborative approach. This finding may suggest that the innovative approach explored in the follow-up experiment has the potential to be a game-changer in the field of CI, with every participant reaching an assertive decision in favor of the new method.

The way the participants collaborated when employing the SI-inspired mode in CI was similar to how boothmates worked together in a booth, but they had more time between hearing the source speech and reproducing their rendition in CI compared to SI. Most participants initially began by taking CI notes individually, even for the passive interpreters, out of concern that they might not be able to assist their partners effectively or because they were unfamiliar with new approaches in CI. However, as they progressed, some participants began to realize that there were more flexible methods, and taking notes individually might not always be the most effective approach in such interpreting mode.
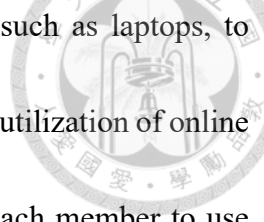
One direct method the participants used was to verbally ask their partner for help or signal to them when they encountered difficulty in reproducing certain terms or phrases.

For example, Participant 4B failed to catch the term "The Seal Team" and sought

assistance from their partner during interpretation. Similarly, Participant 1A faced the

same issue. Unfortunately, all the participants in Groups 1 and 4 misheard it as "CEO

Team", resulting in unsuccessful assistance for this incident based on the output.

Conversely, Participant 2A and 3B, as passive interpreters, successfully assisted their

partners in interpreting the meaning of the term "The Seal Team" and later confirmed that

their assistance was indeed needed during interpretation.
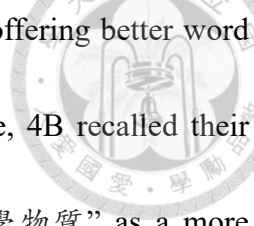
Another example occurred when the speaker mentioned "mask physical pain".

Participant 1B couldn't understand it but noticed their partner searching for the meaning.

In response, 1B decided to reference their partner's notes for that particular part during

interpreting. Although they didn't find the correct meaning, it demonstrated that a

partner's help could be a last resort when listening comprehension and context aren't

sufficient for decision-making. Most participants were somewhat hesitant to ask for help

when acting as the active interpreter. Participant 1B suggested that they might give their

partner a hint early on during the listening stage if they anticipated difficulty in a certain

part, signaling their partner to prepare to provide assistance during rendition. Participant

4B explained that even though they sometimes asked for help directly since it was the

most straightforward approach, they often attempted to handle it themselves first to avoid

appearing unprofessional to the audience.

As the participants were permitted to use electronic devices, such as laptops, to check terminologies or information and type key words as hints, their utilization of online resources became crucial in collaboration. Some groups opted for each member to use their own laptop, while others had one computer prepared, with the passive interpreter often designated to use it. For instance, Participants 2A and 2B decided to share one computer, dividing the screen into two parts: one for a word document and the other for a search engine. This arrangement proved convenient and effective for them. Participant 2A considered themselves a team player and actively searched for information online, taking notes on the word document. They even translated sentences with multiple numbers into Chinese to serve as a reference for their partner. They emphasized that this assistance was optional, akin to how boothmates operate in simultaneous interpreting, and noted the importance of not overly relying on hints to avoid interference. Initially, Participant 2B did not provide much help due to unfamiliarity with collaboration methods, causing 2A to search for information alone even as active interpreter. However, over time, 2B was positively influenced by their partner and began offering more assistance throughout the experiment.

Assistance provided by passive interpreters often proved helpful, although sometimes the information provided may not be actively required by the active interpreter. Interpreters are often considerate of their fellows' needs and may provide assistance

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anticipating their requirements. Participants 1B and 4B mentioned offering better word

choices for their partners, even if not always utilized. For instance, 4B recalled their

partner interpreting "chemicals" as "化學元素", suggesting "化學物質" as a more

appropriate alternative given the context. Their partner accepted the suggestion, finding

it useful. Interpreters may also notice certain words that pose challenges in interpretation.

Participant 4A provided the term "毒瘤(toxic)" to their partner upon noticing a pause,

while Participant 3A offered "主導性人格(alpha)" for their partner. The active

interpreters later admitted familiarity with these concepts but acknowledged difficulty in

translating them into the target language, particularly while still processing the unfinished

segment. Thus, a partner's assistance in CI may be valuable, as they can utilize the time

gap to provide optimal support.
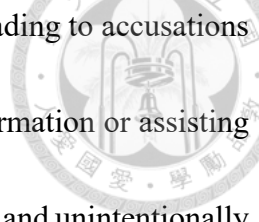
Participant 1B highlighted a specific instance where their partner assisted with non-

verbal content missed during the source speech. The speaker initially mentioned four

chemicals, then later quickly pointed and referred to "these two chemicals" without

specifying which two. 1B missed this crucial information, as there was no context to

discern which chemicals were meant. However, just seconds before 1B was to interpret

this part, their partner pointed to the two chemicals, effectively resolving the issue. Such

timely assistance would not have been possible if only one interpreter was handling the

task, demonstrating the importance of collaborative interpretation in capturing vital non-

verbal cues.

Reflecting on the participants' collaboration in the follow-up experiment using the SI-inspired mode in CI, all the participants found it to be a simpler alternative for incorporating collaboration into CI. Although one participant noted that searching for information while acting as the passive interpreter might detract from listening to the source speech, it ultimately comes down to task allocation and prioritization. Participant 4A, initially opposed to any form of collaboration in CI, changed their perspective after experiencing the method and acknowledged the value of having a partner available for assistance. They even stated that when encountering a part they were unsure about, the first thing that came to mind was the knowledge that their partner was there, and they could turn to their partner for help later. Many participants recognized the flexibility of collaboration in CI under this approach and suggested that training could be implemented to facilitate collaboration, such as providing assistance and determining the appropriate timing to seek help, thereby preventing delays.

However, the proposed SI-inspired CI mode necessitated a change in the setting, as interpreters would not be positioned in a booth. In CI scenarios where interpreters are required to be on stage, the implementation of this collaborative mode may not be suitable. During the interviews following the initial experiment, some participants had already mentioned that collaboration and communication between two interpreters in CI could

potentially be perceived as casual conversation unrelated to work, leading to accusations of unprofessionalism. If interpreters are seen busy searching for information or assisting their partners in front of the audience, it may also distract the audience and unintentionally shift focus away from the speaker. Therefore, the SI-inspired CI mode is not a one-size-fits-all solution and may only be feasible under specific conditions where interpreters can work out of sight of the audience. Additionally, the SI-inspired CI mode also shares the drawbacks of booth collaboration. In SI, interruptions from a partner, especially if they are too assertive or if the interpreter is not accustomed to being interrupted during rendition, can have a greater negative impact in CI. Interruptions or pauses in CI are more noticeable since the interpreter's delivery becomes the sole focus. While this collaborative mode shares similarities with SI and offers a relatively simpler collaboration method, it necessitates interpreters to undergo additional training and communication beforehand to effectively collaborate in CI. This preparation is essential to ensure seamless coordination and minimize potential disruptions during interpretation.
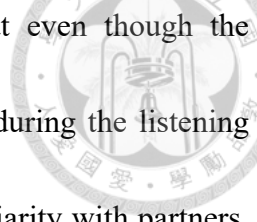
# Chapter 5 Discussion and Conclusion

The primary objective of the study was to explore methods for interpreters to enhance their performance in consecutive interpreting (CI), with a specific emphasis on collaboration. Theoretically, the collaborative dual-person approach was considered to enable interpreters to concentrate fully on listening, thereby alleviating the burden of note-taking. The experiment involved exploration and discussions concerning the participants' performance, their viewpoints on the collaborative dual-person mode and the SI-inspired CI mode, and potential collaborative methods. The findings of the study are detailed in this chapter.

## 5.1 Discussion of Research Findings

Research question 1: *Can a collaborative dual-person approach, in which interpreter A concentrates on note-taking while interpreter B on rendering the message, enhance interpreters' quality in interpreting output?*

Three out of four groups experienced a decline in their overall performance when adopting the collaborative dual-person approach, as the average of their accuracy and delivery scores showed. Individually speaking, the number of the participants who experienced a decline versus those who remained or enhanced their performance was evenly split. However, there was no statistically significant difference between the two
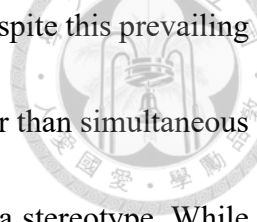
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approaches in the experiment. This may be due to the fact that even though the collaborative dual-person method eases the burden of interpreters during the listening comprehension stage, challenges related to note-taking habits, familiarity with partners, and memory retention could affect the feasibility of the method.

The focus of the experiment shifted towards collaboration in the follow-up experiment, and this aspect will be further discussed in the response of research question 2, which addresses interpreters' perceptions of collaboration in CI.

Research question 2: *How do interpreters perceive the collaborative dual-person approach in consecutive interpreting?*

During discussions on the collaborative dual-person approach, the participants showed varied interests, with some intrigued by the theoretical aspects while others raised the issue of the personal nature of note-taking. When evaluating the feasibility and improvement brought about by the collaborative dual-person approach in CI, the participants provided an evenly divided response. This aligns with the quantitative analysis of the participants' interpreting performance, suggesting that the approach neither significantly enhanced nor worsened overall performance due to the existence of both advantages and challenges.

One noteworthy issue discussed was the perception that CI is inherently an individual task. The participants expressed encountering this belief from both individuals

within the industry and those without an interpreting background. Despite this prevailing notion, many participants emphasized that CI is not necessarily easier than simultaneous interpreting. This research endeavors to highlight this perception as a stereotype. While budget considerations are crucial, the choice between CI and SI should align with the nature of the event.

Some participants were influenced by the idea that collaboration in CI is uncommon or hadn't experienced the advantages of working with a partner, given that having a partner in school and work settings for CI is rare. While they acknowledged the exhaustion in CI when only one interpreter was hired, many still did not initially prefer having a partner. However, when the SI-inspired CI mode was introduced during the follow-up experiment, all the participants preferred this method. Even those who initially did not prefer a partner changed their minds. This reflects that a method that works in interpreters' favor can challenge and potentially overcome stereotypes once they experience the benefits firsthand.

Collaborating with a partner in CI settings is seen as beneficial by most participants, as their partner can act as external help to alleviate the interpreter's fatigue. Additionally, the presence of a partner can provide significant mental support. Despite clients being the ones who pay the interpreters, the participants should be vocal about their ideas and challenge the existing stereotypes. Even though it may be challenging, as one participant

suggested, interpreters can initiate change by altering the mindset of new clients, steering discussions towards a more positive and informed direction.

When certain participants experienced the collaborative dual-person method and shared their opinions on this novel approach, the idea of conducting a follow-up experiment emerged. The primary challenge of the approach in the initial experiment revolved around the level of familiarity with the partner's notes when note-taking was used as a means to divide tasks between two interpreters. The objective of proposing this method was to explore the potential for collaboration in CI and whether it could enhance overall quality and performance.

The rationale behind applying the SI-inspired CI mode stemmed from interpreters' familiarity with how partners collaborate in a traditional booth setting. Shifting interpreters from a booth to a CI environment, whether on stage or not, allowed interpreters to assist their partners in various ways, as long as it didn't disrupt the interpretation process. This change reduced the time required for training and familiarization, making it a more accessible method to adopt and promote collaboration in CI. Furthermore, the SI-inspired CI mode embodies flexibility and is not confined to a single method of collaboration.

While other collaborative approaches were suggested by the participants during their interviews, these ideas remained to be tested to gauge interpreters' perspectives after
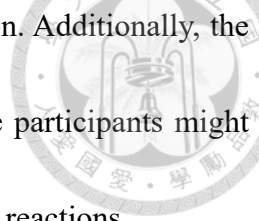
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experiencing them. However, the SI-inspired CI mode garnered positive responses from all the participants in this study, transforming initial doubts and negative opinions about how some view collaboration in CI.

