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A Corpus-based Study on Problem Triggers and Strategies in English-to-Chinese

Simultaneous Interpreting

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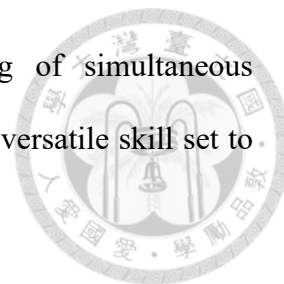
Abstract

This study investigates the strategies employed by conference interpreters to manage various problem triggers during simultaneous conference interpreting. With a focus on the source-target text corpus analysis based on publicly accessible video archives of the Smart City Mayors' Summit in Taiwan from 2021 to 2023, this study aims to explore how interpreters navigate linguistic, cultural, and contextual challenges to maintain clarity, coherence, and accuracy in their renditions.

Both quantitative and qualitative analyses were conducted in this study. The quantitative analysis involved counting the occurrences of four main categories of strategies (Morphosyntactic Reformulation, Synthesis, Expansion, and Paraphrasing) and their subtypes. The qualitative analysis explored how these strategies are applied to different problem triggers, demonstrating the interpreters' ability to dynamically adjust their techniques. Problem triggers were inferred from the strategies identified in the source-target text analysis. The study categorized problem triggers into message-related and sender-related issues, based on Mankauskienė's (2016) framework. Message-related triggers include complex syntax, idiomatic expressions, cultural references, and detailed information such as proper nouns and numbers. Sender-related triggers stem from the speaker's delivery, including incomplete sentences and convoluted expressions, particularly from non-native speakers.

The results indicated that interpreters dynamically utilize a versatile range of strategies to address both message-related and sender-related problem triggers, with Paraphrasing being particularly prominent. It was found that interpreters also often combine strategies to address complex problem triggers. For instance, when dealing with non-native speakers' fragmented sentences, Paraphrasing is frequently combined with Expansion strategies to add explanatory remarks, enhance lexical accuracy, and maintain

logical continuity. This study contributes to the understanding of simultaneous interpreting strategies, and it is helpful for interpreters to develop a versatile skill set to manage diverse problem triggers.



Keywords: conference interpreting, problem triggers, interpreting strategies, corpus-based study

摘要



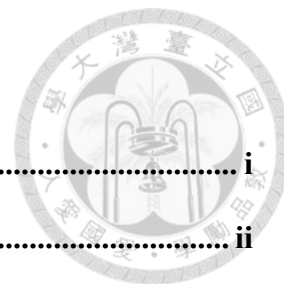
本研究探討會議口譯員在同步口譯過程中因應各種問題觸發點所使用的策略。研究資料取自 2021 年至 2023 年臺灣「智慧城市首長高峰會」公開影片檔，建立語料庫後進行原語與譯語的分析，討論口譯員如何應對語言、文化和語境等挑戰，確保譯語的清晰度、一致性和準確度。

本研究結合量性和質性分析。量性分析當中，研究者統計四大策略類型（形態句法重組、整合、擴展、改述）及各自子類型的發生次數。質性分析則探討這些策略如何運用於不同的問題觸發點，呈現出口譯員動態調整運用技巧的能力。研究者根據原語與譯語的分析中所發現的策略來推測口譯員所面臨的問題觸發點，並根據 Mankauskienė (2016) 的架構，將問題觸發點分類為「訊息相關」和「講者相關」。訊息相關的問題觸發點包括複雜的句法、慣用語表達方式、文化詞，以及專有名詞及數字等詳細資訊。講者相關的問題觸發點則來自講者的表達方式，例如不完整的句子和複雜的表述，這些問題觸發點常見於非母語演講者。

結果顯示，口譯員靈活運用多種策略來因應訊息相關和講者相關的問題觸發點，而改述是最常見的策略。口譯員也經常結合多種策略來解決複雜的問題觸發點。例如，在處理非母語演講者的零碎語句時，改述與擴展策略經常結合使用，藉此增添解釋內容、提升詞彙準確度，並保持邏輯連貫性。本研究有助於理解同步口譯的策略，並能幫助口譯員建立技巧組合，用以因應各式問題觸發點。

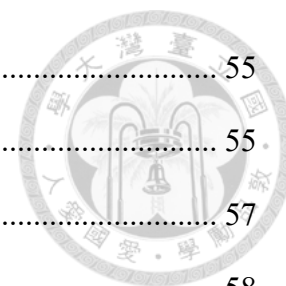
關鍵字：會議口譯、問題觸發點、口譯策略、語料庫研究

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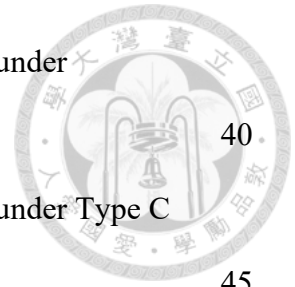
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Chapter 1 Introduction



1.1 Background and motivation

Effective communication is the cornerstone of successful international events, and conference interpreting plays a pivotal role in bridging language barriers among participants from diverse linguistic backgrounds. In high-stakes settings, interpreters are tasked with conveying complex technical information accurately and promptly, ensuring that all participants can engage fully in the discourse. This is particularly critical in discussions involving innovative urban solutions, technological advancements, and policy deliberations.

Interpreting, unlike other forms of communication studied in linguistics, involves at least one participant who is neither the initiator nor the addressee of the message (Setton, 1999, p. 8). Such a form of communication presents several challenges for interpreters which Gile (1995/2009) named “problem triggers.” Problem triggers is defined as “anything that increases the processing capacity requirements of an interpreter (more effort needs to be put into listening/understanding, short-term memory or production) or increases signal vulnerability” (Gile, 1995/2009, p. 171). Understanding problem triggers in interpreting may help solve problems of communication through an interpreter. In this study, problem triggers are defined as speech segments posing challenges, such as increased processing demands, signal vulnerability, language specificity, or speaker-related issues, requiring additional cognitive effort for effective interpretation.

To tackle challenges presented by problem triggers, interpreters adopt strategies. According to Chang (2005), the use of interpreting strategies can be defined as “any goal-oriented, potentially conscious employment of tactics designed to overcome the

processing problems interpreters encountered.” Wu and Liao (2018) defined interpreting strategies as “strategies, skills, and tactics that are problem-solving, problem-preventing, or message-enhancing” during interpreting. This study uses the terms “strategies” and “tactics” interchangeably to refer to actions taken to overcome difficulties during the process of interpreting.

The theoretical foundation for the research on problem triggers and interpreting strategies has been firmly established by existing studies. Gile's (1995) Effort Model, particularly his classification of problem triggers, serves as a pivotal framework, offering a structured understanding of the multifaceted challenges interpreters face. Setton's (1999) broader categorization underscores environmental, speech input, and subject-related influences. Mankauskienė's (2016) classification adds granularity, further refining the examination of problem triggers by source, including lexical, syntactic, sender-related, semological, and technical factors.

Empirical studies have explored the cognitive processes underlying interpreters' strategy use. Riccardi's (2005) categorization of skill-based and knowledge-based strategies, Wu and Liao's (2018) differentiation between problem-solving, problem-preventing, and message-enhancing strategies, and Gile's (2009) extensive inventory of comprehension, preventive, and reformulation tactics contribute to the understanding of how interpreters navigate the intricate landscape of simultaneous interpretation. Additionally, Falbo's (1999, as cited in Ma & Cheung, 2020) micro-strategies provide valuable insights into the variety and purpose of interpreting strategies.

In recent years, there has been a notable shift toward corpus-based studies drawn from real-life data, emphasizing the importance of ecological validity. These studies, such as Ma and Cheung's (2020) examination of language interference in UN General Assembly interpreting and Wang's (2012) investigation of source-target text shifts in

Chinese Premier Press Conferences, move beyond controlled conditions to analyze authentic language use. The ecological validity of such corpus-based studies addresses the limitations of experimental data, providing a more representative understanding of linguistic patterns, expressions, and discourse in interpreting settings. Inspired by this trend, the present study adopts a corpus-based approach to analyze English-Chinese simultaneous interpreting challenges and strategies within the context of real-life international conferences in Taiwan.

As remote conferencing and online streaming technologies become increasingly advanced and popular, more conference videos have been archived online, even along with their interpretations, allowing whoever is interested in the topics discussed to playback without time or space constraints. This provides good resources for researchers to study interpreters' renditions of speeches.

This study chooses the online materials of 2021-2023 Smart City Mayors' Summit in Taipei, Taiwan to build the corpus for analysis. The annual Smart City Mayors' Summit holds significance as a key platform for city leaders to convene, exchange ideas, and collaboratively address the challenges and opportunities associated with smart city initiatives. It serves as a typical work scenario for conference interpreters, as it involves speakers with diverse accents and delivery styles participating in discussions on current issues related to technology, government policies, and human rights. Because of the COVID-19 pandemic, the Summit took place in the form of a hybrid conference in 2021 and 2022, where speakers located in Taiwan delivered their speeches on site, and others dialed into the meeting and spoke remotely. As in-person attendees congregate at Nangang Exhibition Center, the event was broadcasted via YouTube, with one channel in English (original) and the other in Chinese (interpretation). The 2023 Smart City Mayors' Summit was the first time the event was held in-person after the pandemic. This

study utilizes the publicly accessible archived videos of this event to collect data. Through intertextual analysis of real-life data, this study aims to unravel the nuanced dynamics of interpreters' daily challenges, providing a more ecologically valid representation of the interpreting process.

This study seeks to contribute to the field of interpreting by analyzing the strategies used by interpreters to manage problem triggers during English-Chinese simultaneous interpretation, providing practical insights that can enhance interpreter training programs and improve the quality of interpreting services. Understanding the challenges and strategies in simultaneous interpretation is helpful for developing a more comprehensive approach to interpreter education and practice.

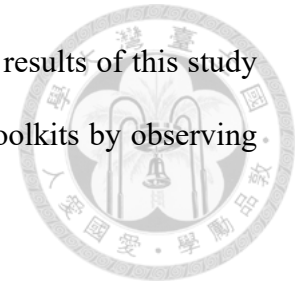
1.2 Research questions

In this study, the researcher built a corpus based on online resources of a real-life conference, and then analyzed the problem triggers in the source-language speech, as well as the strategies which the interpreters adopt in their renditions. This study aims to answer the following questions:

1. What strategies do professional interpreters utilize?
2. What are the major problem triggers for conference interpreters?

In order to find answers to the research questions, qualitative and quantitative analysis was conducted through transcription and annotation. Strategies used by interpreters were identified first through source-text and target-text comparative analysis before inferring the problems associated with strategy use. Understanding these aspects is crucial for enhancing interpreter training programs and improving interpreting practices. By providing practical insights into the strategies used by interpreters, this study aims to contribute to the field of interpreting studies and support the development

of more effective training and support systems for interpreters. The results of this study are beneficial to interpreters who wish to develop or expand their toolkits by observing other interpreters' performances.



1.3 Definition of terms

For this study, several recurring terms are defined as follows:

- Problem triggers: Speech segments posing challenges, such as increased processing demands, signal vulnerability, language specificity, or speaker-related issues, requiring additional cognitive effort for effective interpretation. In this study, problem triggers are inferred from source-target text alterations.
- Strategies: In this study, strategies are identified from source-target text differences, which include obligatory systemic language differences and alterations that may stem from interpreter deliberations. This study identifies interpreting strategies through corpus-based analysis.

1.4 Thesis structure

This thesis is divided into five chapters. Chapter one introduces the study, covering the research background, motivation, questions, and overall structure. Chapter two provides a comprehensive literature review, examining theoretical frameworks by scholars like Gile and Setton, as well as literature on problem triggers and strategy use. Chapter three outlines the research methods, detailing materials, procedures, and data analysis methods used to explore the Smart City Mayors' Summit corpus. Chapter four presents and discusses the results, analyzing the occurrence and patterns of various strategies, their relation to problem triggers, and includes quantitative data and qualitative examples. Chapter five concludes the study by summarizing key findings, discussing

implications for interpreter training and practice, addressing research limitations, and offering suggestions for future research.



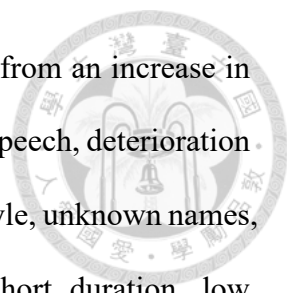
Chapter 2 Literature Review



This chapter provides a comprehensive review of the existing literature relevant to this study's focus on problem triggers and interpreting strategies. Section 2.1 discusses problem triggers in interpreting, drawing on theoretical frameworks and empirical studies to categorize and explain these challenges. Section 2.2 examines the various strategies interpreters use to address problem triggers, highlighting different typologies and their practical applications. Finally, Section 2.3 explores corpus-based analysis of interpreting strategies, emphasizing the importance of real-life data in understanding interpreter behavior.

2.1 Problem triggers in interpreting

Most problems in the process of interpreting are caused by segments in the speech which require extra effort to process. In Gile's (1995) Effort Model, problem triggers are defined as "parts of the speech that increase processing capacity requirements, which may exceed available capacity or cause attention management problems, or with vulnerability to a momentary lapse of attention of speech segments with certain features" (p. 171). In his research, Gile (1990, p. 35) listed parameters which, according to professional interpreters, influence their performance: the source language, the speed of delivery, style, the degree of specialization of the speech, the speaker's pronunciation, environmental noise, the temperature in the booth, the visibility of the speaker and the conference room, prior knowledge of the subject, the general mental condition and physical health of the interpreter, his experience, talent, honesty, the personal relations between team members, the number of delegates listening to the interpretation, and the attitude of organizers and delegates towards the interpreters. Since the list was not finite and may cause problems for its applications for research, Gile (1995/2009, p. 192–200) subsequently prepared a



more structured list of problem triggers, including problems arising from an increase in processing capacity requirements (such as high density of the source speech, deterioration of sound quality, strong accents, unusual linguistic style, reasoning style, unknown names, etc.); problems arising from signal vulnerability (segments of short duration, low redundancy, and similar consonants, vowels and syllables, such as numbers, names, acronyms, etc.); language-specificity related problems (differences in the perception of words, syntactic structures of the language, culture-specific difficulties, etc.); and problems that arise from the speaker factor (i.e. how a specific speaker formulates and presents their speech). Giles' list, designed primarily for educational purposes, features a clear structure. Although it has potential applications in research, it could benefit from the inclusion of broader categories to enhance its overall comprehensiveness (Mankauskienė, 2016, p. 145).

While Setton (1999, p. 99) did not specifically address the issue of problem triggers, yet, he identified three groups of factors which influence simultaneous interpreting: (1) the environment (size and character of the audience, feedback, comfort and technical conditions); (2) the speech input (“language-in-text”, including style, presentation, delivery); (3) the subject (interpreter: his/her competence, intelligence, preparedness and motivation). While Setton's categorization could potentially be extended to encompass problem triggers, it might be considered overly broad and general for a more detailed analysis.

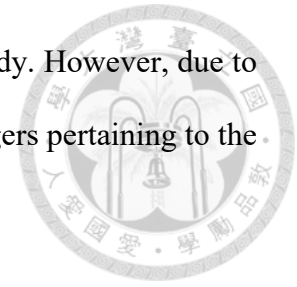
Based on an interpreting communication model which is a combination of Ingram's (1974/2015: 97) and Kirchhoff's (1976) communication models, Mankauskienė (2016, p. 145) divided problem triggers according to their source:

a. As all languages are composed of three systems (lexical, syntactic and semological) (Gleason, 1965), **problem triggers pertaining to the message** can be further divided into the following groups:

- i. Lexical (proper names; numbers; abbreviations; technical terminology);
- ii. Syntactic: phrases (idiomatic expressions; collocations; technical terminology); sentences (syntactic differences between source language and target language; lexical density; long sentences; many clauses; enumeration);
- b. **Sender-related problem triggers** (speaker's accent; non-native speaker; fast speech delivery; monotonous intonation; read speeches, etc.);
- c. **Semological** (metaphors; humor; sarcasm);
- d. **Technical problem triggers** (failures of interpreting equipment; external sounds; interpreter cannot see the speaker, etc.);
- e. **Problem triggers relating to an interpreter** (experience; background knowledge; communication competence; fatigue, etc.).

The present study adopts Mankauskienė's (2016, p. 145) problem trigger classification to examine the source speeches in its corpus, as this structured classification helps provide a comprehensive yet focused understanding of interpreters' challenges in their daily work. It not only covers the cognitive and contextual aspects but also includes the specific linguistic elements, making it a more versatile tool for analyzing interpreting challenges. Furthermore, Mankauskienė's (2016, p. 145) classification has been validated through empirical studies, demonstrating its effectiveness in identifying problem triggers during simultaneous interpreting tasks between two languages with different syntaxes. In Mankauskienė's (2016) study, the results showed that interpreters experienced difficulty interpreting names, numbers, technical terms, as well as language-specific lexical items. Similar problems may also occur when interpreting from English into Mandarin Chinese.

Therefore, this classification is deemed applicable to the present study. However, due to the corpus-based method, this study can only examine problem triggers pertaining to the message and limited aspects of sender-related problem triggers.



2.1.1 Message-related problem triggers

Problem triggers pertaining to the message in interpreting refer to challenges that interpreters face in conveying the intended meaning of a message from the source language (SL) to the target language (TL). These triggers can arise from various sources, including linguistic, cultural, and contextual differences. Such variations in linguistic structures and cultural conceptualizations between the SL and the TL are commonly denoted as “language specificity” in existing literature.

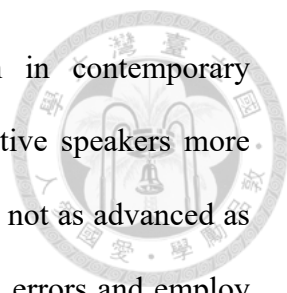
The languages under discussion in this research, namely Chinese and English, are recognized to differ both linguistically and culturally in numerous aspects, ranging from syntax and semantic elements to compactness and abbreviation (Setton, 1993). Ma and Cheung (2020) explored the concept of language specificity in the context of English-Chinese interpreting. The study suggested that structural asymmetry between SL and TL is a significant source of cognitive load for interpreters, impacting interpreting performance. It also further delved into language specificity in English-Chinese interpreting, focusing on structural differences between the two languages. The differences in passive constructions and attributive clauses pose considerable linguistic challenges. Passive constructions in English, used for formal styles, differ significantly from those in Chinese, where they tend to indicate negative semantic meanings. Attributive clauses, common in English, are structured differently in Chinese, with modifying elements appearing before the headword. Both passive constructions and

attributive clauses contribute to cognitive overload during interpreting, leading to potential interference.

On the lexical level, numbers and proper names are common problem triggers for interpreters. Interpreters widely acknowledge the challenge of interpreting numbers. Various studies reveal that the overall performance in accurately interpreting numbers is notably subpar, observed across both professional interpreters (Timarová, 2012; Collard & Defrancq, 2017) and students (Braun & Clarici, 1996; Mazza, 2001; Pinochi, 2009). Challenges stem from the lack of conceptual representation (Timarová, 2012; Seeber, 2015), high informativeness (Alessandrini, 1990), and non-redundancy (Gile, 1995; Seeber, 2015) of numbers. Proper names are another factor that commonly poses challenges for interpreters. Proper names convey specific knowledge about entities, such as individuals, places, or institutions. Speakers use proper names to convey their relationship, knowledge, and assumptions about participants' familiarity. If assumptions about the listener's knowledge are incorrect or early communication fails to bridge knowledge gaps, the use of proper names can create difficulties in the ongoing conversation. Gile (1995) emphasized that names pose challenges for interpreters, particularly when the interpreter is unfamiliar with a specific name or its pronunciation in the target language. According to Gile's (1995) "Effort Model," names, as well as other smaller linguistic elements like numbers or acronyms, can intensify interpreters' efforts, necessitating specific coping tactics.

2.1.2 Sender-related problem triggers

Factors related to the sender, including the speaker's non-native status and reading off scripts, can act as problem triggers in the interpretation process. With the extensive teaching of English as a second language (Crystal, 2003), English as a Lingua Franca has



gained prominence as the prevailing mode of communication in contemporary international conferences. Therefore, interpreters encounter non-native speakers more frequently. Non-native speakers' linguistic proficiency is commonly not as advanced as that of native speakers (Ellis, 1985). They may exhibit grammatical errors and employ constructions not typical in native speakers. Furthermore, their word choices are frequently suboptimal and may be inaccurate. Consequently, the language of non-native speakers may be less effective in conveying their intended meaning compared to that of native speakers (Lev-Ari, 2015). Furthermore, non-native speakers typically speak with an accent, presenting pronunciation variations from standard English. Non-native source texts that depart from familiar acoustic-phonetic patterns pose challenges to the interpreter's perception. According to Gile's (1995) Effort Model, this situation compels the interpreter to allocate a significant portion of processing to the Listening and Analysis Effort (Gile, 1995, p. 173).

2.2 Interpreting strategies

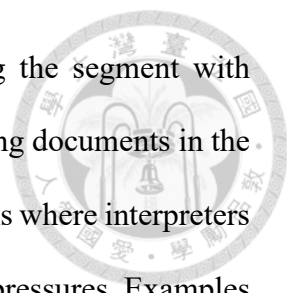
Many of the problem triggers highlighted in the preceding section are common and recurring. To address such challenges, interpreters develop and employ a variety of strategies to reduce cognitive processing load or to help cope with problems and emergencies during the process of interpreting. There have been many studies on effective interpreting strategies (also referred to as tactics or techniques), quite a few of which also proposed categorization of strategies (e.g. Kohn and Kalina, 1996; Donato, 2003; Riccardi, 2005).

Riccardi (2005) categorizes interpreting strategies into skill-based and knowledge-based. According to Riccardi, skill-based strategies are automatically triggered by the recognition of a well-known stimulus within the communicative event,

whereas knowledge-based strategies are activated as a result of conscious analytical processes (2005, p. 760-762). For instance, as a skilled-based strategy, experienced interpreters resort to their prepared stock phrases to interpret recurrent, stereotypical parts of speeches, such as welcoming, greetings, thanks, and introduction of different points of an agenda. This helps conserve interpreters' cognitive resources for more demanding parts of the source speeches, where the interpreters utilize knowledge-based strategies. For example, due to the differences in sentence structures among languages, an interpreter may pause their interpretation and "wait for meaning disambiguation and then resumes output at a rapid pace" (Riccardi, 2005, p. 762).

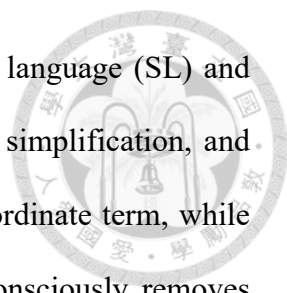
Wu and Liao (2018) presented a model of interpreting strategies conditioned by constraints and norms, where they distinguished three types of strategies: problem-solving, problem-preventing, and message enhancing. With an aim to create a trainee-friendly interpreting strategy model and a taxonomy for pedagogical purposes, Wu and Liao (2018) grouped interpreting strategies under four principles: BE FLEXIBLE, ONE CHUNK AT A TIME, BE CLEAR, and BE CONCISE. This classification corresponds to problem-solving (strategies under BE FLEXIBLE), problem-preventing (strategies under ONE CHUNK AT A TIME), and message-enhancing (strategies under BE CLEAR and BE CONCISE). Wu and Liao's (2018) discussion focuses on strategies that require deliberate, conscious activation, as opposed to spontaneous, automatic responses.