Although this study focused on comparing single-person CI and dual-person CI, some view human-AI interaction as another form of collaboration. With the advent of various AI tools, their use in interpreting settings has also become more common. Some interpreters use automatic transcription software during interpreting to accurately capture numbers and perform sight translation when necessary. Orlando (2014) introduced a hybrid mode of interpreting called "consec-simul with notes". This interpreting mode combines both conventional CI and SI modes as interpreters can use a digital pen in CI settings to record the source speech while the speaker is speaking and play back the recordings during their interpretation. Even though consec-simul with notes is performed by a single interpreter, the utilization of AI tools, which enables interpreters to work with technology during interpreting, can be seen as an alternative form of collaboration.
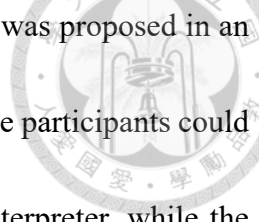
## 5.2 Limitations

Despite the efforts to replicate a real CI setting by considering the experiment's duration and the selected material, there were still notable differences. The use of videos and the absence of an on-site speaker might have created a different experience for the

participants compared to directly interacting with a speaker in person. Additionally, the absence of an audience could have influenced stress levels, and the participants might make strategic adjustments to their interpretations based on audience reactions.

The training time during the workshop was limited to one hour, with the participants working in groups to practice on a 14-minute video. Some groups mentioned that the workshop helped them become familiar with their partners' notes. Exploring the impact of multiple training sessions or allowing interpreters to acclimate to collaboration, perhaps with their own long-term partners before the experiment, could be an interesting avenue for future research. Additionally, given the emphasis on trust in collaboration in CI, it would be intriguing to explore whether heightened levels of trust, achieved through experimenting with the collaborative approach on partners who have extensive experience working together, can facilitate the method's utilization and improve performance.

Moreover, the experiment was conducted on a small scale with four groups of participants. Expanding the participant pool and including more variety, such as individuals from different academic grades beyond Year 2 and 3, or recruiting interpreters with varying years of experience, including professional interpreters in the market, could provide captivating insights into their performance under the method and their opinions towards it.
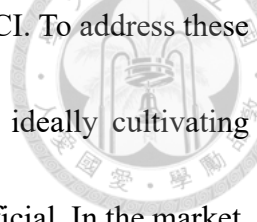
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Most importantly, since the collaborative dual-person approach was proposed in an experimental setting, there were many restrictions that limited how the participants could work with this method. Note-taking was strictly assigned to one interpreter, while the other interpreter could only listen to the interpreting material. In a real-life setting, such restrictions would not exist, and the situation might differ significantly. Additionally, some interpreters see note-taking as a way to help them process information and facilitate comprehension, as the act of taking notes may help interpreters concentrate and analyze the source speech more effectively. Therefore, separating note-taking from the long CI working condition may introduce new challenges.

Although the proposed collaborative method was theoretically feasible, the research could not control how participants used their partners' notes. If participants were excessively drawn to the notes, as some admitted, and ended up reading from them instead of using them as visual cues based on their own memory and comprehension, this could lead to other challenges. For example, interpreters might start making up information based on keywords, thus not benefiting from the original aim of the proposed method.

## 5.3 Future Research

One of the primary challenges of the collaborative dual-person approach was the variation in the participants' note-taking habits. Additionally, most participants lacked
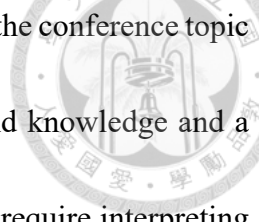
experience working with a partner, even in turn-taking scenarios for CI. To address these challenges, providing interpreters with longer training sessions or ideally cultivating long-term partnerships before entering the experiment could be beneficial. In the market, certain interpreters frequently collaborate with one or more regular partners, particularly in SI assignments. Hence, establishing enduring partnerships is a common and achievable practice.

As this study concentrated on the collaborative method in CI, the CI notes from the experiment were not the primary focus. Considering the various personal note-taking methods, identifying a specific pattern across multiple participants might as well prove challenging. However, if future research aims to delve into notes under the collaborative dual-person method, it could explore whether interpreting partners adapt their note-taking habits for convenience, such as using more words than symbols. The research could investigate if these changes actually aid partners in memory recall and contribute to smoother rendering during interpretation.

While the evaluation of interpreting output considered both language and non-language elements, involving the researcher, the rater, and the participants reflecting on their own performance, introducing end-users and clients as separate groups of raters would add an intriguing dimension.
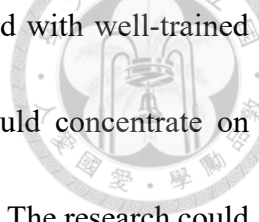
End-users, acting as real-life conference attendees, represent the general audience in

conference settings. Inviting individuals from backgrounds related to the conference topic

as audience and raters could be ideal. They possess both background knowledge and a

keen interest in the speech, making them likely candidates who may require interpreting

services. End-users' assessments could cover aspects such as accuracy, quality of the

target language, and the overall delivery of the interpretation, aligning with guidelines

proposed by previous studies on assessing interpretation quality (e.g., Cheung, 2013; Lee,

2008; Zwischenberger, 2010). This approach ensures that the evaluation captures the

essence of how a typical conference audience would perceive and assess interpreting

performance.
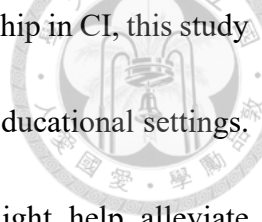
As for clients, their willingness to participate in the experiment as raters could be

crucial. If clients witness an enhancement in the interpreting output and recognize the

benefits of having a partner of interpreters in CI, they may become more receptive to the

idea that collaboration in CI offers multiple advantages and should not be perceived solely

as an easier or more cost-effective choice.

In contrast, the SI-inspired CI mode adopted in the follow-up experiment received

more positive feedback among the participants. This method, also involving collaboration,

is more familiar to interpreters due to their experience in SI booths. Adapting to this new

method in CI could be easier, potentially bringing a clear positive impact on interpreters'

output and CI experience. The various collaboration strategies available in the SI-inspired

CI mode, akin to the resources in a booth, could be further explored with well-trained interpreters to better understand its feasibility. Future research could concentrate on comparing the SI-inspired CI mode with the conventional CI method. The research could also explore other interpreters' perspectives on the method and examine potential SI collaborative strategies that could be applied to CI collaboration. Also, data could be gathered by analyzing the interpreting output under both methods to identify any statistically significant differences between them.

Regarding the topic of hiring two interpreters, the participants expressed differing opinions, such as finding it strange to have two interpreters for one speaker or concerns about the perception of not working when one interpreter is not actively interpreting. Exploring scenarios where two interpreters might be suitable, such as dealing with multiple speakers or when interpreters are off-stage, could offer valuable insights. Delving into discussions on the visibility of interpreters, particularly in situations where their on-stage presence is not mandatory, might help mitigate potential misunderstandings and alleviate stress levels for interpreters. Additionally, it is worth considering different types of collaboration, such as allocating work based on language directions, particularly when dealing with speakers of different languages who speak for approximately equal amounts of time. Interpreters can therefore concentrate on one of their working languages, thereby improving interpreting quality and avoiding fatigue during work.

To foster the SI-inspired CI approach and the concept of partnership in CI, this study suggests introducing collaboration or having a partner in CI within educational settings. Challenging the notion that CI is inherently a solo endeavor might help alleviate interpreter fatigue and encourage clients to reconsider how they work with interpreters. The messages interpreting students receive in educational institutions and the opinions of clients and the general public greatly impact interpreters, as many participants mentioned. Increasing exposure and discussion of collaboration in CI might provoke communication and provide an opportunity for professionals, scholars, and students to share their views on this concept. The collaborative approaches suggested in the study are still relatively new. Even though the SI-inspired CI mode is evolving from existing interpreting methods, these collaborative methods require extensive practice and a high level of trust between partners. Introducing them in interpreting training programs would allow students to practice the collaborative method, form partnerships, and address challenges with the guidance of interpreting professionals.

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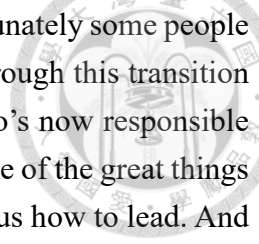
# Appendix I

*Materials and transcripts*

✧   *Pre-experiment workshop:* https://youtu.be/D9sr6ttoeJk

Segment 1:

So I'm embarrassed that I have a career. I talk about things like trust and cooperation, and there should be no demand for my work. But the fact that the matter is there is demand for my work, which means that there's an opportunity. It means that trust and cooperation are not yet standard in our organizations and yet they should be, and we know that, which is why we're looking for ways to bring those things to our organizations. So I thought I would do something a little different today. You know, when you're speaking to tens of thousands of people and you have the opportunity to share a message, of course, most rational people would say, "let's go with something I've talked about lots of times and I'm really good at", but I'm not normal so I'm going to do something completely new and I hope this works out. There are two things that I think the great leaders need to have—empathy and perspective, and I think these things are very often forgotten. Leaders are so often so concerned about their status, of their position and organization, they actually forget their real job. And the real job of a leader is not about being in charge, it's about taking care of those in our charge. And I don't think people realize this, and I don't think people train for this. When we're junior, our only responsibility is to be good at our jobs. That's all that we really have to do. And some people actually go get advanced educations so that they can be really good at their jobs, accountants or whatever. Right? And you show up and you work hard. And the company will give us tons and tons of training how to do our jobs. They'll show us how to use the software. They'll send us away for a few days to get trained in whatever it is that we're doing for the company and then they expect us to go be good at our jobs and that's what we do. We work very hard. And if you're good at your job. They'll promote you.

Segment 2:

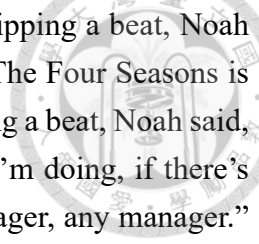And at some point, you'll get promoted to a position where we're now responsible for the people who do the job we used to do, but nobody shows us how to do that. And that's why we get managers and not leaders, because the reason our managers are micromanaging us is because they actually do know how to do the job better than us. That's what got them promoted. Really what we have to do is go through a transition.

Some people make it quickly, some people make it slowly, and unfortunately some people will never make that transition at all. Which is we have to go this through this transition of being responsible for the job and then turning into somebody who's now responsible for the people who are responsible for the job. And as I said before, one of the great things that is lacking in most of our companies is that they are not teaching us how to lead. And leadership is a skill like any other. It's a practicable, learnable skill. And it is something that you work on. It's like a muscle. If you practice it all the days, you will get good at it and you will become a strong leader. If you stop practicing, you will become a weak leader like parenting. Everyone has the capacity to be a parent. Doesn't mean everybody wants to be a parent and doesn't mean everybody should be a parent. Leadership is the same. We all have the capacity to be a leader. Doesn't mean everybody should be a leader, and it doesn't mean everybody wants to be a leader. And the reason is because it comes at great personal sacrifice. Remember, you're not in charge. You're responsible for those in your charge. That means things like when everything goes right, you have to give away all the credit, and when everything goes wrong, you have to take all the responsibility. That sucks, right? It's things like staying late to show somebody what to do. It's things like when something does actually break. When something goes wrong, instead of yelling and screaming and taking over, you say "try again". When the overwhelming pressures are not on them, the overwhelming pressures are on us. At the end of the day, great leaders are not responsible for the job. They're responsible for the people who are responsible for the job. They're not even responsible for the results.