Gile (2009, p. 201-211) refers to deliberate decisions and actions aimed at preventing or solving problems as "tactics," providing an extensive inventory of coping tactics within the framework of his Effort Model of Simultaneous Interpretation (SI). These tactics can be categorized into three primary groups: comprehension tactics, preventive tactics, and reformulation tactics. Comprehension tactics come into play when issues with understanding arise or are anticipated. Gile outlines four fundamental



comprehension tactics, including delaying response, reconstructing the segment with contextual assistance, seeking help from the boothmate, and consulting documents in the booth. Preventive tactics aim to mitigate the risk of failure in situations where interpreters sense potential issues due to time constraints or processing capacity pressures. Examples include taking notes, adjusting the ear–voice span, segmentation, and altering the order of elements in an enumeration. The most extensive category, reformulation tactics, is employed to address potential challenges related to production or short-term memory. The initial three reformulation tactics overlap with the comprehension tactics mentioned earlier, involving delaying response, seeking boothmate assistance, and consulting documents in the booth. Additionally, interpreters use other reformulation tactics such as substituting a segment with a more inclusive term, providing an explanation (paraphrasing), reproducing the sound from the source-language speech, instant naturalization, and transcoding. Although less frequent, interpreters may resort to informing delegates of an interpretation problem, directing them to another information source, omitting information, engaging in parallel reformulation, and even switching off the microphone in extreme cases.

Falbo (1999, as cited in Ma & Cheung, 2020) integrated reformulation strategies mentioned in various literature and classified them into three primary micro-strategies, namely morphosyntactic reformulation, synthesis, and expansion, each further subdivided into distinct sub-categories. Under morphosyntactic reformulation, strategies include morphosyntactic transformation, syntactic segmentation, and changing order within a clause. Morphosyntactic transformation involves altering negative clauses to positive, transforming nouns into verbs, or converting subordinate clauses into main clauses. Syntactic segmentation breaks down lengthy sentences into shorter clauses, particularly useful for languages with structural dissimilarities. Changing order within a



clause aids in managing word order disparities between the source language (SL) and target language (TL). Synthesis strategies comprise generalization, simplification, and deletion. Generalization involves replacing a segment with a superordinate term, while simplification entails lexical or stylistic simplification. Deletion consciously removes redundant information. Expansion strategies include explanatory addition, addition to maintain coherence, repetition, and paraphrasing. Explanatory addition expands lexis for clarification, addition to maintain coherence explains coherence relationships, repetition reiterates previously processed parts, and paraphrasing is employed when interpreters face challenges in finding suitable terms or uncertainty about equivalent expressions in the TL.

Apart from explaining how interpreters use strategies, some studies have tried to explore the underlying mechanisms through retrospection, a method borrowed from cognitive science, to get insights into interpreters' thought processes and to connect specific strategies to the overall mental work involved in the interpretation process. Bartłomiejczyk (2006, p. 152) described interpreting strategies as methods that have the potential to address specific problems faced by interpreters or to generally facilitate the interpreter's task and prevent potential issues. The definition consists of two components: problem-oriented strategies, which are applied to resolve specific difficulties, and overall strategies, which contribute to the overall facilitation of the interpreter's task. Bartłomiejczyk's (2006) empirical study investigated strategies employed by interpreters during simultaneous interpreting (SI), focusing on the directionality of interpreting from English into Polish and vice versa. The hypotheses proposed variations in the use of strategies based on language direction, considering factors such as the interpreters' native language and the ease of word production in each language. The study involved 36 advanced interpreting students, using authentic source texts in English and Polish, and

examined strategies such as anticipation, transcodage, paraphrasing, and more. The subjects' introspective data were encoded, categorized, and analyzed, revealing insights into the cognitive processes involved in simultaneous interpreting. The results showed that inferencing, parallel reformulation, and transcodage were more frequent in English-to-Polish interpreting, which confirmed the hypotheses. Unexpectedly, certain strategies, such as transfer, showed similar occurrences in both directions, leading to considerations about language-pair-specific factors. The study emphasizes the importance of directionality in SI training and acknowledges limitations, urging future research to address these gaps and broaden insights into strategic behavior across diverse language combinations and experience levels.

Chang and Schallert (2007) examined Chinese/English interpreters' choice of strategies while simultaneously interpreting in different directions. The subjects in their experiment underwent both quantitative and qualitative analysis during the interpretation of speeches in both languages, followed by stimulated retrospective interviews. With a model representing the role of strategies in SI, the study revealed insights into the interpreters' strategies and thoughts based on their linguistic output and cognitive activities. In the model, listening, speaking and memory are presented as inter-connected activities. It was found that in listening, interpreters use both top-down and bottom-up strategies, with a heightened reliance on top-down methods such as anticipation and visualization to offset the simultaneous demands of listening and speaking. As concurrent listening and speaking often lead to perception problems, especially when excessive attention is devoted to interpreting previous segments, interpreters compensate by employing strategies like parallel reformulation and generalization. In speaking, under time pressure, interpreters face production difficulties, resorting to strategies like omission and paraphrasing. Memory plays a vital role, with interpreters using notes and

key words. Monitoring is an ongoing process, allowing interpreters to actively adjust strategies based on self-awareness and internalized norms. The results indicate that interpreters develop and employ strategic methods informed by factors such as understanding of their language limitations, the strategic options at their disposal, audience expectations, and other perceived norms influencing their performance and discourse structures, to effectively manage the intricacies associated with interpreting in different directions.

As observed in the above reviewed literature, many previous studies related to strategies involved experimental data. In addition to generating verbatim transcripts of the source text and target text, interviews were also conducted to confirm the reasons behind the use of strategies (e.g., Bartłomiejczyk, 2006; Chang & Schallert, 2007). However, the ecological validity of experimental data is limited as it is gathered within controlled conditions. Instead of relying solely on controlled conditions, a corpus-based approach analyzes authentic language use, allowing researchers to capture a more representative and ecologically valid sample of linguistic patterns, expressions, and discourse. Since researchers are unable to capture the interpreters' cognitive process through corpus data analysis, corpus-based studies related to strategies often involve source-target text analysis. The next section provides a review of the existing corpus-based studies exploring interpreting strategies.

2.3 Corpus-based analysis of interpreting strategies

Corpus-based studies in interpreting involve the systematic analysis of parallel corpora, where source texts and their corresponding interpretations are aligned. By comparing and contrasting the source and target texts within a corpus, researchers can identify and categorize different types of alterations in the target speeches compared to

the source speeches. These alterations are referred to by various terms, including “shifts,” “transformation categories,” and “strategies.” This section reviews corpus-based studies which investigate source-target text differences to gain insights into different aspects of interpreting, such as modes, norms, strategies and individual styles.

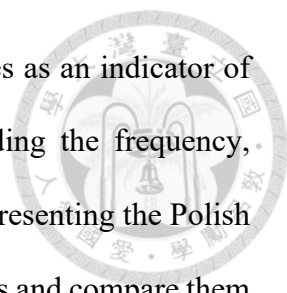
Schjoldager (1995) categorized “transformation categories” or “translational relationships” (1995, p. 81) through corpus-based source-target text comparison in her study about translational norms. Using a corpus-based approach, Schjoldager analyzed a Danish news article and an Amnesty International advertisement, both transformed into speeches for a simulated conference. Participants interpreted these speeches, allowing the study to identify various transformation categories such as Repetition, Permutation, Addition, Deletion, Substitution, Equivalent Substitution, Paraphrastic Substitution, Specifying Substitution, Generalizing Substitution, Overlapping Substitution, and Substitution Proper. The findings underscore the value of corpus-based analyses in revealing the nuanced strategies interpreters employ to manage linguistic and contextual challenges during simultaneous interpreting.

In a study on signed media interpreting, Wehrmeyer (2020) defined deviations from the source semantic content as shifts. Within their research framework, shifts are categorized into “additions,” “omissions,” and “reformulations and skewed substitutions” (p. 274) and used to identify interpreter strategies and norms. The study involved two experienced Sign Language Interpreters who simultaneously interpreted news broadcasts from English to South African Sign Language (SASL). Analyzing a corpus consisting of approximately 30,000 words in the source text and 15,000 words in the target text, Wehrmeyer (2020) found that reformulation, generalization, and omission are shifts that occurred the most frequently in the interpretation, as interpreters were under intense time

pressure to keep pace with the speakers. These shifts were primarily viewed as strategic responses to manage cognitive overload and the fast-paced nature of the task.

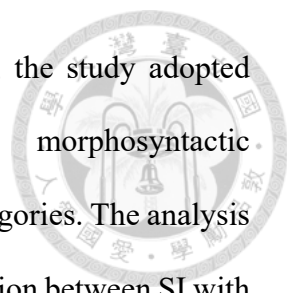
Acknowledging that interpreting studies have long focused on exploring cognitive processing behind interpreting behaviors, Wang's (2012) corpus-based study focused on source-target text shifts to infer norms in the interpreting activities of Chinese Premier Press Conferences. Three types of shifts were identified through inter-textual comparative analysis in a parallel corpus: Type A shifts involve "Addition," Type R shifts involve "Reduction," and Type C' shifts involve "Correction." Under Type A shifts, five sub-types are recognized. A1 shifts involve the addition of cohesive devices, A2 shifts entail informational addition and elaboration, A3 shifts relate to the explication of intended meaning, A4 shifts encompass repetition, and A5 shifts involve the addition of new information. Type R shifts include R1 shifts (omission) and R2 shifts (compression), where interpreters omit or compress information, respectively. Type C' shifts occur when interpreters deliberately correct inaccurate or wrong information. Major findings of Wang's study indicate a prevalence of Type A shifts (Addition) in interpreters' behavior, with fewer occurrences of Type R shifts (Reduction) and Type C' shifts (Correction). Four typical norms of source-target text relations were identified: adequacy, explication in logic relations, specificity in information content, and explicitness in meaning. The study suggested that interpreters adhere to these norms, emphasizing accuracy, consistency, completeness, and acceptability of the target text. The findings align with Gile's (1999) norms of "maximizing information recovery" and "maximizing the communication impact of the speech." The study recognized the importance of exploring different interpreting modes and settings in future research.

Gumul and Bartłomiejczyk (2022) used the corpus-based approach to investigate explication styles of professional interpreters working for the European Parliament (EP).



Explicitation, defined as shifts from implicit to explicit forms, serves as an indicator of individual interpreting style. The study proposed questions regarding the frequency, consistency, and forms of explicitation among 12 EP interpreters representing the Polish Language Unit, aiming to identify convergences in explicating styles and compare them to those of interpreting trainees. The material for analysis came from the EP-Poland Corpus, covering debates on the rule-of-law crisis in Poland. The method included voice identification, manual segmentation, and alignment for tracking explicating shifts. The findings revealed a variety of explicating patterns, and interpreters' styles were categorized as lean, medium, abundant, and extreme based on explicitation frequency. The study also identified common forms of explicitation, such as adding connectives, meaning specification, reiteration, and modifiers. However, significant variations were identified in terms of the scope, type, and patterns of explicitations, preventing the establishment of convergence among interpreters from the same community of practice. Nevertheless, the researchers utilized authentic data, allowing them to observe interpreters' natural choices driven by the genuine need to convey content to a specific audience. This level of ecological validity and contextual embeddedness is beyond reach in experimental research. The study also suggested the need for further exploration, particularly in comparing explicitation styles among freelance conference interpreters in diverse settings.

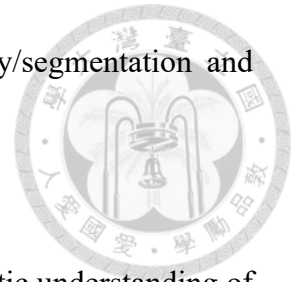
Ma and Cheung (2020) employed a corpus-based descriptive approach to systematically compare language interference in Simultaneous Interpreting (SI) with text and SI without text, focusing on English-Chinese interpreting at the UN General Assembly. Through transcription, manual alignment, linguistic feature summary, and annotation of reformulation strategies, the study addressed questions about lexical features, reformulation strategies, and the relationship between interpreting mode and



language interference. For the analysis of reformulation strategies, the study adopted Falbo's (1999) typology, including three micro-strategies: morphosyntactic reformulation, synthesis, and expansion, further divided into sub-categories. The analysis revealed differences in reformulation strategy frequency and distribution between SI with text and SI without text. Morphosyntactic reformulation and expansion are more prevalent in SI with text, whereas segmentation and deletion dominate SI without text, indicating the influence of interpreting mode on cognitive processes. Strategies such as reordering information are more common in SI with text, leveraging written scripts to produce natural target expressions. Strategies for interpreting passive constructions and attributive clauses vary between SI with text and SI without text, indicating the impact of cognitive constraints on language interference. The study's implications for interpreting practice include the importance of written scripts for quality, the need to prioritize SI with text in training programs, and awareness of language-specific factors in handling structural asymmetries.

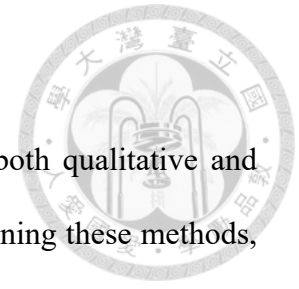
From the literature reviewed in this section, it can be seen that source-target text alterations, however denoted, can be used to infer strategies adopted by interpreters. Therefore, building on Ma and Cheung's (2020) approach, this study uses the term “strategies” to refer to source-target text alterations that may stem from both obligatory systemic language differences and interpreter deliberations. This study considers obligatory systemic language differences within its discussion of strategies, since inherent language differences can also act as problem triggers, as evidenced by research such as Chang and Schallert (2007, p. 141), which notes that interpreters use different strategies depending on the language pair, especially when there are apparent syntactic asymmetries, such as between Chinese and English. These linguistic and cultural differences result in unique problems that necessitate specific strategies, as shown by Dawrant's (1996)

finding that interpreters frequently employ strategies like linearity/segmentation and anticipation to address word-order issues.



Collectively, the studies reviewed above contribute to a holistic understanding of the intricate nature of interpreting, where problem triggers necessitate diverse strategies, and corpus-based source-target text analyses reveal the nuanced dynamics of strategy utilization through insights derived from real-life data. Many of these studies also suggested expanding the range of exploration to diverse modes and settings of interpreting, as well as types of interpreters. Inspired by the methodology and theories provided by existing studies, the present study aims to shed new light on strategy utilization by freelance interpreters in a typical international conference in Taiwan.

Chapter 3 Research Methods



This study employed a triangulated approach, integrating both qualitative and quantitative methods to ensure a comprehensive analysis. By combining these methods, the study not only identified and categorized the strategies used by interpreters but also quantified the frequency and patterns of these strategies, offering a multi-faceted understanding of interpreter behavior. The quantitative analysis involved systematic annotation and counting of different strategy types to discern prevalent patterns, while the qualitative analysis focused on the examination of interpreting strategies and their corresponding problem triggers. This triangulated approach enhances the validity and reliability of the findings, providing insights into the practical strategies employed by interpreters under varying conditions. This chapter details the processes of data collection and data analysis, providing a framework for understanding how interpreters navigate various problem triggers in high-stakes conference settings.

3-1 Data Collection

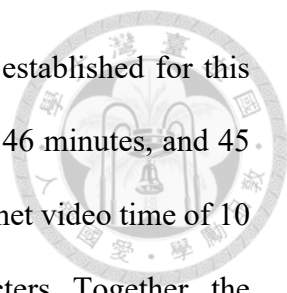
The corpus for this study was constructed by gathering authentic data from speeches delivered at the Smart City Mayors' Summit from 2021 to 2023, alongside their simultaneous interpretations. The Smart City Mayors' Summit is an integral part of the annual Smart City Summit & Expo (SCSE) series, organized by city governments in Taiwan, primarily Taipei, in collaboration with the Taiwan Smart City Solutions Alliance and Taipei Computer Association. The SCSE is the largest professional exhibition in Asia focused on comprehensive smart city solutions.

The 2021 and 2022 Summits were hybrid conferences due to the COVID-19 pandemic, with sessions held at different times to accommodate global participants. The 2021 Smart City Mayors' Summit was conducted in Taipei across two sessions on March

23 and 24. The 2022 Summit also took place in two sessions on March 22 and 23. In 2023, the Summit returned to an in-person format at the Taipei Nangang Exhibition Center on March 28, signaling a transition back to traditional conference settings. Attendance figures for the Smart City Mayors' Summit varied each year, with 264 participants from 30 countries in 2021, 188 participants from 76 cities in 2022, and an unspecified number of attendees in 2023. The data collected from the Smart City Mayors' Summit provides insights into real-world interpretation scenarios. The varied and dynamic nature of the Summit speeches, coupled with the diverse linguistic and cultural backgrounds of the speakers, ensures that the corpus reflect a wide range of interpretation challenges.

While primarily conducted in English, the Summit featured simultaneous interpretation into Mandarin Chinese. Occasionally, Taiwanese speakers communicated in Mandarin Chinese, and the interpreters translated their remarks into English. The Summit was also broadcasted on YouTube in dual channels, allowing viewers to choose between Chinese and English broadcasts. The researcher obtained research material from the "Smart City Summit & Expo, Taipei" channel on YouTube, where the videos of 2021-2023 Smart City Mayors' Summit are archived.

The videos include preparation time for the livestream and tea breaks, during which the content is blank, resulting in a difference between the total length of the videos and the net duration of the corpus. Additionally, in the "2022 Smart City Mayors' Summit Session I" video, intended as the source text, there was an inadvertent broadcast of the interpretation audio, obscuring the source text for 24 minutes and 51 seconds. Consequently, the study excluded the segment where source text data could not be collected. The data for this study also excluded the rare instances where speakers spoke Mandarin Chinese, necessitating interpretation into English, due to their limited occurrence.



A parallel corpus of the source text and the target text was established for this study. The source text comprises a total net video time of 10 hours, 46 minutes, and 45 seconds, amounting to 80,629 words. The target text includes a total net video time of 10 hours, 47 minutes, and 38 seconds, amounting to 140,650 characters. Together, the parallel corpus have a total video time of 21 hours, 34 minutes, and 23 seconds, with a cumulative word count of 221,279 words. Table 1 presents a list of the videos used as materials for this study; Table 2 provides a breakdown of the corpus data, including the total net time and word count.

Table 1

Videos for Corpus Establishment

Video	Title	Total Time
1	2021 Mayors' Summit Online Session I	2:15:57
2	2021 首長高峰會 場次 I	2:15:54
3	2021 Mayors' Summit Online Session II	2:28:47
4	2021 首長高峰會 場次 II	2:28:44
5	2022 Smart City Mayors' Summit Session I	1:59:52
6	2022 智慧城市首長高峰會 場次 I	1:48:22
7	2022 Smart City Mayors' Summit Session II	2:09:44
8	2022 智慧城市首長高峰會 場次 II	2:09:40
9	2023 Smart City Mayors' Summit: Mayors' Roundtable	3:27:50
10	2023 智慧城市首長高峰會: 圓桌會議	3:27:50

Table 2*Corpus Data*

Source Text			Target Text		
	Net Time	Wordcount		Net Time	Wordcount
Video 1	2:15:08	16,271	Video 2	2:15:12	29,896
Video 3	2:27:44	18,371	Video 4	2:27:50	31,934
Video 5	1:16:43	10,283	Video 6	1:17:19	17,781
Video 7	2:01:19	13,825	Video 8	2:01:26	24,973
Video 9	2:45:51	21,879	Video 10	2:45:51	36,066
Total	10:46:45	80,629	Total	10:47:38	140,650

3-2 Data Analysis

This study conducted both quantitative and qualitative analysis to understand the challenges and strategies that occurred in the context of the Smart City Mayors' Summit. The quantitative aspect involves annotating the texts and systematically counting the occurrences of different strategy types to discern patterns in interpreter behavior. For qualitative analysis, the researcher identified, categorized and illustrated the strategies observed in the intertextual analysis and their corresponding problem triggers.

The original data underwent a series of systematic processing steps to facilitate comprehensive analysis, in accordance with a content analysis approach proposed by Dornyei (2007, pp. 245-257), steps including 1) transcribing the data; 2) pre-coding and coding; 3) growing ideas, and 4) interpreting the data and drawing conclusions.

Firstly, the source text and target text were transcribed from the audio-video recordings. In the transcript, the researcher made a deliberate choice to include verbal fillers such as “uh” and “um” to provide an accurate and authentic representation of both

the speakers' and interpreters' speech patterns. These fillers reflect natural speech flow, indicating hesitation, emphasis, or thought formation, and highlight the cognitive load and processing challenges during live interpretation. By retaining these verbal mannerisms, the analysis can also benefit from a richer dataset, enabling a more nuanced examination of speaker-interpreter interactions.

After transcribing, a manual alignment process was implemented to synchronize the source and target texts, creating a parallel corpus that allowed for a detailed comparison. The parallel corpus then underwent pre-coding, which involved reading, reflections, and labeling of salient features related to strategies. This pre-coding laid the groundwork for the subsequent main coding process, which was divided into initial coding and second-level coding.

During initial coding, the researcher referenced categorization of reformulation strategies by Falbo (1999, pp. 181–183, as cited in Ma & Cheung, 2020) to initially identify strategy use. The categorization includes Type A (Morphosyntactic Reformulation), Type B (Synthesis) and Type C (Expansion), which are further divided into subcategories: A1 (Morphosyntactic Transformation), A2 (Syntactic Segmentation), A3 (Changing Order within a Clause), B1 (Generalization), B2 (Simplification), B3 (Deletion), C1 (Explanatory Addition), C2 (Addition to Maintain Coherence), C3 (Repetition), and C4 (Paraphrasing). The initial coding phase involved systematic labeling and explaining of the previously highlighted features, forming the basis for the identification of patterns. Quantitative analysis also took place during this initial coding phase, with the occurrences of different strategy types being annotated and counted.

After the initial coding stage, the researcher adjusted Falbo's typology (as cited in Ma & Cheung, 2020) to this particular study, based on observations from initial coding. The researcher singled out Paraphrasing as Type D strategy and adopted the definition

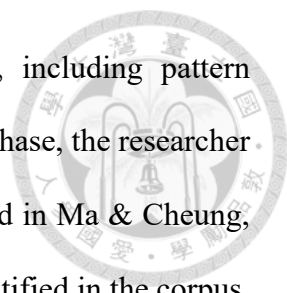
proposed by Wu and Liao (2018, p. 194), since it was observed that Paraphrasing could be too complex to be simply labeled as Expansion. It could take form of a mix of expansion, synthesis, morphosyntactic transformation, and/or more. It is also fundamentally different from the individual strategies it may incorporate because it operates as a holistic approach. The researcher found that Wu and Liao's (2018, p. 194) definition of Paraphrasing, "Putting ideas in other words by changing sentence structures or adjusting messages," fits this study. Morphosyntactic transformation was hence removed from the original Type A in order to avoid overlapping categories. Furthermore, Addition Proper was added to Type C due to the occurrences observed in the corpus. Table 3 provides the adjusted typology for this study, detailing the subtypes of strategies and their respective definitions, some of which are cited in Ma and Cheung (2020), while others are derived from various other sources. It must be pointed out that strategies identified from source-target text differences do not include translation errors, and translation errors are not considered part of these strategies.