Segment 3:
I love talking to CEOs and say "what's your priority?" And they put their hands on their hips so proud and say "my priority is my customer." I'm like "really? You haven't talk to a customer in 15 years." There's no CEO on the planet responsible for the customer. They're just not. They're responsible for the people who are responsible for the people who are responsible for the customer. I'll tell you a true story. A few months ago, I stayed at The Four Seasons in Las Vegas. It is a wonderful hotel, and the reason it's a wonderful hotel is not because of the fancy beds. Any hotel can go and buy a fancy bed. The reason it's a wonderful hotel is because of the people who work there. If you walk past somebody at The Four Seasons and this and they say hello to you, you get the feeling that they actually wanted to say hello to you. It's not that somebody told them that you have to say hello to all the customers, say hello to all the guests, right? You actually feel that they care. Now, in their lobby, they have a coffee stand. And one afternoon I went to buy a cup of coffee and there was a barista by the name of Noah who was serving me. Noah was fantastic. He was friendly and fun and he was engaging with me and I had so much fun buying a cup of coffee. I actually think I gave 100% tip, right? He was wonderful. So as
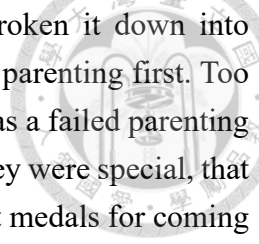
is my nature, I asked Noah, "do you like your job?" And without skipping a beat, Noah says, "I love my job." And so I followed up. I said, "what is it that The Four Seasons is doing that would make you say to me I love my job?" Without skipping a beat, Noah said, "throughout the day, managers will walk past me and ask me how I'm doing, if there's anything that I need to do my job better." He said, "not just my manager, any manager." And then he said something magical. He says, "I also work at Caesar's Palace, and at Caesar's Palace, the managers are trying to make sure we're doing everything right. They catch us when we do things wrong." He says, "When I go to work there, I like to keep my head under the radar and just get through the day so I can get my paycheck." He says, "Here at The Four Seasons, I feel I can be myself." Same person. Entirely different experience from the from the customer who will engage with Noah.

Segment 4:
So we in leadership are always criticizing the people. We're always saying we got to get the right people on the bus. I've got to fill my run my team, I'm going to get the right people. But the reality is it's not the people, it's the leadership. If we create the right environment, we will get people like Noah at The Four Seasons. If we create the wrong environment, we will get people like Noah at Caesar's Palace. It's not the people, and it was so quick to hire and fire. You can't hire and fire your children. If your kids are struggling, we don't say "you got a C at school, you're up for adoption." So why is it that when somebody has performance problems at work, why is it that our instinct is to say "you're out"? We do not practice empathy. What does empathy look like? Here's the lack of empathy. This is normal in our business world. You walk into someone's office, someone walks into our office and says "your numbers have been down for the third quarter in a row. You have to pick up your numbers. Otherwise, I can't guarantee what the future will look like." How inspired you think that person is to come to work the next day? Here's what empathy looks like. You walk into someone's office, someone walks into your office and says "your numbers are down for the third quarter in a row. Are you OK? I'm worried about you. What's going on?" We all have performance issues. Maybe someone's kid is sick. Maybe they're having problems in their marriage. Maybe one of their parents is dying. We don't know what's going on in their lives. And of course, it will affect performance at work. Empathy is being concerned about the human being, not just their output.
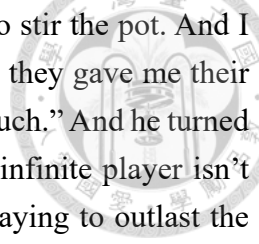
Segment 5:
So what I thought we would do, what I thought I would do, is show you what empathy looks like. How do we practice empathy with someone we don't understand? How do we practice empathy with an organization or a group that we're struggling with? Right? So

we have to understand that it breaks down to four things. I've broken it down into parenting, technology, impatience and environment. Let's talk about parenting first. Too many millennials have grown up subject to what has been described as a failed parenting strategy. Too many of them were told as they were growing up that they were special, that they can have whatever they want just because they want it. They got medals for coming in last. They got participation medals, right? And the science of this is already good. We know that it devalues the feeling that somebody who works hard and comes in first place, and it actually makes the person who comes in last embarrassed because they know they don't deserve it. So it actually makes them feel worse. It actually doesn't help. There are a lot of kids who got into honors classes not because they deserved it but because their parents complained. And they got "A"s not because they earned them but because their teachers didn't want to deal with the parents. Right? Then those kids graduate and they start a job. And in an instant, they find out that they're not special. That you don't get anything just because you want it. You get nothing for coming in last, and your parents cannot help you get a promotion. And in an instant, their entire self-image is completely shattered. In an instant, the way they view themselves as completely changed, turned on its head. And so what you find is that there's an entire generation growing up with lower self-esteem than previous generations. Remember, they have grown up in an Instagram, Facebook, Snapchat world in which they are very, very good at putting filters on everything. They're very, very good at curating how they want to be seen. And we think they're full of confidence. They seem to have all the answers. They seem to be telling us what to do. At the end of the day, it's just not there. It's just not true. It's just not true. Their confidence is a lot weaker than before. They don't know where they're coming from. They don't know where they're going. They're unsure of themselves. And they lack the courage to ask.

Segment 6:
It's the leaders and the companies that understand the game that they're in and organize their resources and their decision making around the infinite contest that outlast and frustrate their competition. I spoke at a leadership summit for Microsoft. I also spoke at a leadership summit for Apple. Now at the Microsoft summit, I would say 70% of the executives spent about 70% of their presentations talking about how to beat Apple. At the Apple summit, 100% of the executives spent 100% of their presentations talking about how to help teachers teach and how to help students learn. One was obsessed with their competition. The other one was obsessed with where they're going. So at the end of my presentation at Microsoft, they gave me a gift. They gave me the new Zune, which was the competitor to the iPod Touch when it was a thing, right? And I have to tell you, this piece of technology was spectacular. I'm sitting in the back of a taxi with a senior Apple
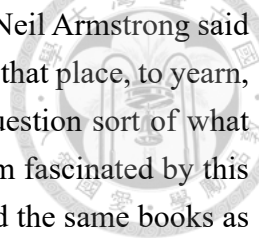
executive, sort of employee, number 12 kind of guy, and I decided to stir the pot. And I turned him and I say, "you know, I spoke at a Microsoft summit and they gave me their new Zune and I have to tell you, it is so much better than your iPod Touch." And he turned to me and said, "I have no doubt." Conversation over. Because the infinite player isn't playing to be number one every day with every product. They're playing to outlast the competition. If I had sent to Microsoft, "oh, I've got the new iPod Touch. It's so much better than your new Zune," they would say, "can we see it? What does it do? We have to see it." And the reason Apple frustrates their competition is because secretly, they're not even competing against them, they're competing against themselves. And they understand that sometimes you're a little bit ahead, and sometimes you're a little bit behind, but if you wake up every single morning, and compete against yourself—How do I make our products better than they were yesterday? How do I take care of our customers better than we did yesterday? How do we advance our cause more efficiently, more productively? How do we find new solutions to advance our calling, our cause, our purpose, our belief, our why? Every single day, what you'll find is overtime, you will probably be ahead more often.

✧ *Experiment:* https://youtu.be/CFlG6aCZXcw

Segment 1:
I believe in people, and I like people. I'm struck also by the irony of an organization or an event like this, where a bunch of technologists have come together to discuss largely the issues of people, and that we're doing it even here together as a group. What I found fascinating about all of this is that all of the content that you will hear today, you could easily hear online. We could videotape all of it. I could get this exact same talk in front of my computer, and you could sit at your desk in front of your computer and listen to it. The difference is it's not quite the same. All the communication of the information would be exactly the same but for the fact that you wouldn't be here. And it's this, it's this interaction, it's that we're here together as a group that makes these kinds of events special. In fact, if for the rest of the day, all of the speakers are absolutely awful, you could go home and someone will say, how was it? You say, well, speakers were awful and they'll say you're going to go back again next year? and you say, of course I'm going again next year because I had a wonderful time, because I met all these wonderful people. And this is where the ideas are exchanged as the conversations in between. And I'm fascinated about this idea. I'm fascinated by how in a world where technology is remarkable, the things that we can dream up in and the things that we can do, yet we still come together
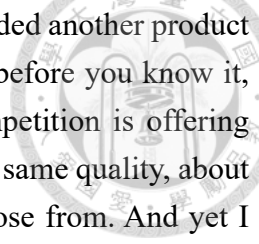
as groups to do things as people. I was also struck by something that Neil Armstrong said that he was grateful to be led by people who inspired him to yearn for that place, to yearn, listen to that. That's such a wonderful feeling. And so it begs the question sort of what does it mean to lead? You know, why do people do what they do? I'm fascinated by this idea of leadership. And I read the same books as everyone else. I read the same books as all of you. And you know, learn your style of leadership and how to adjust your style of leadership to spit to the situation at hand, etcetera, etcetera. That's not leadership, that's management.

Segment 2:
All leaders have one thing and one thing only. Followers. That's it. That's it. If you're a leader, it means you have followers. It has nothing to do with rank. It has nothing to do with intelligence. It has nothing to do with seniority. If people are willing to follow you, you are a leader. The question is, what's a follower? A follower is somebody who volunteers to go where you want to go. Someone who raises their hand and says I choose to follow you. We can get people to do all kinds of things using authority. That doesn't make you a leader. A leader is when someone says "I volunteer to go where you're going", the question is why should anyone follow you? There's only two ways to influence human behavior. You can either manipulate people or you can inspire people. Examples of manipulation in the business world are things like dropping your price. If you drop your price low enough, people will buy from you. We know this. Promotions. Two for one, free toy inside, or if you're in the business-to-business space, we call it value added. The concept is the same, it's giving things away for free to reduce someone's risk, so they'll choose you over the competition and it works. Innovation. What organizations like to call innovation is really novelty. Innovation, real innovation changes the course of industries, if not the way we live our lives. Adding a camera to your cell phone is a wonderful feature, but it is not an innovation. It's the difference between steps and leaps. The problem is what most organizations think is innovation is really novelty. It's the latest shiny thing. The example I love to give is an American example about Colgate toothpaste, the brand of toothpaste. In the 1970s, there are only two choices of Colgate toothpaste. Do you know how many there are now? 27.

Segment 3:
27 different choices of 1 brand of toothpaste because what happened was competition increased and the metric went down. Whether it's revenues or market share, profit doesn't matter. The metric went down and so they added a new product and the population went ooh, shiny. We're all drawn to it. The problem is the competition copied. This is one of the problems with competition. You see, they compete. And then the metric went down

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again. Well, it worked the first time. So we'll do it again. And they added another product and another product and another product and another product. And before you know it, you have 27 different line extensions, which means that their competition is offering about the same number of products at about the same price, about the same quality, about the same service, literally hundreds of choices of toothpaste to choose from. And yet I have no data to show that people are brushing their teeth now more than they were before. And the best part is what are these companies complain about now? What's their biggest challenge? How do we differentiate ourselves? This is hilarious to me, which is how do we what? How do we get out of a problem that we created for ourselves? There are all kinds of other manipulations. Fear, wonderful manipulator. If any of you are parents, you know exactly what I'm talking about. You could scare people into doing all sorts of things. Aspirational messages. We're constantly being told you have to be aspirational. Give people something to aspire to. You know, you can get people to join the gym with an aspirational message, but to get them to work out three days a week, that requires a little bit of inspiration. Now, I cannot dispute that these and many other manipulations work. The problem is none of them breed loyalty. The problem is, none of them create trust.