Table 3

Definition of Different Types of Reformulation Strategies

Type A: Morphosyntactic Reformulation	
Subtype	Definition
Type A1: Syntactic Segmentation	Breaking down long sentences into shorter clauses while adhering to the original structures (Seeber & Kerzel, 2011).
Type A2: Changing Order within a Clause	Altering the order of phrases or other elements within a clause (Gile, 1995).

Type B: Synthesis	
Subtype	Definition
Type B1: Generalization	Replacing a segment with a superordinate term or a more general speech segment (Gile, 1995, p. 197).
Type B2: Simplification	Lexical or stylistic simplification of the source message (Kalina, 1998, p. 120).
Type B3: Deletion	Removal of information from the original language (Kalina, 1998, p. 120).
Type C: Expansion	
Subtype	Definition
Type C1: Explanatory Addition	Expanding lexises and content to provide clarification (De Feo, 1993, p. 33).
Type C2: Addition to Maintain Coherence	Explicating coherence relations for logical continuity (De Feo, 1993, p. 33).
Type C3: Repetition	Repeating previously processed parts (Messner, 2001, p. 86) as a way of enhancing lexical accuracy by using synonyms or synonymic phrases.
Type C4: Addition Proper	Adding new information which does not exist in the source text (Wang, 2012, p. 205).
Type D: Paraphrasing	
Putting intended concepts in other words by changing sentence structures or adjusting messages (Wu & Liao, 2018, p. 194).	



The second-level coding phase involved further analysis, including pattern identification, examination, and re-coding if necessary. During this phase, the researcher adopted the modified version of Falbo's (1999, pp. 181–183, as cited in Ma & Cheung, 2020) categorization, as shown in Table 3, to label the strategies identified in the corpus. Furthermore, qualitative analysis was emphasized in this phase, where the researcher observed strategy use and inferred what constitutes problem triggers. This process aimed to transition from "descriptive and low inference codes" to "higher-order pattern codes" as suggested by Dornyei (2007, p. 251). The study focuses on message- and sender-related problem triggers under Mankauskienė's (2016) classification. This is because technical issues and problem triggers associated with the interpreter cannot be identified solely through the analysis of transcriptions. The researcher integrated semological problem triggers (metaphors, humor, and sarcasm) into message-related problem triggers, as the researcher noted a limited occurrence of those during the study's observations.

The researcher independently carried out the entire coding process. While the lack of additional raters may limit inter-rater reliability, the researcher employed rigorous self-checks and iterative reviews of the coded data to maintain consistency and objectivity. This independent approach was complemented by thorough documentation of the coding criteria and processes, ensuring transparency and replicability. See the Appendix for a few pages of the researcher's corpus analysis documentation.

Chapter 4 Results and Discussion



This chapter presents the findings of the study, analyzing the data collected from the Smart City Mayors' Summit from 2021 to 2023. Through a detailed examination of the source and target texts, this study explores the occurrence of different types of strategies used by interpreters and their relation to various problem triggers. The quantitative analysis reveals the frequency and distribution of strategies. The qualitative analysis further explores specific examples, illustrating how these strategies are employed to address linguistic and contextual challenges in simultaneous interpreting. By linking the strategies to the problem triggers identified in the corpus, this chapter aims to understand the strategies interpreters use to manage the complexities of simultaneous interpreting.

4.1 Statistics Reflecting Regularity of Strategies

Figure 1

Occurrences of the Four Types of Strategies

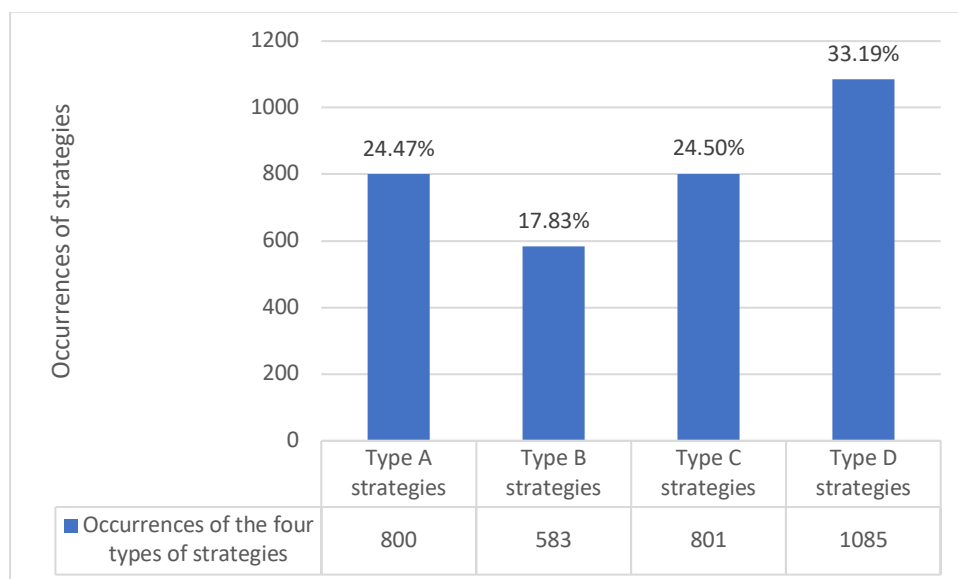


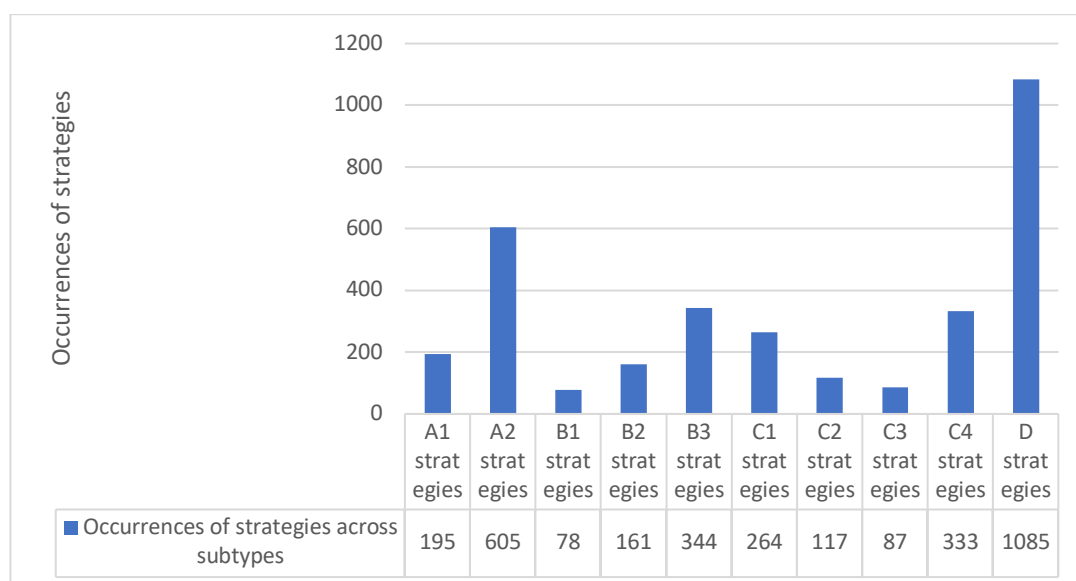
Figure 1 shows the overall occurrences of Type A strategies (Morphosyntactic Reformulation), Type B strategies (Synthesis), Type C strategies (Expansion), and Type

D strategies (Paraphrasing) collected from the source-target text analysis. Type D strategies (Paraphrasing) have the most occurrences at 1085 counts, followed by 801 occurrences of Type C strategies (Expansion), 800 occurrences of Type A strategies (Morphosyntactic Reformulation), and 583 occurrences of Type B strategies (Synthesis).

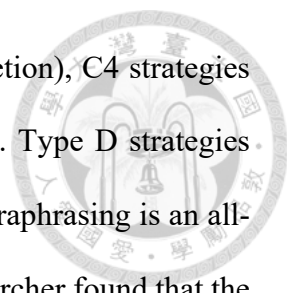
It can be observed that interpreters often opt for paraphrasing to convey the meaning of the source text in a different linguistic form while maintaining its essence. Additionally, Type C strategies (Expansion) and Type A strategies (Morphosyntactic Reformulation) have nearly equal numbers of occurrences, indicating that interpreters frequently engage in both expanding upon the content or ideas presented in the source text (Type C) and restructuring the syntax of sentences (Type A). Type B strategies (Synthesis) are observed less frequently, suggesting that interpreters tend to merge or integrate information from the source text in a more limited manner compared to other types of strategies.

Figure 2

Total Occurrences of Strategies across Subtypes



Looking into the occurrences of strategies across subtypes, Figure 2 shows that type D strategies (Paraphrasing) has the highest count of 1,085 occurrences, followed by



A2 strategies (Changing Order within a Clause), B3 strategies (Deletion), C4 strategies (Addition Proper), C1 strategies (Explanatory Addition), and so on. Type D strategies largely outnumber all the other types of strategies, partly because Paraphrasing is an all-encompassing type of strategy. During the analysis process, the researcher found that the reformulation elements involved in Paraphrasing are often too intricate to be simply labeled Morphosyntactic Reformulation, Synthesis, or Expansion, but it was also observed that there were several situations where the Paraphrasing is utilized regularly, which will be further discussed in section 4.2.4.

From Figure 2, the leading subtypes within each category can also be examined. For instance, within Type A strategies, A2 (Changing Order within a Clause) occurred the most. This can be attributed to the inherent syntactic differences between English and Chinese, which often necessitate the reordering of elements within clauses to maintain grammatical correctness and clarity. A1 strategies (Syntactic Segmentation) had 195 occurrences, indicating that segmentation of complex sentences into smaller, manageable parts is also a common practice to ensure coherence.

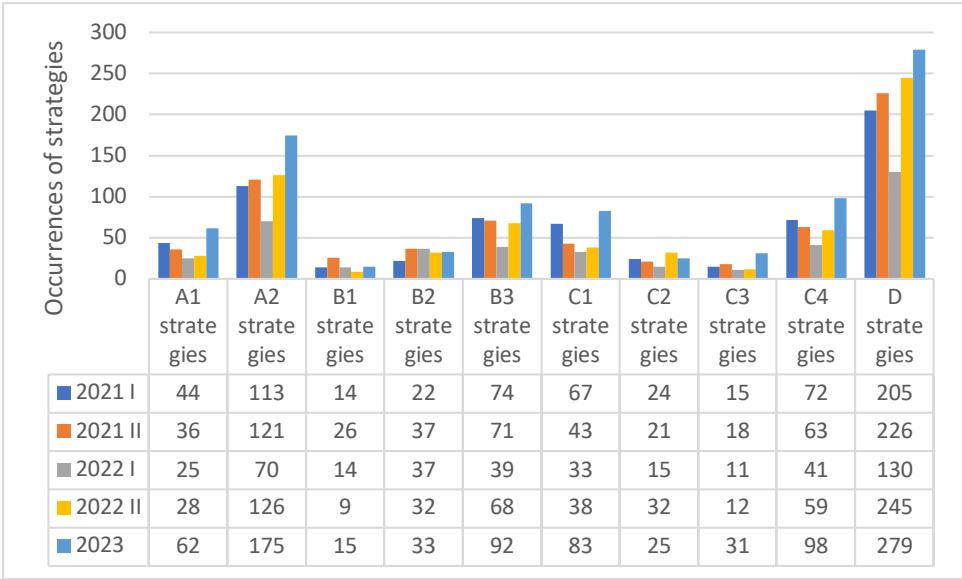
For Type B strategies, B3 (Deletion) occurred the most. This prevalence indicates that deletion is a common strategy to streamline information and maintain the flow of interpretation, especially when dealing with redundant or non-essential content that may clutter the message. B2 strategies (Simplification) had 161 occurrences, showing the need to simplify complex information into more understandable terms. B1 strategies (Generalization) had the fewest occurrences, totaling 78, which reflects the occasional need to generalize specific details into broader terms.

In the case of Type C strategies, C4 (Addition Proper) occurred the most. This indicates that interpreters often add new information not present in the source text to enhance clarity and coherence for the audience. C1 (Explanatory Addition) strategies

were also common, showing the need to explain and clarify implicit information in the source text. C2 strategies (Addition to Maintain Coherence) had 117 occurrences, highlighting the need to add connective words or phrases to maintain logical continuity. C3 strategies (Repetition) were the least common, with 87 occurrences, which shows that repetition of information is less commonly used but still relevant for ensuring clarity. A detailed discussion of these strategies and their relations to different problem triggers is provided in Section 4.2.

Figure 3

Strategy Patterns across Different Years/Sessions



This chart illustrates the consistent patterns of strategy occurrences in simultaneous interpreting across different years (2021 to 2023) and sessions of the Smart City Mayors' Summit. Despite the variations in the total number of strategies, the overall distribution of different types remains relatively stable across the years. Type D strategies (Paraphrasing) consistently have the highest occurrences, followed by A2 (Changing Order within a Clause), B3 (Deletion), and C4 (Addition Proper), showing that these are staple strategies for interpreters to manage the linguistic and contextual challenges they

face. Among these strategies, the occurrences of B3 (Deletion) and C4 (Addition Proper) are consistently close across different years with alternating prominence. This suggests that interpreters dynamically adjust their strategies based on the specific needs of the session, either condensing information or elaborating to enhance understanding, while maintaining an overall balance between these two approaches. This consistency across years highlights the robustness of these strategies in addressing common problem triggers in conference interpreting.

4.2 Strategies and Their Relations to Problem Triggers

The above results have shown the overall patterns of interpreters' adoption of strategies, with a strong tendency toward paraphrasing. This upcoming section will zoom in on the quantitative and qualitative analysis of each subtype of strategies under Types A, B, C and D. By examining the specific instances and contexts in which these strategies are employed, this section aims to associate the strategies with different problem triggers, providing insights into interpreters' coping methods and how different strategies manage linguistic and contextual challenges.

4.2.1 Type A strategies (Morphosyntactic Reformulation)

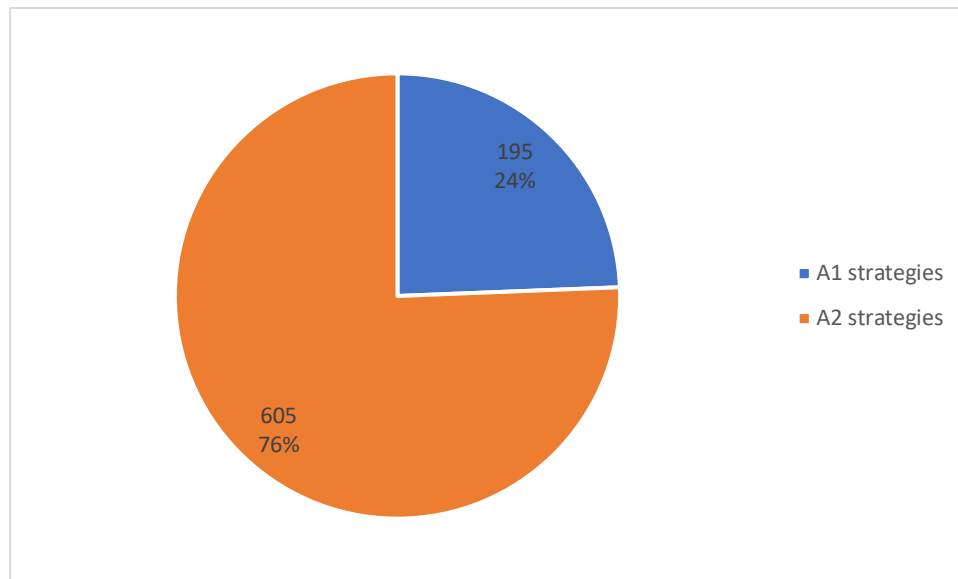
Type A strategies (Morphosyntactic Reformulation) involve altering the structure and syntax of a sentence or clause to better fit the grammatical conventions and stylistic preferences of the target language. By implementing Morphosyntactic Reformulation, interpreters ensure that the translated text flows naturally and is syntactically coherent in the target language. Such processes may involve rearranging the order of words or phrases within a clause or adjusting the placement of modifiers to accommodate the grammatical norms of the target language, as demonstrated in Changing Order within a Clause, or

breaking down complex sentences into smaller segments, as seen in Syntactic Segmentation.



Figure 4

Occurrences and Percentages of the Subtypes of Strategies under Type A (Morphosyntactic Reformulation)



Within the Type A strategies, A2 (Changing Order within a Clause) is predominantly used by interpreters, occurring over three times as often as A1 (Syntactic Segmentation). Specifically, A2 strategies were employed 605 times, while A1 strategies were used 195 times. The researcher observed that this is because switching elements within clauses is frequently required due to the inherent syntactic and structural differences between the English and Mandarin Chinese languages. These two languages often have varying word orders and grammatical constructions, necessitating frequent reordering to maintain coherence and meaning in the target language. In contrast, syntactic segmentation is almost exclusively used to process very long and complex sentences. Syntactic segmentation involves breaking down complex sentences into smaller, more manageable segments. This approach is crucial when dealing with lengthy, intricate sentences that could otherwise overwhelm the audience or lead to

misinterpretation. A detailed discussion of Type A strategies (Morphosyntactic Reformulation) and their relations to different problem triggers is provided below (See Tables 4 and 5).

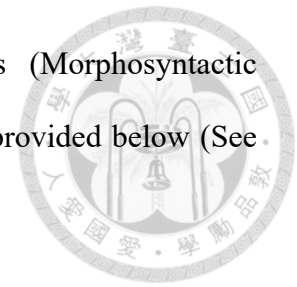


Table 4

Examples of A2 Strategies (Changing Order within a Clause)

ST	TT	Literal Translation of TT
We are sharing our best practices for COVID response with our sister and partner cities <u>during the peak of the pandemic.</u>	我們 <u>在疫情最嚴重的時期</u> 與姐妹市跟城市夥伴分享本市防疫的最佳做法。	We <u>during the pandemic most severe period</u> with sister cities and urban partners share our city prevention of epidemic best practices
Taipei City is constantly striving to become a hub city <u>for smart city innovation and public private cooperation and exchanges.</u>	台北市不斷的努力要成為 <u>智慧城市創新以及公私協力合作交流的</u> 樞紐城市。	Taipei City is constantly striving to become a <u>smart city innovation and public private cooperation exchange</u> hub city.

A2 strategies (Changing Order within a Clause) happen most commonly in dealing with prepositions and post-modifiers. Right-branching sentence structures, where the main subject of the sentence is described first, and is followed by a sequence of modifiers that provide additional information about the subject, is commonly used in English, but Chinese is a left-branching language (Huang, 2006). Therefore, when interpreting from English to Chinese, the rearrangement of elements before and after these prepositions occurs to accommodate the different syntactic structures between the two languages.

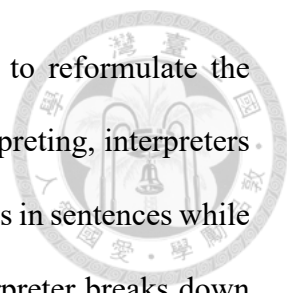
In the first example in Table 4, the subject "sharing our best practices for COVID response" is moved after the time frame "during the peak of the pandemic," followed by

the action “sharing”, and then the objects “sister cities” and “partner cities.” This restructuring accommodates the preferences of Chinese grammar, which often places temporal references before subjects and verbs. In the second example, the descriptive phrases “for smart city innovation” and “public private cooperation and exchanges” are placed before the main subject “hub city.” This alteration aligns with Chinese syntax, which often places modifiers before the nouns they modify. This reordering allows for smoother and more natural flow in the Chinese sentence, matching the syntactic preferences of the target language.

Table 5

Examples of AI Strategies (Syntactic Segmentation)

ST	TT	Literal Translation of TT
Today's Summit brings together mayors, leaders, representatives from different fields across so many different countries to share with us today their insights and best practices on how to harness the power of digital technologies for economic recovery and community development.	今天的高峰會集集（結）了各個領域的專家先進，由全球各地遠道而來，跟我們分享他們的專業洞見， <u>跟我們分享</u> 他們的最佳做法， <u>學習如何</u> 善用數位科技的力量 <u>來推動</u> 疫後的經濟復甦以及社區的發展。	Today's summit gathered various fields' experts and pioneers, from all over the world coming a long way, to share with us their professional insights, to share with us their best practices, to learn how to harness digital technology's power to promote post-pandemic economic recovery and community development.
Intelligent communities can create new economic opportunities for citizens by attracting businesses, investors, and entrepreneurs.	智慧的社區可以為市民朋友打造新的經濟契機， <u>比如說</u> 他可以進行招商、吸引投資人，還有企業進駐。	Intelligent communities can for citizens friends create new economic opportunities, for example , they can attract businesses, attract investors, and have enterprises move in.



A1 strategies (Syntactic Segmentation) are also often used to reformulate the right-branching sentence structures in English. In simultaneous interpreting, interpreters do not always have the time or capacity to change the order of elements in sentences while encountered with prepositions. In the examples in Table 5, the interpreter breaks down complex English sentences into smaller, more manageable segments, reflecting the structure of the Chinese language.

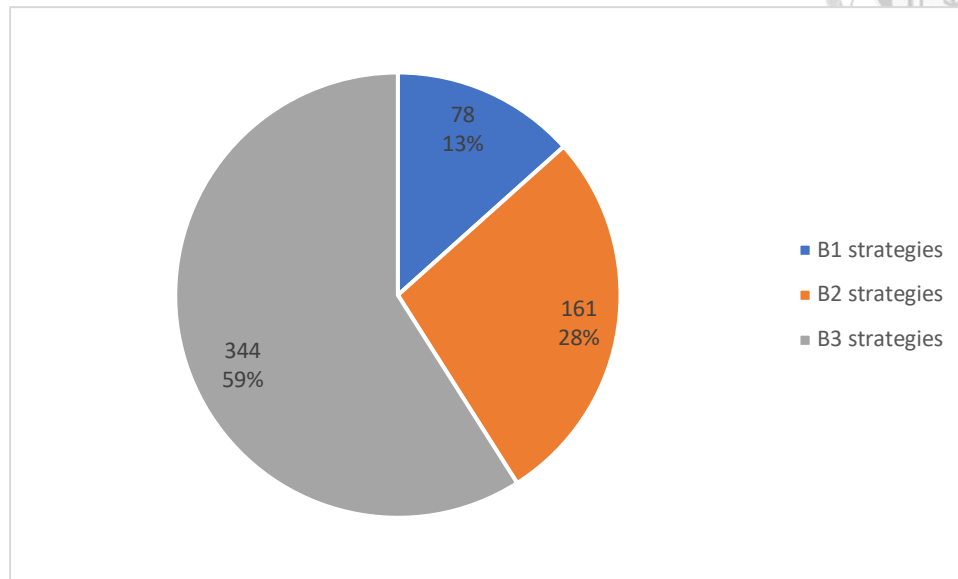
In the first example, the English sentence contains multiple prepositions, such as “from,” “across,” “for,” and “on.” The interpreter segments the sentence into smaller syntactic units to handle each prepositional phrase separately. For instance, when the speaker says “best practices on how...,” the interpreter breaks down the structure and adds an verb to create a more manageable clause: “best practices, to learn how...” This segmentation allows the interpreter to accurately convey the intended meaning of each prepositional phrase in Chinese while maintaining grammatical correctness. In the second example, the speaker lists multiple actions that communities can take to create new economic opportunities. The interpreter segments the structure of “create new economic opportunities by attracting businesses, investors, and entrepreneurs” using “for example” to introduce each action distinctly.