Segment 4:
And over the course of time, they cost more money, someone has to pay for it all, and over the course of time it increases stress both for the buyer and for the seller. It is stressful for us to make decisions today in a world in which manipulation is the norm, where we are bombarded by manipulations from all sides, from all people trying to get us through any number of things, whether it's vote for them or buy from them or do something. The question is, how do we choose? What's right for us? It's called stress. We literally have trouble choosing these days. But it's stressful for the sellers as well. In a marketplace where manipulation is the norm, how do we stand out? How do we get hurt? How do we find people to follow us? The alternative is inspiration. And there are only a few people and a few organizations that tend to rely vastly more in inspiration than manipulation. And I'll talk about some of the bigger ones, like Apple computers or Southwest Airlines or Martin Luther King. And you see it not only in organizations with great leaders as well, like Martin Luther King or John F Kennedy or Nelson Mandela. And what I learned is that regardless of their size and regardless of their industry, every single one of these leaders, every single one of these organizations thinks, acts and communicates the exact same way, and it's the complete opposite to everyone else. All I did was write it down and it's probably the world's simplest idea. I call it the Golden Circle. And it's 3 concentric circles of bull's-eye. In the middle is why. Centering is how and the outside ring is what. Why, how what. It's this little idea that distinguishes those with the capacity to inspire versus everyone else. Let me define the terms really quickly. Every single

organization on the planet knows what they do. These are the products you sell, the services you offer. Everyone here knows what they do.
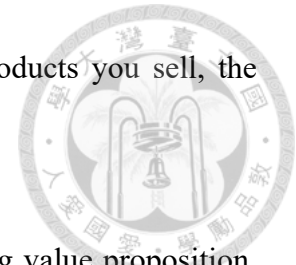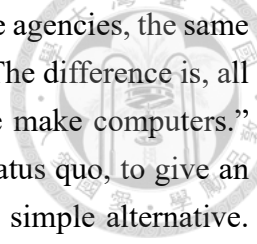
Segment 5:
Some know how they do it. Whether you call it your differentiating value proposition, your USP or proprietary process. These are the things that you think make you different or special or stand out from the competition, from everyone else. But very, very few people and very, few, very, very few organizations can clearly articulate why they do what they do. And by why, I don't mean to make money. That's a result. By why, I mean, what's your purpose? What's your cause? What's your belief? Why does your organization exist? Do we really need another company to do what you're doing? Do we really need another one? Why did you get out of bed this morning, and why should anyone care? As a result, the way we think, the way we act, the way we communicate, is from the outside in, it's obvious we go from the clearest thing to the fuzziest thing. We tell people what we do. We tell them how we're different or how we're better or how we're special. And we expect some sort of behavior, a vote, a purchase, support, whatever it is, but not those leaders with the capacity to inspire. Regardless of their size, regardless of their industry, every single one of them thinks, acts, and communicates from the inside out. Let me give you an example. I use Apple frequently just because they're easy to understand and we all get it. If Apple were like everyone else, a piece of communication would sound like this. We make great computers. They're beautifully designed, simple to use, and user friendly. Want to buy one? Yeah, that's normal. Here's our new car. It's got, you know, great gas mileage, leather seats, tinted windows. Here's our law firm. We went to all the best schools. We've got all the best lawyers. We went all of our cases. We work with all of the biggest firms. This is normal.

Segment 6:
Here's how Apple actually communicates. They start with why. Everything we do, they say, "we believe in challenging the status quo. We believe in thinking differently. The way we challenge the status quo is by making our products beautifully designed, simple to use and user friendly. We just happened to make great computers. Wanna buy one?" It actually feels different. All I did was reverse the order of the information. What it starts to show us is that it's not what you do that matters. It's why you do it. And what you do simply serves as the tangible proof of what you believe. People don't buy what you do, they buy why you do it. This is the reason why every single person in this room is perfectly comfortable with the idea that Apple sells computers. We're also perfectly comfortable with the idea that Apple sells MP3 players and phones and DVR's. Apple is just a company. That's all they are. It's a corporate structure. Every single one of their
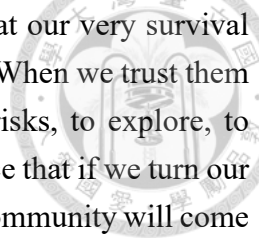
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competitors has equal and open access to the same resources, the same agencies, the same consultants, the same talent, the same media. It is a zero-sum game. The difference is, all of their competitors have defined themselves by what they do. "We make computers." Apple has defined themselves by why they exist, to challenge the status quo, to give an individual the opportunity to stand up to Big Brother, and choose a simple alternative. Everything they say and everything they do simply serves as proof. Dell makes perfectly good products. They're every little bit qualified to make every single product that Apple makes. And a few years ago, they tried. A few years ago, Dell came out with MP3 players and PDA's, and nobody bought one. Doesn't make sense. Why would we buy an MP3 player from a computer company? But we do it every day. Because it's not what you do that matters. It's why you do it. And people don't buy what you do, they buy why you do it.

Segment 7:

For this little idea to work, we have to have three things. One, you have to know why you do what you do. If you don't know why you do what you do, how will anyone else? You have to have clarity of why. Two, you have to have discipline of how. You have to hold yourself and your people accountable to your own guiding principles and your own values. And thirdly, you have to have consistency of what. Everything you say and everything you do has to prove what you believe. This is the concept behind authenticity. People are always telling us you have to be authentic. People prefer to buy from the authentic brand. They prefer to vote for the authentic candidate. What does that mean? How do you implement authenticity. If I send you home to your work tomorrow and say please the next thing you do, I want to make sure it's more authentic. What's the first thing you're going to do? No clue. What authenticity means is the things you say and the things you do you actually believe. This is caveman stuff. The reason the human race is so successful is not because we're the strongest. It's not even because we're the smartest. It's because we're social animals. It's because we have the ability to form communities and cultures. What's a community? What's a culture? It's a group of people with a common set of values and beliefs. What's a country? It's a group of people with a common set of values and beliefs. What's a company? It should be a group of people with a common set of values and beliefs. When we're surrounded by people who believe what we believe, something remarkable happens. Trust emerges. Make no mistake of it. Trust is a feeling. Trust is a human experience. Simply doing everything you say you're going to do does not mean people will trust you. It just means you're reliable. And we all have friends who are total scrubs and yet we still trust them.
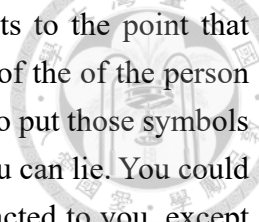
Segment 8:

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Trust is a feeling born out of a common set of values and beliefs that our very survival depends on our ability to find those people so that we can form trust. When we trust them and they trust us, we're more willing. We're more likely to take risks, to explore, to experiment, which requires failure, by the way. All with the confidence that if we turn our back or fall over and make a mistake, that someone from within our community will come to our aid or watch our back or help us up. Absent trust, we still have the will to survive. The difference is it's every man for himself. Absent trust, you know, we all try and push each other out of the way because we gotta win, we gotta compete, we gotta live, we gotta survive. This is what happened at Lehman Brothers. Lehman Brothers was very, very good at what they did, very, very good at how they did it. But there was no sense of purpose or cause or why that that bounded the company together. And at the slightest shake, the whole thing collapsed. Not in months, not in weeks, in days, that company collapsed in days. And that's because when stress started to show up, all the individuals said I'm out of here, got to look after numero uno, got mouths to feed, got bills to pay. They're not the first organization to go through hard times. They're not the first organization to suffer financial scandal. The difference is in great organizations, in great cultures, and in great communities. When there is stress, the organization comes together to solve the problem. Absent trust, we back off and the thing collapses. The most basic human desire on the planet is to feel like we belong. Again, we are social animals and we all have the innate ability to do this. If I ask you to go out on the street and find all the people who believe what you believe, you know exactly what to do. You're gonna strike up a conversation with someone. You either have good chemistry with them or you won't. You'll either get along with them quickly or it'll take some time. The point is, you know how to do it. Our survival depends on it. It's called dating. It's called making friends. It's called networking. We know how to do it. The problem is, it's not scalable.

Segment 9:
But if you know the symbols to look for, it becomes much easier. If I ask you to go out on the street and find all the people wearing red hats. It's easy. There's one, there's one, there's one, there's one, there's one, there's one. They are easy to spot because you know what to look for. This is what we do when we look for certain symbols and certain we read things about each other. Every single decision we make in our lives as individuals or as organizations, is a piece of communication. It's our way of saying something about who we are and what we believe, in an attempt to track people so that they may form trust with us and we may form trust with them. There are people who walk around with Harley-Davidson logos on their body right on tattoos. This is a corporate logo. Some of them don't even own the product. But it has nothing to do with the company. It has to do with them because Harley is so clear about what they believe, because they're so disciplined

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in how they do it and they're so consistent in what they do. It gets to the point that everything they say and everything they do now serves as a symbol of the of the person of who they are, who they believe they are. And the reason we want to put those symbols out is so that we may attract people who believe what we believe. You can lie. You could tell people what we think they want to hear. And they'll still be attracted to you, except they'll be attracted to the lie. And then when they realize that it's not true, you'll have a hard time forming trust. This is what Tiger Woods did to us. He lied to us. He told us what he thought we wanted to hear, and we thought it was great. The difference is we found out it was a lie and now he's having a very hard time forming trust again. If I told you that some footballer cheated on his wife and slept with 100 women, would you care? No. It's because we expect it. It's because it's authentic. It's because… it's because… it's who they are. But not with tigers. He chose to lie to us. It's not actually the behavior that we're offended by, it's that it's inconsistent with what our expectations are. Everything you say and everything you do has to prove what you believe.

Segment 10:
Like I said, the most basic human desire is to feel like we belong and is so remarkably powerful. How many of you are from Paris? Most of you, right? Yeah. Good number of you. OK. Are you friends with everyone in Paris? Why not? Why not? But when you go to Leon and you meet someone from Paris, you're like, "hey, I'm from Paris" and you're best friends. And when you go to America and you're on holiday and you're standing there in New York and you're riding the subway and you happen to hear French being spoken behind you, and you turn around and you say, "where are you from?" They say, "Leon," they said "we're from Paris" and your best friends. Because when you're in an environment where you don't feel like you belong, you seek out anyone who may share the same values and beliefs as you so that you can start to form trusting relationships. And the amazing thing is, those relationships are real. Those relationships are real. That other family will say to you, "have you eaten at this restaurant? You've got to go to this restaurant", and you will take your family to this restaurant because complete strangers on the subway told you to. That's insane. If that happened here, if somebody on the metro just turned you and told you to go to some restaurant, you go like this. The most basic human desire on the planet is to feel like we belong and we have the innate ability to find those things and to sense that. This is the reason why this could not be recreated over our computers. It's because as human beings, it's our biology that gives us this ability. It's this ability to read each other. You know, the blogosphere gets very upset at me when I talk about this and how you know you cannot replace these human experiences in these human feelings over the Internet. They get very mad at me. And yet, every single year, 20,000 bloggers descend on Las Vegas to have a huge big conference they called

Blogosphere, Blog World. My question is, why couldn't I do it online? That's because you nothing can recreate that sense of human being, of human coming together.
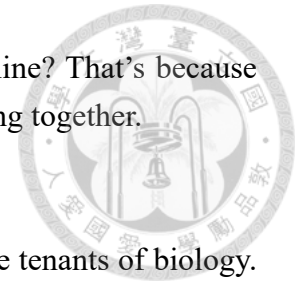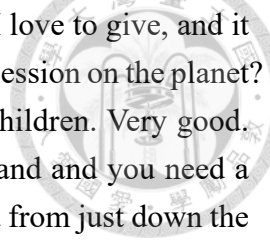
Segment 11:
Nothing, I'm telling you, is my opinion. It's actually grounded in the tenants of biology. If you look at a cross section of the human brain, looking from the top down, you see that the human brain evolved into three major areas that corresponds precisely with this little idea. The outside area is our neocortex, our Homo sapien brain, responsible for all of our rational and analytical thought and language. The middle two sections make up our limbic brains. Our limbic brains are responsible for all of our feelings, like trust and loyalty. It's also responsible for all human behavior, all decision making, and it has no capacity for language. This is the reason you can't ask people "why do you do business with us? Why do you like? Why do you like us?" They can't tell you. The part of the brain that controls behavior doesn't control language, and so they rationalize. This is the reason why the question "Why do you love your husband or why do you love your wife" is a difficult question. "Why do you love your wife?" "I don't know." That's where most people start. And then they start saying things. They start rationalizing. "She's fun. She's... she's... I've known her forever. She's always there for me when I need her." It sounds like the household pet. And those aren't necessarily the qualities for marriage. My sister says of my brother-in-law, my sister says of my brother-in-law. I never imagined I'd marry a guy like him. Right, what she's saying is "before I got married, I had a list of all the attributes I wanted in my future husband. And he's got none of them. And yet I fell in love with him anyway. And I wanna spend the rest of my life with him and raise a family with him." It is a human experience that we have trouble putting into words. And so we try, we rationalize, and then we say things that don't make sense. "She completes me." I don't know what that means. What does that means? It means I have a left arm and a left leg, and I'm looking for someone with a right arm and a right leg, and together we can make one. I mean, it's nonsense.