4.2.2 Type B strategies (Synthesis)

Type B strategies (Synthesis) involve simplifying and condensing the source speech to make it clearer and more concise in the target language. This can include deletion of non-essential words or phrases, simplification of complex language, and generalization of specific details into broader terms or categories. These strategies help ensure that the key message is effectively communicated to the audience without unnecessary linguistic complexity.

Figure 5

Occurrences and Percentages of the Subtypes of Strategies under Type B (Synthesis)



Within the Type B strategies, B3 (Deletion) is the most commonly used by interpreters, accounting for 344 occurrences, which is 59% of the total Type B strategies. This significant share of occurrences indicates that interpreters streamline information and maintain the flow of interpretation, especially when dealing with redundant or non-essential content. This approach helps to ensure that the core message is delivered efficiently and effectively, minimizing the potential for confusion. B2 (Simplification) and B1 (Generalization) have relatively fewer occurrences, respectively representing 28% and 13% of the Type B strategies. Nonetheless, they play essential roles in conveying the key message succinctly without overwhelming the audience with excessive detail. Simplification helps to reduce complex ideas into more understandable segments, while generalization allows for broader concepts to be communicated without the need for specific details. Subtypes of Type B strategies (Synthesis) and their connections to various problem triggers are discussed below (See Tables 6-8).

Table 6*Examples of B3 Strategies (Deletion)*

ST	TT	Literal Translation of TT
Can we please pass the microphone to this gentleman over here <u>on the right, behind you?</u>	可不可以把麥克風遞給這邊的貴賓？	Can or cannot microphone pass to here's distinguished guest?
I'll give you a quick example in North Bay Village with COVID, <u>germane to the topic.</u>	給大家一個例子，在北灣村因應疫情的時候的一個做法。	Give everyone an example, in the North Bay Village, in response to the pandemic's time, a practice.
And <u>I we have to say</u> we totally agree with you.	我們非常的同意您的看法。	We completely agree with your opinion.

Occasionally, interpreters omit certain words or phrases that are not essential for conveying the main message in the target language. This approach helps to maintain the flow and clarity of the interpretation, particularly when dealing with extraneous details that may clutter the message. In the first example in Table 6, the phrase “on the right, behind you” is deleted. This deletion simplifies the instruction and makes it more concise in Chinese, as specifying the exact location of the gentleman is not crucial for understanding the request to pass the microphone. Similarly, in the second example, the phrase “germane to the topic” is omitted. This deletion removes additional context that may not be directly relevant to the main point being made, allowing the interpretation to focus on providing a clear and concise example of pandemic response in the speaker’s community. In the third example, the omitted phrase “And I we have to say” is redundant and does not contribute any substantial meaning to the main message. By removing these non-essential elements, the interpreter communicates the core message without unnecessary complexity or potential distractions.

Table 7*Examples of B2 Strategies (Simplification)*

ST	TT	Literal Translation of TT
Since uh Janova is known as for its industry, we we have a fertilizer company that makes a lot of a lot of, to some extent, uh CO2 emissions, we have to come up with the decarbonization processes and so on so on.	我們這邊有肥料業者。那當然就會有碳排，所以我們希望能夠有脫碳的流程。	We here have fertilizer industry. Then of course will have carbon emissions, so we hope to have decarbonization process.
In 20, in 2019, the secretary of the environment development, the “r-e-m-m-a-q-b’s visor,” a a web a platform for the management strategy and visualizations of air quality and methodological data.	在 2019 年，環境發展部部長他們建立了一個平台來測量，空氣品質以及相關的氣象資料。	In 2019, the Minister of the Environment Development Department they established a platform to measure, air quality and related meteorological data.

With B2 strategies (Simplification), the interpreter condenses complex or verbose language into simpler, more straightforward expressions in the target language. This typically occurs when the source speech is unnecessarily lengthy. In the first example in Table 7, the original speaker provides a somewhat lengthy explanation about the presence of a fertilizer company and its carbon emissions, followed by the necessity for decarbonization processes. The interpreter simplifies this by directly stating the existence of a fertilizer company leading to carbon emissions and the subsequent need for decarbonization processes. This simplification streamlines the message and eliminates unnecessary elaboration, making it easier for the audience to grasp the main point. In the second example, the original speaker introduces a complex description of a platform for managing air quality and meteorological data (“r-e-m-m-a-q-b’s visor”). The interpreter’s

simplification removes unnecessary complexity and ensures clarity in the interpretation, allowing the audience to understand the essence of the message without getting bogged down by extraneous details.

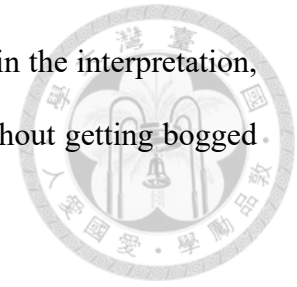


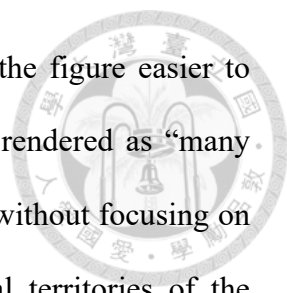
Table 8

Examples of B1 Strategies (Generalization)

ST	TT	Literal Translation of TT
<u>232 million</u> US dollars	<u>兩億多</u> 美元	<u>more than 200 million</u> US dollars
<u>thousands of</u> the casualties	<u>很多</u> 的人員傷亡	<u>many</u> personnel casualties
from the unceded traditional territories of the <u>Halkomelem and Squamish speaking people</u>	在 <u>加拿大原住民</u> 的土地上	on <u>Canadian Indigenous peoples'</u> land
if we have no the people, <u>no the doctors, no paramedics, no nurses</u> who are in the front line	如果沒有 <u>醫護人員</u> 的話，沒有這些人在第一線在努力的奮鬥的話	If no <u>healthcare personnel</u> , no these people at frontline struggling hard efforts.

B1 strategies (Generalization) is when the interpreter simplifies or condenses specific details or concepts into broader terms or categories. This is often employed to provide a concise rendition or convey the general idea without getting into specific details. Generalization helps maintain the flow of communication and ensures that essential information is conveyed effectively, especially in situations where time or linguistic constraints exist. Among the data collected for this specific study, the researcher finds that Generalization is often used to cope with message-related problem triggers such as proper names and numbers.

Examples in Table 8 illustrate how B1 strategies (Generalization) simplify specific details into more general terms. The phrase “232 million US dollars” is



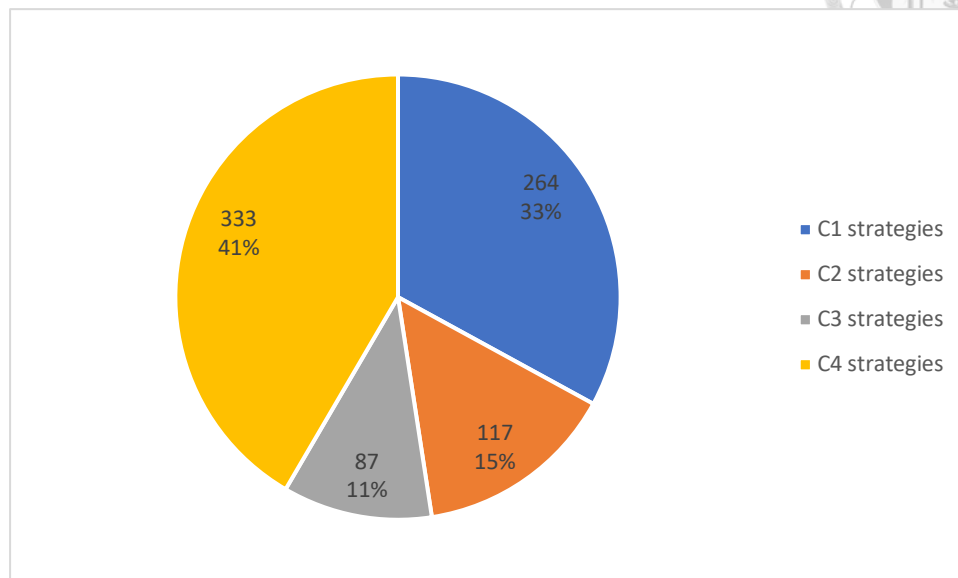
generalized to “more than 200 million US dollars,” which makes the figure easier to process and remember. Similarly, “thousands of the casualties” is rendered as “many personnel casualties,” providing a broad understanding of the scale without focusing on exact numbers. The detailed reference to “the unceded traditional territories of the Halkomelem and Squamish speaking people” is generalized to “Canadian Indigenous peoples’ land,” making it more straightforward and avoiding potential confusion with specific tribal names. Lastly, the enumeration of “people, doctors, paramedics, and nurses” in the context of frontline workers is simplified to “healthcare personnel,” encompassing all the specified roles into a single, easily understood category. These generalizations help streamline the message, ensuring clarity and ease of comprehension for the audience while helping the interpreter cope with time and linguistic constraints.

4.2.3 Type C strategies (Expansion)

Type C strategies (Expansion) involve adding information to the interpretation to enhance clarity, lexical accuracy, and coherence. This is achieved through various methods that aim to enrich the target message. Interpreters employing these strategies might emphasize formality by adjusting the language register to suit the context, or provide additional explanations to clarify unfamiliar concepts or cultural references. They may also repeat key ideas using synonyms to reinforce understanding and overcome potential language barriers. Maintaining logical continuity is another important aspect of Expansion strategies, where interpreters might add transitional phrases or make implicit connections more explicit. These techniques help ensure that the interpreted message is not only accurate but also easily comprehensible and culturally appropriate for the target audience. By expanding on the original content, interpreters can convey both the literal meaning and the underlying nuances of the source message.

Figure 6

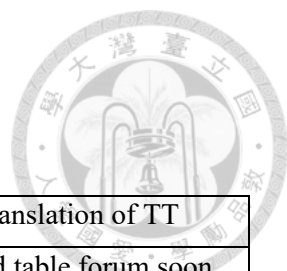
Occurrences and Percentages of the Subtypes of Strategies under Type C (Expansion)



The chart illustrates the distribution of the subtypes of Type C strategies (Expansion) used by interpreters. C4 strategies (Addition Proper) are the most frequently employed, accounting for 333 occurrences, which is 41% of the total Type C strategies. This indicates that interpreters often add new information not present in the source text to enhance clarity and coherence for the audience. C1 strategies (Explanatory Addition) are the second most common, representing 33% of the Type C strategies. The substantial use of C1 (Explanatory Addition) reflects the necessity of providing additional context or clarifications that might be implicit in the source text. C2 (Addition to Maintain Coherence) make up 15% of the Type C strategies. C3 (Repetition) are the least frequently used, representing 11% of the Type C strategies. The lower frequency of C2 and C3 strategies indicates that while maintaining coherence and repeating key points are important, interpreters tend to opt for providing new information or explanations to achieve the purpose of clarity. In this section, examples are provided to illustrate how Expansion is utilized in simultaneous conference interpreting and the effects of such strategies (see Tables 9-12).

Table 9

Examples of C4 Strategies (Addition Proper)



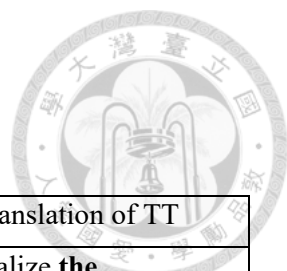
ST	TT	Literal Translation of TT
Our roundtable conference will begin in less than one minute.	我們的圓桌論壇即將在一分鐘之後 <u>正式</u> 開始。	Our round table forum soon will in one minute <u>formally</u> begin.
I sincerely appreciate your attendance.	在此誠摯感謝各位 <u>今日撥冗</u> 的出席。	Here (I) sincere thank all today for <u>taking time to</u> attend.
Taipei's contributions will not cease.	<u>當然</u> ，台北市的付出並不會就此而停止。	<u>Of course</u> , Taipei City's contributions not will here cease.