Segment 12:
What we're attempting to do is put into words the feelings we have towards another person or organization with the part of the brain that doesn't control language. And so we rationalize or make things up. We do the exact same thing at work. We talk about people who "get it". And that guy, no matter how much data I show him, no matter how much information I give him, he just doesn't get it. What's "it"? How do we find people who get it before we do business with them to realize they don't get it? What we're attempting to do is put into words the feelings we have towards other people this comments that have values and beliefs with the part of the brain that doesn't control language. This sense of

belonging and the sense of community is so powerful. The example I love to give, and it freaks me out every time I talk about it. What's our most valuable possession on the planet? Come on, what's the most valuable possession on the planet? Our children. Very good. So let's suppose you want to go out with your wife, with your husband and you need a babysitter. You have two options. Option number one is a 16-year-old from just down the street with barely, if any babysitting experience. Option number two is a 32-year-old from you don't know from where she just moved into the neighborhood and she's got 10 years of babysitting experience. Who do you choose? The 16-year-old. You choose the 16-year-old. You would rather trust your most valuable possession on the planet, your children, with somebody from within your community, with no experience over somebody from outside, from you don't know where, with vast amounts of experience. Then why do we do it differently at work? Why are we so preoccupied with someone's CV and where they've worked and how long they've worked and how much money they made for our competitors? And yet we never think to ask what they believe, what they value. Can we trust you? Can you trust us?

Segment 13:
Leadership is the ability to stand on the street corner with your own red hat and simply talk about what you believe. "Got red hat? Got red hat? Got red hat here." And all the other people wearing red hats, whether they know their own why or not, whether they can see their own red hat or not, are eerily drawn to you because what you're able to do is put into words the way they see themselves. What you're able to do is put into words the values and beliefs that they hold dear. And they're drawn to you because they feel that they can trust you and they can start to form community around you. This is what leadership is. Leadership puts our own desires and our own values and our own beliefs into words. There's an inextricable link between leadership and communication. Those who lead are the ones who can clearly talk about what they believe, and those who can clearly talk about what they believe are the ones who lead. Let's imagine that we're out on a on a tour, a three-hour tour on a boat. And we get stranded on a desert island. Here we are all stranded on the desert island. The question is, how will we get off the island? Well, one of us stands up and says I will lead. We like that. We're social animals. We appreciate leadership. And he stands up and says, Okay. "Who's got ideas? You. You think we should build a fire? I like it. Good. You. You think we should look for food? Good, good, good. You. You think we should build a boat? Good. I like it. OK, let's take a vote." At the same time, someone else stands up and says, "as we were coming into the beach, I saw some mosques over on the West side of the island and I saw some smoke, which means there's a fishing village over there and if we can get to that fishing village, we can find help. Now we're gonna have to get through this forest to get there, and I don't know

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how to get through the forest. I'm gonna need some help. But if you want to help, I'll welcome it. And if you don't want to help, don't worry. When we get help, we'll come back and get you." The question I have for you is who do you want to follow? Who do you want to follow?
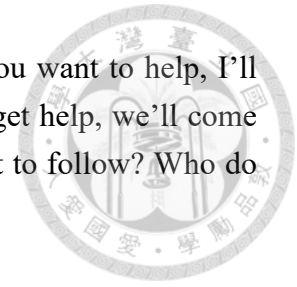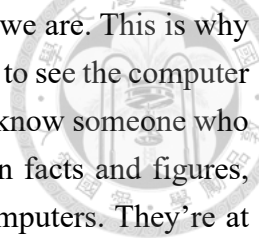
Segment 14:
We want to follow the second guy. There's no data to show that that fishing village exists. There's no photographs and no one else saw it. The only thing we have is his conviction, his absolute belief in the existence of that world that we cannot see, and his ability to put that future state into words that we're drawn to. And we will volunteer to go with him, maybe even take personal risk. I don't know how to get through the forest. I don't know how to cut down trees. But I will go because I believe it's important, not for me, but for the greater group. The irony is, our own survival depends on our ability to help each other. This is the irony, and here we go. We rally together, we choose to take the risk, we choose to follow. We volunteer to follow him, and we go through these woods. And it's hard. And we have to cross rivers and go around boulders and chop down trees and eventually we come to where he said the fishing village is, and there's no fishing village. Did he lie to us? Were we just conned? Was this all a big joke? Is this all… Is this all for naught? And we say to him, "where is the fishing village? You said there was a fishing village. As you said, if we could get here, we would survive." And he turns to us and say, "I believe there was a fishing village. But that doesn't matter because look what we were able to do, we were able to get through that forest together. That means that we can pick absolutely any direction on this island and we will be able to get there." That's called leadership. When people believe what you believe, they will work for you with blood and sweat and tears. When they don't believe what you believe, they work for your money. The goal is not to surround yourself with everybody who needs what you have. The goal is to surround yourself with people who believe what you believe.
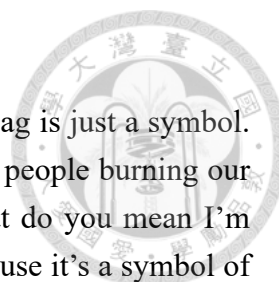
Segment 15:
There are million reasons why people will do business with you that have nothing to do with you. You happen to meet some checklist that they have. They happen to hate your competition more. There's a difference between repeat business and loyalty. You see, repeat business means I'll do business with you over and over and over again. Loyalty means I'm willing to turn down a better product at a better price to continue to do business with you. And it's the loyal ones, those who feel like they belong, those who are doing business with you, gives them some sense of identity or belonging. Those are the ones. Those are the ones who do great. And the reason is that because it becomes personal, it becomes personal. We use these symbols, we use these companies, we use these, we use

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these organizations as tangible ways of saying something about who we are. This is why people with love opening their computers in airports. They love for us to see the computer they're using. How many of you love your Macintosh computer? Or know someone who loves their Macintosh computer? OK. Rationally speaking, based on facts and figures, data. Right? Factually, factually speaking, Macs are substandard computers. They're at least 25% more expensive, sometimes double the price of their PC counterparts. There's less software, there's fewer peripherals, and I know because I switched to a Mac, they're absolutely slower. Rationally speaking, no one should ever buy one. But they do, over and over and over again. And when they decide they're gonna buy one, they don't do any comparative… competitive comparisons. They're not comparing the price and the data and the features from one product to another. They simply decide that's the one I want and they go and choose it.

Segment 16:

And if you ask somebody who loves their Mac, why do you love your Mac? They don't tell you. "Well, you see. I see myself as somebody who likes to challenge the status quo. And so it's very important for me to surround myself with all the people and the products and the brands to prove to the outside world who I am. Because I'm using these things as symbols to tell people about who I am in an attempt to attract people who believe what I believe, so that I can start to form strong bonds of trust because my own survival depends on it." Biologically, that's what happens in the part of the brain that controls behavior but not language. And so they rationalize, "it's the user interface, it's the simplicity, it's the design." And they say things that don't make sense. "I'm a creative person", whatever that means. At the end of the day, what they're doing is they're using this symbol to say something about who they are, which is why people with Macs will never put big stickers of their families over the tops of their computers. It'll never happen. Cover up that beautiful glowing apple? Never, never. And have you ever seen a dirty Macintosh? That's because they clean them. How many of you broken out the glass cleaner simply to clean your HP? It doesn't happen. Never. The people of Macs will sit there and clean their computers, right? Because we have to keep it clean. Because it is a symbol of who I am. And when you tell them "you know that you bought a substandard computer", they start foaming at the mouth and they start getting angry and they'll probably call you an idiot. And the reason they take it so personally is because you didn't insult their computer. You insulted them. Because Apple is so clear about what they believe, so disciplined and how they do it, and so consistent in what they do, that symbol now serves as a representation of who I believe I am. And if I surround myself with enough of these symbols that I'm consistent enough, you'll know something about me.
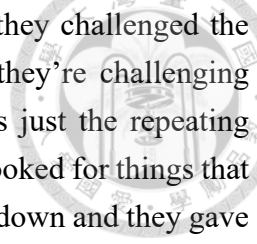
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Segment 17:

It's the same thing as a flag. What's a flag? A flag is just a logo. A flag is just a symbol. Who cares about the flag? But we don't. We get angry when we see people burning our flag. Why do we get angry? "Because you're attacking me." "What do you mean I'm attacking you? I just burnt my own property." No, we get angry because it's a symbol of our values and beliefs. And when you attack the flag, it's the same as attacking me. Where do you think the Mafia comes from? You killed my cousin. Now I have to kill your whole family. Didn't do anything to me. It's because we're protective of those within our community. We're protective of those who believe what we believe. So much so that when you attack someone who believes what I believe, it's as if you're attacking us. It's as if you're attacking me. And at the same time, we will protect each other. This is what great organizations are. Great organizations are communities, cultures, common sense of values and beliefs when we will go to bat for each other and work for each other and help each other, even at great personal sacrifice. Because, ironically, my own survival depends on it. What we need more of today is not talking just about the technology, what technology can do. That's all fine and good, but the question is why does that technology exist in the first place? Why do you have the technology? What's the point of it? Why should I care? How are you helping me on a very, very human level? Innovation doesn't come from telling people to come up with a better technology. Innovation comes from solving problems that are deeply, deeply personal to me. We hail Apple as this great innovative organization, the most innovative organization in the world, blah blah, blah. Where does it come from? Steve Jobs, by the way, did you know how many of the ideas that Apple currently sells… How many Steve Jobs came up with? 0. None of them. He didn't come up with Apple. Steve Wozniak came up with the Apple. He did not come up with iTunes or the iPod or iPhone. It's all people within his organization.

Segment 18:

What Jobs was able to do was put into words why they were coming to work. When he was able to put into words was why the company exists. He gave people something to build. This is what they were looking for, just as Neil Armstrong talked about that yearning. Give people some sort of yearning and they will solve the problem. This is what entrepreneurship is. Entrepreneurship isn't starting a business. Entrepreneurship is solving a problem. 35 years ago, when Apple, before Apple even existed. Steve Jobs and Steve Wozniak were standing in a garage in Cupertino, CA, and they made something they called the little blue box. It allowed people to avoid paying long distance rates on their phone bills. In a day and age when there was only one long distance phone company. They were challenging Marbell, the existing status quo phone monopoly. And then they started Apple and they challenged Big Blue IBM, the existing status quo monopoly

computer platform. And then they challenged Microsoft. And then they challenged the music industry and then they challenge the phone industry. Now they're challenging publishing. And if you're in television or movies, you're next. It is just the repeating pattern. It is other people in the organization who came to work and looked for things that restricted human opportunity, look for things that held the individual down and they gave people. They used the technology as a way of people giving people to challenge that, giving them an option. It's remarkable and it's a repeating pattern. Even if you look at all of their advertising and all of their communications for the past decades, it's all exactly the same. That 1984 commercial, that wonderful Ridley Scott commercial. That woman runs into the Orwellian scene and throws the hammer through the screen. It's one individual challenging the status quo. And then you have, "hi, I'm a Mac, hi, I'm a PC," an individual, and you have one person standing there listening to their iPod. It's always an individual.

Segment 19:
It's always an individual. It's always I. And Jobs is constantly talking about the revolution this and the revolution that. It is a cause. Think different is a belief. It is not a product differentiator. What distinguishes one organization from another is not simply what you do, it's why you do it. And if people believe what you believe, they'll be drawn to you as if you were their own. The goal is not to surround yourself with people who need what you have. The goal is to surround yourself with people who believe what you believe. And the reason is because of something called the law of diffusion of innovations. If you don't know the law, you definitely know the terminology, what the law of diffusion tells us… standard deviation bell curve is that the first 2.5% of our population are our innovators. The next 13.5% of our population are our early adopters, the next 34% are your early majority, then your late majority and the last 16% are your laggards. The only reason these people buy touch tone phones is because you can't buy rotary phones anymore. We all, we all fit at various times at various reasons across this standard deviation. But the law of diffusion tells us is that this population, the innovator and the early adopter population, are very comfortable trusting their guts. They're very comfortable making intuitive decisions. Remember that biology, the part of the brain that controls decision making, doesn't control language, but it does control feelings. This is where gut decisions come from. There is no part of your stomach that controls decision making, and it's not in your blood and it's not in your bones and it's not in your soul and you're not following your heart. You know, let's win hearts and minds. It's winning minds and minds. This is the reason why we talk about decisions. Feeling right. We say just feels right. Why would we use the verb to feel to describe a decision? It's because the part of the brain that controls feelings controls decision making. That's why. It just doesn't

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control language. And so we ascribe it to different parts of the body. These people are very comfortable trusting their guts and making those intuitive decisions. This population, the majority, is more cynical, more practical. They absolutely care about things like price and quality and service and features. The problem is, is that they will not try something until someone else has tried it first.
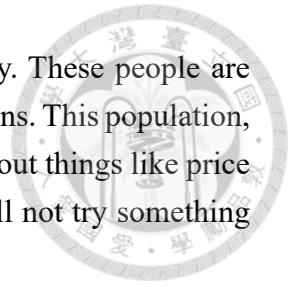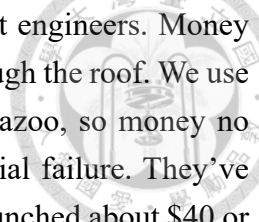
Segment 20:
These are the people we have to drop our price, offer value add and come up a little promotions. We have to reduce their risk to try something unfamiliar. These people happily try new things that have never been tried before simply to reflect something what they believe The problem is, is that you cannot achieve mass market success or mass market acceptance for an idea until you achieve between 15 and 18% market penetration. This is the tipping point. It's a social phenomenon. The problem is, is that it's hard to get there. When I talk about 15 to 18%, I don't mean of the mass population, I mean 15 to 18% of people who believe what you believe. It's easy to get 10%. If you ignore everything I'm telling you today, I promise you you can get about 10% loyalty, you have about 10% of your customers who love you, not like you. Like is rational. Love you. It's emotional. You ask somebody, "do you like your job?" "I really like my job. I get paid well. I like the people I work with. I like the challenge. Do you love your job? I wouldn't go that far." Like we know there's a hierarchy, like his rational love is is emotional right? It's easy to get about 10%. Law of averages will say you have about 10%. But it's hard to get this tipping point. This is what Jeffrey Moore and his book *Crossing the Chasm* talks about. This is the Chasm. So the question is how do you get those people? And this is where leadership matters. This is when you talk about what you believe. I'll give you two examples. I'll give you a business example and a social example. In the United States, we have a brand called TiVo, which is a brand of DVR. TiVo basically invented the category and has been around for about 11 or 12 years now. When you ask any company "why did your company fail?" or "why did your product fail?", they will usually give you some combination of four reasons. They'll either tell you that it was undercapitalized, didn't have enough money, that's very popular. Poorly executed, that's a common one. You know, "we didn't have a good product. We had, we had bad people, had the wrong people." Or bad market conditions. That pretty much explains absolutely every failure there is.
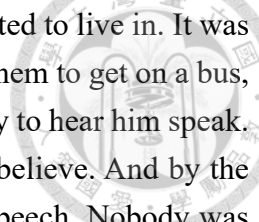
Segment 21:
TiVo had the recipe for success. They had everything that we consider what we need for success. When their product was introduced about 11 years ago to this current day, it is the single highest quality product on the market. No one will dispute that. It's incredibly

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fantastic product. So execution, flawless. People, they hired the best engineers. Money could buy. Market conditions. The unaided awareness of TiVo is through the roof. We use it like a verb "I TiVo things" and they had venture capital up to wazoo, so money no problem. Money was no problem. TiVo is a commercial and financial failure. They've never made money and when their company went public the stock launched about $40 or $50 and then very quickly plummeted and except for a couple of little blips has never traded above $10. And the reason is because they took… they took this brilliant product, this brilliant piece of technology, and they attempted to tell the mass market what the product does. They attempted to convince with facts and figures what the product does. They said to the mass market, "we have a product that pauses live TV, skips commercials, memorizes your viewing habits and records on your behalf without you even asking" And the cynical practical majority said, "I don't need it, I don't like it, I don't want it, you're scaring me." They didn't buy one. There are a few who did, a few early adopters who did, but it didn't make a difference, and the company has done very poorly. Imagine if they told this population why the product exists. Imagine if they had said "if you're the kind of person who wants to have total control over every aspect of your life. Boy, we have a product for you. It pauses live TV, skips commercials that memorizes your viewing habits and records on your behalf without you even asking." In this instant, what the product does serves the tangible reasons to believe that they're not the reasons you use to convince somebody to choose you over the competition in the first place. It's not what you do that matters, it's why you do it. And people don't buy what you do, they buy why you do it.

Segment 22:

I'll give you my favorite example. It's a social example. In the summer of 1963, 250,000 people showed up on the Mall in Washington, DC to hear Martin Luther King give his famous I Have a Dream speech. There were no invitation sent out, and there was no website to check the date. How do you do that? How many emails did you get to be here today? And there's only, what, a few 100 people? 250,000. Doctor King was not the only man in that country who knew what had to change to bring about civil rights over there. He wasn't the only great orator. He wasn't the only man who suffered in a pre-civil rights America. In fact, he wasn't even the perfect man. He had his complexities. We just don't talk about those things. The difference is he didn't go around telling people "what we need to do, what we need to do, what we need to do." He went around and told people, "I believe, I believe, I believe." And people who believe what he believed took his cause and made it their own. And they told people what they believed. And those people took that course and made it their own. And they told people what they believed. And long behold, on the right day, on the right time, a quarter of a million people showed up to hear him speak. How many of them showed up for him? Zero. They showed up for themselves.

It's what they believed about America. It's the America that they wanted to live in. It was the country that they wanted to raise their children and that inspired them to get on a bus, travel for 8 hours and stand in the sun in Washington in August simply to hear him speak. Showing up was one of the things that they did to prove what they believe. And by the way, he gave the "I have a dream" speech, not the "I have a plan" speech. Nobody was inspired by any plan, ever. The goal is not to talk about what you do. The goal is to talk about what you believe. And people who believe what you believe are drawn to you as if you are their own. Because you help them put into words the way they see themselves and the things you say and the things you do give them the ability to tell others what they believe to make tangible. Because those symbols and those products and those services say something about who they are and they will say with pride "I love working with that company."

Segment 23:

This is why we talk about in sales. It's about relationships. "I love my guy." We always talk about when we have a good relationship with the company because it's a human experience, it's a human experience. Make no mistake of it, all of these things we're talking about, like trust and loyalty, are human experiences. Technology and the Internet are wonderful things to speed up transactions. They're wonderful things to connect people, to spread information, absolutely. But it's very, very difficult to form strong human bonds through the Internet. Just like we talked about with Blog World, the Internet can live alongside and technology can live alongside the human experience, but it cannot replace the human experience. Your friends are not on Facebook. You know, and your network is on LinkedIn and you're not having any conversations on a blog and you're not having a dialogue on Twitter. Those aren't human experiences. If you compare the way we actually have conversations where we interrupt each other, we advance ideas versus the way people communicate online is sort of "my idea, my idea. My idea, hey, that's a good idea, Steve. That agrees with my idea. My idea. My idea. Hey, you're an idiot. My idea, my idea." And if you ask any retailer on the planet who's ever come out with a blog for their customers to give feedback, the number of innovations that have come out of the feedback from those blogs. The answer is zero. None, because people just use it to complain and moan. And there's no vulnerability and there's no risk in doing things online, which is the reason we put ourselves out there like that. Risk requires this. Vulnerability requires this. And when you feel that someone is willing to tell you something genuinely about who they are, you can start to form strong bonds of trust. There's something called a parasocial relationship. A real relationship is, and we know a lot about each other. We start to learn about each other. A parasocial relationship is one person knows more about the other person than they know about you. And you start to form a strong bond, except it's one-
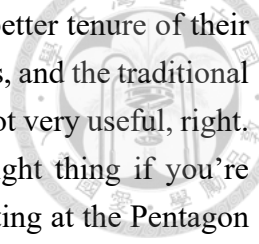
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sided.

Segment 24:

This is what happens with fame, with celebrities. We know all about them, but they don't know even that we exist. And we know about their lives. We know about their social lives. We know who they're dating, we know about their careers, and we follow them as if they're our friends. And we call them on… we're on first name basis with them, right? We call them by their first names, as if we know. It's a parasocial relationship, where we feel that we know them, but they don't know us. The problem is all those feelings associated are absolutely real. They feel absolutely real. The opportunity for innovation is not to just tell people in the outside world, you know, "do this, do that." The opportunities to bring people together, so the feeling is mutual. So we work together to advance a problem. So we work together to get to that fishing village because our own survival depends on it. If people don't feel that you're in it as well with them, if they don't believe that you believe what they believe, then there's not gonna be any strong human bond. The opportunity is to articulate your vision of the future that does not yet exist yet. What is your vision? What is your fishing village? And are you putting into words so clearly that other people can understand it as clearly as you can and they can tell others about it and they wanna go there and they will risk blood and sweat and tears to help you get there, not for you, but for themselves. And they will watch your back and help you explore. Just like that 16-year-old that you hired to babysit your children. Because they get you, they understand you. They know that you're the same. They know you believe what you believe. This is the goal. Human relationships, real trust, real loyalty that is not borne out of products and services but borne out of beliefs and values. There are leaders, and there are those who lead. Leaders hold a position of power or influence, but those who lead inspire us. And whether they're individuals or organizations, we follow those who lead not because we have to. But because we want to. We follow those who lead, not for them. But for ourselves. This is for those who want to find someone to inspire them. This is for those who want to inspire those around. Thank you very much.

✥  *Follow-up Experiment (Video 1):* https://youtu.be/I4BzczE5goc

Segment 1:

The traditional metrics will reflect purpose over time, so having purpose of being purpose-led, it's not the absence of metrics. But it's prioritizing the purpose before the metrics and purpose-led organizations overtime will demonstrate better metrics. So the

companies that are purpose driven tend to be more profitable, have better tenure of their employees, more loyalty over time, more loyalty from their customers, and the traditional metrics tend to reflect that. It's in the short term that the metrics are not very useful, right. It's because sometimes we make purposeful sacrifices to do the right thing if you're purpose driven and infinite minded. So I had a meeting, I had a meeting at the Pentagon once. And you know when you have a meeting and somebody, you wait in the foyer. And then someone comes to get you. And then you walk to the meeting, right? You walk to the hall and you have this hallway talk. Because it's too uncomfortable to talk about nothing, and it's too premature to start the meeting, so we just, like, say, "how's the weather?", you know? "Did you have trouble finding it?" You know. "Did you have trouble getting here?" And we sort of had this nonsense hallway talk. And then we walk in the conference room. It ends immediately, and we start the meeting. Right? So I was at the Pentagon and this big general came to get me from the foyer, and we're walking down the hall to his office for the meeting. And so we're making hallway talk. And he says, "hey, Simon, I had everyone in my office read your book." And I said, "my publisher thanks you." And he said, "tell them not to bother. I had them read my copy." Total book sales, 1. Total impact, huge.

Segment 2:
Compared going to an event where they give out 500 free copies of my book. Total book sales, 500, but people use them as coasters and doorstops. Total impact, 0. And so in the short term it looks better being at the event from 500 than selling one, but if I wait over the course of time, that will yield better book sales because those people will tell their friends to read it and their friends will go buy a book, they'll tell their friends... So the point is if I wait over time, book sales absolutely help me recognize it's the movement growing, but not in any particular month. I don't care about, and I don't care about like, people say, "how many books do you want to sell for a year? How many speeches do you want to do per year?" I don't care. It makes no difference to me whether it's this year or next year. What I want is momentum. The way I measure success with the metrics is the momentum going like this? And the exact dates and the exact numbers… It's like I want to lose a certain amount of weight by a certain date. But what happens if you don't lose the weight by that day? Well, you're still way healthier than you were, even though you missed the goal. So the goals are good because they help drive us and motivate us. But if you hit it or make it, it doesn't matter in the infinite game. It's a guidance, not an absolute. Finite views metrics is absolute, infinite views metrics as a measure of speed and distance. They are guides. We're going faster, we're going slow. So yes, metrics are hugely important. You can't run a marathon without metrics. You need to know how fast and how far. Right, you need metrics. But the question is, how we view them? So traditional
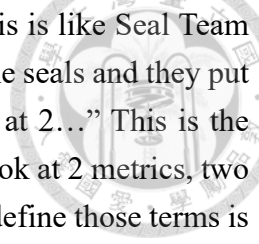
metrics are perfectly fine.
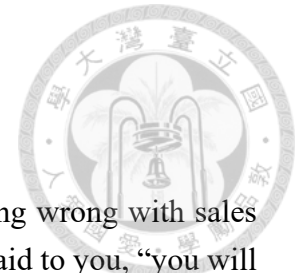
Segment 3:

Simon, what do I do with my sales target tomorrow? There's nothing wrong with sales targeting, like I said, having goals gives us something specific. If I said to you, "you will get a bonus at the end of the year if you accomplish more", you're gonna say, "how much more", and I'm gonna say, "more." It's actually unnerving. Right. It's actually unnerving. Give me a number, give me a date and I can work towards that. There's nothing wrong with that. So there's nothing wrong with targets. Just like I said, if you say I want to lose a certain amount of weight by a certain date, like, that's actually very helpful than "I wanna lose weight", right? Like "I wanna lose 5 kilos by X date", you can do that. The question is how we get there. I don't have a problem with the metric. So this is a traditional model. I need everybody in the company to hit this number, or I need your team to hit this number by the end of the year. And it's usually annual because that's when we pay taxes. So here's one team, Team one. Performance is like this, morale is like this, like when we're doing well, everybody's happy. When we're doing badly, everybody's bad and sad. People are quitting, people are getting fired, there's layoffs, you know, one quarter because we missed the numbers and at the end of the year we have a quick hard promotion, and we hit the number on the date. And that leader and that team is given a bonus. Right, which sends a message to the rest of the company. If this is how you do business, you'll do very well here. Then there's another team that's really well led. Morale is really good all the time. No one quits. No one's getting laid off. No one gets fired. Everything's great. Same target. You know they love each other. You ask the people, they all love their jobs, right? And at the end of 12 months, they missed the target. We give that team and that leader nothing. So basically what we're saying is if you run your business this way, you won't do well at this company. I don't have a problem with the target because clearly this team is going to hit the target in 14 months, but they missed the arbitrary date and they missed the arbitrary projection. And so we have to consider not just if they make it, but how they make it. And this team should get a much… should be respected more than this team, because this is good, steady growth. This is what keeps companies healthy. This is dangerous. It looks good on paper, but it's destroying the people and it's destroying the culture and it just kind of last.
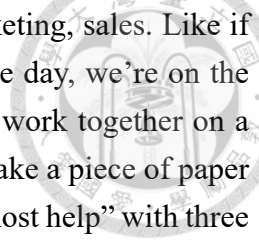
Segment 4:

So I don't have any problem with targets and that's not a problem. But the problem is, are they absolute and are we considering the manner in which we achieve our goals? So what metrics are missing, right. I had opportunity to meet with somebody from the Seal teams. And few would debate that the Seals are one of the highest performing organizations on

the planet, right? And I asked them. "How do you choose?" Like, this is like Seal Team Six kind of stuff, right? Like they get their… they take people from the seals and they put them in two things. "How do you choose?" And he says, "we look at 2…" This is the head of training. This is the head of training who told me this. "We look at 2 metrics, two axes. We look at performance, and we look at trust. And the way we define those terms is this performance on the battlefield, and this is how you are off the battlefield." So this is how good you are at your job. Do you make the metrics? Do you make the numbers? Do you hit the revenue targets? Whatever. But this is the kind of person you are when it's not the meeting, right. So I may trust going to a meeting with you, but I may not want to hang out with you when I'm stuck in an airport. The way they put it is "I trust you with my life, but I don't trust you with my money or my wife." That's how they put it. Clearly nobody wants this person on their team, A low performer of low trusts, clearly. Clearly everybody wants this person, the high performer of high trust on their team. Clearly. This is what they learn. This person over here, the high performer of low trust, is a toxic team member, which eventually becomes toxic leader if we keep promoting them. That is a toxic team member. And they would rather have a medium performer of high trust, sometimes even the low performer high trust, it's a relative scale, over this person. We have a million metrics at work for performance and we have negligible to no metrics for trust. So it's not that we don't care about these things, it's we don't know how to recognize these things. We don't know who these people are, and sometimes we do, and we say, "why do you let that person to be on your team", and we say, "their numbers are so good."

Segment 5:

In other words, we allow these people to stay even though they are pulling down the performance of everybody else. Now that doesn't mean we should immediately fire them, right? Just like I don't believe you should immediately fire a low performer, you should coach them, and help them get their performance up. If somebody is a low trust, we should coach them. But if they prove to be uncoachable, the cause is bigger than any of us, and so it's time to find some place where you'll be happier, because clearly if we're not happy, I can guarantee you're not happy. So here's the joke. It is unbelievably easy to find these people. Just go to any team and asked "Who's the a\*\*hole?", and they'll all point to the same person. So to answer your question, the thing that we're missing is peer review. We don't have peer reviews. Our bosses tell us how well we're doing, so we're all working for one person's approval. If you have a great boss, great. If you're unlucky and you don't, then you're screwed because it's one person's approval that determines my entire career. So peer review should be used as an evaluation tool. In other words, it's 360 reviews. So we took 360 reviews and the one of the ways that we did it, we made our own. And I'll tell you how we do it, which is, we take a team, which is defined by a group of people

who work together not to do with the hierarchy. So it's not just marketing, sales. Like if you're an engineer and I'm a marketer and I talk to you every single day, we're on the same team, right? So the team is defined as a group of people who work together on a regular basis. We take a team, and every single team member has to take a piece of paper and write "what are my top three weaknesses", or "places I need the most help" with three specific examples, and then three specific examples of my biggest strengths or the places that I believe I've grown the most. All of those pieces of paper are collated and shared amongst the whole team.

Segment 6:
And then we all get together in a room. And one by one, each person gets to start and they pull out their paper and the first thing they do is read out their top three weaknesses with their examples. And then everyone in the room is allowed to add more. And the only thing they're allowed to say is thank you. No excuses, no explanations, just thank you. And the reason is because we tell them, there's a little speech we give at the beginning. That what we're asking each other to do is really, really uncomfortable. It is really uncomfortable to tell people I work with some people who… sometimes people more senior than me, where they're hurting me, where they suck, right? And they would rather not tell you. What they're gonna tell you because they wanna see you grow and become a better version of yourself. So when they give you this information, say thank you. If you have an emotional reaction, anger. Probably because what they're telling you is true. That's what we tell. That's what we say. And we also say if they're telling you something that's just wrong, no emotional reaction, you're just thinking, you know, then ignore it. Say thank you for the feedback and move on. You don't have to… it's not all gospel, it's feedback, right? Then, when we're done with the top three weaknesses, we do the exact same thing with the top three strengths. You read your own, and then anyone at the table can add to it. And what you start to discover is that you are actually having a positive influence in people's lives that you didn't even realize. So it ends on an amazing high. Then we have to have the ability to coach to those weaknesses and strengths. So it's not over. Now, over the course of the year, we now have data that shows us where you can grow in your weaknesses, grow your strengths, cause we want you to get even better and mitigate your weaknesses. And we're gonna coach each other or have outside coaches to help. But we have data now. And then at the end of the year what we want to see or actually, I don't like annual reviews, I like quarterly reviews. That's a whole separate thing. Because I want to see growth. Because when you do an annual review, really you're only getting reviewed in the past few months because nobody can remember what happened six months ago. You know, you've been amazing for nine months and the past three months you sucked, and that's what you review says, you know, so quarterly you can show growth.

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But then what we want to do is we want to see that people are growing, not just performing. We want to see them growing. So that's one thing you can do is start implementing some sort of peer review. And if you identify these people, coach them. And if they prove to be uncoachable, do you have the courage to ask these people to go help another company?
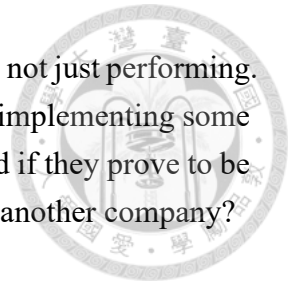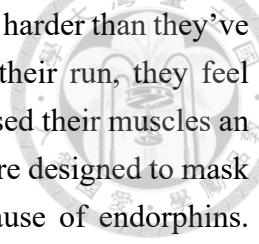
✧ *Follow-up experiment (Video 2):* https://youtu.be/_Djrsb5JtWk

Segment 1:
Now if you think about it, in the military they give medals to people who are willing to sacrifice themselves that others may gain. In business, we give bonuses to people who are willing to sacrifice others so that we may gain. We have it backwards. Wouldn't you like to work in an organization in which you have the absolute confidence, the absolute knowledge that other people that you may or may not know who work in the same organization as you would be willing to sacrifice themselves so that you may survive? And then, and we're not talking about giving your life. I mean, we don't even like to give up credit. If you look at the human animal, the human animal is like a machine. There are systems inside our bodies that are trying to get us to do things that are in the interest of the survival of the human animal, right? Just like in the business, in the company, if you want people to do something, you offer them some sort of positive or negative incentive to direct the behavior, right? So if you want people to achieve a certain goal, you offer them a bonus if they achieve that goal, and they'll work towards that goal because they want the bonus. It's a very simple system. The human body works exactly the same way. It works exactly the same way. Inside our bodies, our chemicals that are trying to get us to do things that are in the best interest of us. If you've ever had a feeling of happiness, pride, joy, love, fulfillment. All of these feelings that we have are chemically produced feelings. And they're produced by 4 chemicals predominantly. These are basically responsible for all of the feelings that I would generically call happiness. They are Endorphins, Dopamine, Serotonin and Oxytocin. EDSO. These two chemicals, endorphins and dopamine. I like to call these the selfish chemicals, because you don't really need anybody's help to get them, right? let me tell you. Let me tell you a little bit about what they are.
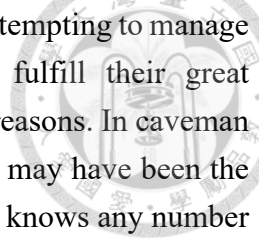
Segment 2:
Endorphins. Endorphins are designed to do one thing and one thing only. Mask physical pain. That's it. That's what they do. If you if you're a runner, if you've ever gone and done a heavy exercise, you've heard of an endorsement rush or a runner's high. Basically

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what's happening is when that runner is out there pushing their bodies harder than they've ever pushed before, they feel good. And when they're done with their run, they feel fantastic. And then an hour later, they're in pain for damage they caused their muscles an hour before, right? This is what endorphins are designed to do. They're designed to mask physical pain. By the way, the reason laughing feels good is because of endorphins. You're actually convulsing your internal organs, and endorphins are masking the physical pain. I'm sure everybody here has laughed so much that the endorphins eventually run out. You go, "stop, stop. It hurts." Endorphins. They feel good. Dopamine. Dopamine is the feeling that you found something you're looking for, like you accomplished something you set out to accomplish. So you know that feeling you get when you cross something off your to-do list. That's dopamine. Feels awesome. You know when you… when you have a goal to hit and you achieve that goal, you're like, "yes", you feel like you've won something, right? That's dopamine. The whole purpose of dopamine is to make sure that we get stuff done, OK? This is why we're told you must write down your goals. Your goals must be tangible. There's a biological reason for that. We're very, very visually oriented animals. You have to be able to see the goal for it to biologically stay focused. For example, think about corporate visions, right? A corporate vision has to be something we can see, right? That's why it's called a vision. You can see it, right? "To be the biggest, most respected, to be the fastest growing" are not visions. They're nothing.

Segment 3:
You need a tangible goal. You need a tangible goal, right? Every time we achieve a goal and achieve a metric and achieve a milestone, that makes us feel like we're making progress to the vision we can see. We keep going and going and going until we achieve something remarkable. Dopamine comes with a warning. Dopamine is highly, highly, highly addictive. Here is some other things that release dopamine. Alcohol. Nicotine. Gambling. Your cell phone. We can also get addicted to performance in our companies when all they do is give us numbers to hit, numbers to hit, numbers to hit and a bonus you get and a bonus you get and a bonus you get. All they're doing is feeding us with dopamine and we can't help ourselves. All we do is want more, more, more. It's no surprise that the banks destroyed the economy because one of the things we know about dopamine addict is that they will do anything to get another hit, sometimes at the sacrifice of their own resources and their relationships. Ask any alcoholic, gambling addicts or drug addict. Ask them how their relationships are doing and if they've squandered any of their resources. It's an addiction. Dopamine is dangerous if it is unbalanced. It is hugely helpful when in a comfortable and balanced system. But when unbalanced, it's dangerous and it's destructive. You don't need anybody's help to get these. Go for a run, achieve your goals. You'll get dopamine, you'll get endorphins. But you won't have any feeling
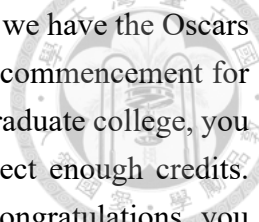
of fulfillment or love or trust. That's where these come in. These are attempting to manage these. It's because of these two chemicals that leaders really fulfill their great responsibility outside in the world is danger, at all times, for various reasons. In caveman times that danger may have been, you know, a saber-toothed tiger. It may have been the weather, it may have been a lack of resources, it may have been, who knows any number of things. Things that with no conscience are trying to kill you. They want to end your life, and so how do we survive?

Segment 4:
We work together, and together, we come together in our groups and our companies and our tribes to feel like we belong, to be around people who believe what we believe so that we may feel safe. When we're surrounded by people who have our best interests in mind and we feel safe, we will organize ourselves and cooperate to face the dangers externally. Don't forget the outside dangers are a constant in a modern world. The outside dangers may be your competition that's trying to put you out of business or at least steal your business. It might be the ebbs and flows of the economy. It might be terrorism. All of these unknowns, all trying to put you out of business. Take away your job. Take away your livelihood. End it for you. Nothing personal. It's a constant. Inside our organizations, the dangers we face are not a constant, they are a variable. And they are the decisions of leadership as to how safe they make us feel when we go to work. This is the job of leaders. When we stand together, we can more easily face the dangers outside. When we break up inside our companies, if our leaders don't allow us the space to feel safe inside our own companies, to feel like we belong, then we have to we're forced to exert our own energy to protect ourselves from each other and, by the way, expose ourselves to greater danger from the outside. If you have to worry about politics, if you have to worry about someone stealing your credit, if you have to worry about your boss not having your back. Think about the energy you invest. Not in your business, not in the products you're trying to develop. Not in your work, not in how great you're producing, not in your creativity, but in just keeping yourself feeling safe. This is destruct. The responsibility of leadership is 2 things. One to determine who gets in and who doesn't get in. This is what it means to start with why? What are our values? What are our beliefs? Who can we allow in? Second thing is to decide how big this is.

Segment 5:
Great leaders extend the circle of safety, the circle of belonging, out to the outermost edges. So the most junior person feels like they belong, feels safe. That's what these other two chemicals are trying to do. Serotonin is the leadership chemical. It's the responsible for feelings of pride and status. And this is why public recognition is very important. We

are social animals and we need the recognition of others. This is why we have the Oscars and this is why we have public awards events. This is why we have commencement for graduation. I mean, think about it. What does it really take to get to graduate college, you need to pay your bills, fulfill the minimum requirements, and collect enough credits. That's it, right? It's a formula. You could get an e-mail that says "congratulations, you fulfilled all the requirements for graduation. Enclosed, please print out the PDF of your diploma." Wouldn't feel so good, right? So instead we have a big ceremony to recognize the accomplishment. And in the audience, we put our family and our friends and our teachers, all of those in our tribe who've supported us and watched our backs as we've made it through. And then we show up on that day and we go up on that stage and we take our diploma. It feels great. We feel our status rise. We feel our pride go up. And by the way, when you have serotonin in your veins, your confidence goes up also. And here's the best part about serotonin. At the exact moment that you took your diploma and you felt that surge of serotonin go through your body. At the exact moment, your parents sitting in the audience also got a surge of serotonin and also felt an intense pride watching you graduate, and this is what Serotonin is trying to do. It is trying to reinforce the relationship between parent and child, boss and employee, coach and player.

Segment 6:
And think about it. Think of the speeches that we give. If you give an award to somebody, what do they say? "I couldn't have done it. Thank God. I thank my parents. I thank my coach." We thank the person who we believe was looking out for us. Great teams don't want to win the trophy. Great teams want to win one for the coach. They want to make the coach proud. We want to make our parents proud. And it raises our status and it raises our confidence and it feels good. And we in turn will look after others so that they may accomplish the same. This is what Serotonin is trying desperately to do. And so we evolved into hierarchical animals. We're constantly assessing and judging each other, constantly arranging ourselves who's the alpha? Who's the dominant? And what we do is when we assess that someone else is the alpha, we voluntarily take a step back and allow them to eat first. Alphas get first choice of meat and first choice of mate. This is why we're constantly trying to raise our status, it's because there are benefits to being the alpha. People will do things for us and step back and offer us favors, but it comes at a cost. You see, the group is not stupid. We're not giving all of that stuff away for free. Leadership, alpha comes at a cost, you see, we expect that when danger threatens us from the outside. That the person who's actually stronger, the person who's better fed. And the person who is actually teeming with Serotonin and actually has higher confidence than the rest of us, we expect them to run towards the danger to protect us. This is what it means to be a leader. The cost of leadership is self-interest. If you're not willing to give up your perks

when it matters, then you probably shouldn't get promoted. You might be an authority, but you will not be a leader. Leadership comes at a cost. You don't get to do less work when you get more senior. You have to do more work and the more work you have to do is put yourself at risk to look after others. That is the anthropological definition of what a leader is.
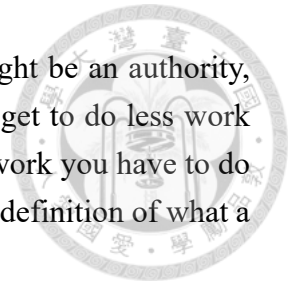
# Appendix II

*Consent Form*

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<div style="text-align:center">研究參與者知情同意書</div>

一、研究主題：逐步口譯雙人模式

二、研究者：沈業恆（國立臺灣大學翻譯碩士學位學程研究生）

三、研究目的：欲瞭解逐步口譯使用雙人合作模式進行的可行性

四、研究方法與程序：

參與者需以兩人一組，參加實驗前工作坊、正式實驗及訪談。實驗前工作坊（約1小時）及逐步口譯實驗（約2小時）兩者相隔一週，小組訪談（約30分鐘）則於實驗後進行。

五、研究效益與對研究參與者之益處：

1. 研究之科學效益：教學教材、方法與流程能應用於未來班級

2. 對參與者之益處：本實驗有助於逐步口譯學生的學習

六、研究材料之運用規劃及機密性：

口譯及訪談之錄音或錄影，以及研究者之觀察與紀錄都將以代碼註記。所有資料將由研究者妥善保管，純粹作為學習研究，未來論文內容提及研究對象時，會以匿名形式發表，絕不會洩露任何個人資料。

七、研究參與者權利：

1. 研究者已妥善向您說明研究內容與相關資訊，若有任何疑問，請直接詢問或透過email: ▮▮▮▮▮▮▮▮ 向研究者聯絡。亦可與研究者之指導教授吳茵茵老師聯絡，email為 ▮▮▮▮▮▮▮▮ 。

2. 研究者已將您簽署之一式兩份同意書其中一份交給您留存。

請您決定是否參與本項實驗。在下欄簽名，就表示您已閱讀以上的說明並同意參與。研究過程中不需任何理由，可隨時撤回同意書或退出研究，口頭或email告知研究者即可。

研究參與者簽名：＿＿＿＿＿＿＿＿＿　　日期：＿＿＿年＿＿＿月＿＿＿日

研究人員簽名：　＿＿＿＿＿＿＿＿＿　　日期：＿＿＿年＿＿＿月＿＿＿日

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# Appendix III

*Questions for post-experiment interview*

1.  請問您對於逐步口譯工作模式有什麼樣的了解？

2.  您認為目前普遍採用的逐步口譯的工作模式有需要優化之處嗎？

3.  您更偏好單人還是雙人模式的逐步口譯工作？

4.  您更偏好實驗中以段落分工還是以工作內容分工的逐步口譯雙人模式？

5.  您認為逐步口譯雙人合作模式（collaborative dual-person approach）的可行性
    如何？

6.  您在實驗前和實驗後對逐步口譯雙人合作模式的看法有沒有改變？

7.  您在實驗過程中與搭檔之間的合作有遇到任何挑戰嗎？

8.  您認為逐步口譯雙人合作模式改善了目前單人模式的哪些地方？

9.  您認為逐步口譯雙人模式在市場上的接受度如何？

10. 您認為您和您的搭檔在哪一種逐步口譯雙人模式下的產出會得到口譯聽眾更
    好的評價？