By adding information that is not explicitly stated in the source speech, the interpreter enhances the politeness and emphasis of the message, ensuring that it effectively communicates the intended meaning to the audience in the target language.

In the first example in Table 9, the interpreter, while conveying the message that the roundtable conference will begin in less than one minute in Chinese, adds the word "officially" to emphasize that the conference will formally commence.

In the second example, the interpreter adds information to acknowledge that the attendees have made time for the conference, which is also for the sake of being polite.

In the third example, the interpreter adds “of course” at the beginning of the sentence to emphasize the certainty and inevitability of Taipei's ongoing contributions. This addition reinforces the speaker's confidence and conviction in Taipei's continued efforts. Overall, these additions ensure that the target text is not only accurate but also culturally appropriate and respectful.

Table 10*Examples of C1 Strategies (Explanatory Addition)*


ST	TT	Literal Translation of TT
And to realize our net zero goal,	那為了要能夠達到 <u>菲律賓</u> 的淨零碳排願景，	And to realize <u>the Philippines</u> ' net zero goal,
We provide cashless payments subsidies to at least three business districts every year to increase the utilization rate of cashless payment.	我們每年也至少向三個商圈提供無現金支付的補貼，希望能夠提高 <u>商家</u> 使用無現金支付的使用率。	We every year also at least to three business districts provide cashless payment subsidies, hoping can enhance <u>businesses</u> ' use cashless payment rate.
More and more people need social and and health related services. We have Alzheimer's disease we have dementia and so on and so on.	現在有越來越多的居民，他需要社會公衛相關的資源跟服務。 <u>比如說</u> 我們有阿茲海默症，還有失智症等 <u>這些銀髮族特別會面臨的疾病</u> 。	Now have more and more residents, they need social public health related resources and services. <u>For example</u> , we have Alzheimer's disease, and also dementia and so on, <u>these diseases especially commonly faced by grey-haired group</u> .

C1 strategies (Explanatory Addition) contribute to clarity by explicitly specifying contents that might be ambiguous or unspecified in the source speech. This is often used to specify pronouns, as seen in the first example in Table 10, where “our net zero goal” is expanded to “the Philippines’ net zero goal” to clarify the reference. In the second example, the interpreter adds “businesses” to the phrase about cashless payments subsidies to make it clear which entities are expected to increase their utilization of cashless payments. In the third example, the speaker only lists the diseases Alzheimer's and dementia, and the interpreter expands this by explaining that these diseases are especially common among the elderly.

These explanatory additions provide details that might be implicit in the source text to bridge potential gaps in information. Such additions not only clarify the immediate content but also help in maintaining the logical flow and coherence of the interpreted message.

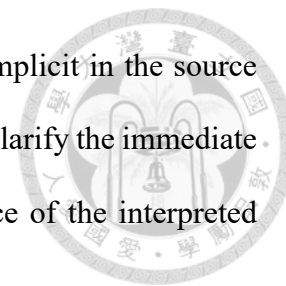


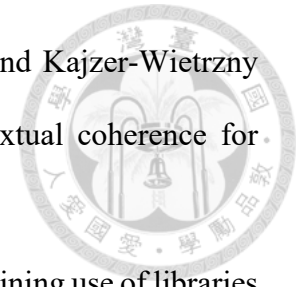
Table 11

Examples of C2 Strategies (Addition to Maintain Coherence)

ST	TT	Literal Translation of TT
I think most people, most cities they will find that the use of libraries, the numbers have really dropped, right? So I think Singapore is pretty Innovative.	我想在全球多數的城市都會發現，圖書館的使用率現在日漸下滑。我想新加坡 <u>在這方面</u> 特別的創新。	I think in in global most cities will find, library's usage rate (is) now gradually declining. I think Singapore <u>in this aspect</u> (is) particularly innovative.
Taipei is the financial, commercial and high-tech center of Taiwan in the Asian region. We cannot afford to delay our urban and industrial digital transformation.	台北可以說是台灣以及亞洲的金融、商業以及高科技中心。 <u>有鑑於此</u> ，我們在都市跟數位轉型方面的努力更是刻不容緩。	Taipei can be said to be Taiwan and Asia's finance, business and high technology center. <u>In view of this</u> , our efforts in urban and digital transformation aspect are even more urgent.
Our annual Smart City Exhibition, traditionally held in March of each year, was delayed last year due to the emerging COVID-19.	我們每年的智慧城市展覽，一般來說是在每年的3月舉行， <u>但是</u> 去年因為有新冠肺炎的關係，因此延期。	Our annual Smart City Exhibition is generally held in March each year, <u>but</u> last year it was postponed due to COVID-19.

By adding phrases to maintain coherence and logical continuity, the interpreter enables the audience to follow the speaker's argument and understand the connections between different parts of the discourse. Therefore, C2 strategies (Addition to Maintain Coherence) help to create a more cohesive and comprehensible interpretation. This is

consistent with findings from Gumul and Bartłomiejczyk (2022) and Kajzer-Wietrzny (2022), who emphasize the role of explicitations in enhancing textual coherence for interpreting.

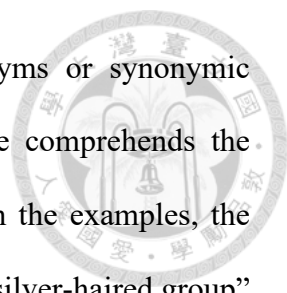


In the first example in Table 11, the speaker mentions the declining use of libraries and then shifts to discussing Singapore's innovation. To maintain coherence, the interpreter adds “in this aspect” in their rendition, which helps to connect the two ideas and clarify that the innovation mentioned pertains to addressing the decline in library usage. The second example demonstrates a similar technique. The interpreter introduces the phrase “in view of this” to connect Taipei's status as a financial, commercial, and high-tech center with the urgency of its urban and digital transformation efforts. In the third example, the interpreter adds “but” to clearly contrast the usual timing of the event with its postponement due to the pandemic. The word “but” highlights the deviation from the norm and emphasizing the reason for this change. These additions ensure that the target audience can follow the speaker's reasoning and the flow of information, thereby enhancing the overall clarity and coherence of the interpreted message.

Table 12

Examples of C3 Strategies (Repetition)

ST	TT	Literal Translation of TT
But still, we <u>transform</u>	但是我們還是要不斷的 <u>改變、轉型</u>	But we still need to continuously <u>change, transform</u>
<u>pilot projects</u>	<u>前導計畫或試點的計畫</u>	<u>pilot projects or pilot projects</u>
<u>senior citizens</u>	<u>銀髮族、老年族群</u>	<u>silver-haired group, elderly population</u>



Occasionally, interpreters repeat certain parts with synonyms or synonymic phrases to enhance lexical accuracy and ensure that the audience comprehends the intended meaning of the original speech, as shown in Table 12. In the examples, the interpreter repeats the concept by using “change” and “transform,” “silver-haired group” and “elderly population,” as well as two different ways of saying “pilot projects” in Mandarin Chinese. Interpreters use repetition to accurately convey the meaning and ensure that the repeated terms are understood as referring to the same thing. By offering synonyms, the interpreter can bridge potential gaps in comprehension, allowing for more nuanced and culturally appropriate interpretations (for instance, “silver-haired group” is a culturally appropriate term in Mandarin Chinese to refer to senior citizens).

4.2.4 Type D strategies (Paraphrasing)

During the analysis process, the researcher found that the reformulation elements involved are often too intricate to be simply labeled Morphosyntactic Reformulation, Synthesis, or Expansion. Therefore, the researcher decided to include Paraphrasing in the typology as Type D. Type D strategies involve rephrasing the source text to better suit the target language's grammatical and stylistic norms while preserving the original meaning. Paraphrasing encompasses a broader range of techniques, making it a versatile and essential tool for interpreters. As seen in the quantitative analysis, Paraphrasing has a significantly higher count than all other strategies, indicating its frequent use. This section provides examples of Paraphrasing in interpreting and examines different use cases.

Wu and Liao (2018, p. 195) discuss paraphrasing as a critical strategy that involves “putting the intended concepts in other words, using whatever sentence structures and resources available at the moment.” The present study adopts Wu and

Liao's (2018) definition of Type D strategies, highlighting its flexibility and adaptability. Wu and Liao (2018) also emphasize that paraphrasing can involve semantic modifications and syntactic transformations, which are not mutually exclusive but are operationalized as sub-strategies for explicit instruction. This broad application of paraphrasing supports its frequent use in the current study's findings.

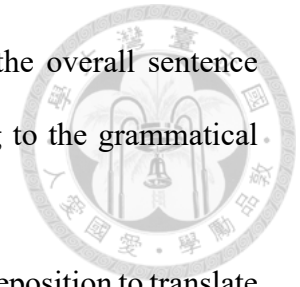
The strategy of paraphrasing allows interpreters to manage complex linguistic structures, cultural differences, and nuances that may not have direct equivalents in the target language. It transforms intricate sentence structures into more accessible forms, adapting culturally specific references, and maintaining the intended tone and meaning. Furthermore, the researcher observed that interpreters also utilize Paraphrasing to navigate fragmented and convoluted expressions, providing clearer and more coherent language while preserving the essence of the original message. This strategy helps bridge the language barrier for non-native speakers, ensuring that their points are conveyed effectively and understood by the audience.

Table 13

Examples of paraphrasing to adapt to grammatical conventions

ST	TT	Literal Translation of TT
..., and when we're able to understand that <u>nobody will</u> make solutions <u>instead of us</u> , but <u>we must do it ourselves</u> .	那我們必須要了解的是， <u>我們才能</u> 夠決定自己要做什麼樣的解決方案， <u>別人</u> <u>沒有辦法幫我們</u> 。	and (what) we must understand is, <u>we only can</u> decide ourselves to do what kind of solution, <u>others (do)</u> <u>not have way (to) help us</u> .
And it can be in <u>anything from</u> public safety initiatives <u>to</u> just finding ways in which to have transportation more efficient.	這個合作 <u>可能</u> 是一個公共安全的計畫， <u>或者是</u> 可能讓交通更加有效率的專案等等。	This cooperation <u>may be</u> a public safety plan, <u>or maybe</u> making transportation more efficient project, and so on.

In both examples in Table 13, the interpreter reorganizes the overall sentence structures to convey the meaning of the source text while adhering to the grammatical conventions of the target language.



“Instead of,” as shown in the first example, is often a tricky preposition to translate. Here, the interpreter transforms the negative clause into a positive clause and vice versa (“no body will” becomes “only we can”; “we must do” becomes “others cannot”), which is in line with the reformulation strategy of morphosyntactic transformation described by Falbo 1999 (pp. 181–183), as cited in Ma and Cheung 2020. The negative connotation of “nobody will” is flipped to a positive “we can,” which is a more straightforward and emphasizes the agency of the subject in a positive manner. It is then followed by a negative clause “others cannot” to reiterate the point.

In the second example, “Anything from... to...” is a commonly used English phrase to indicate a range of possibilities. However, it can sound awkward when literally translated to Chinese. In this example, the interpreter rephrases the sentence structure to convey a similar range of possibilities. By introducing the idea with “or maybe,” the interpreter effectively mirrors the function of “anything from... to...” while ensuring that the sentence sounds natural and fluid in Chinese. This rephrasing captures the range of possibilities implied in the source text without directly copying the English structure, which may not be idiomatic in Chinese.

These examples demonstrate that paraphrasing is helpful for interpreters to manage complex linguistic structures, ensuring that the translated text adheres to the grammatical norms of the target language while preserving the original meaning.

Table 14

Examples of paraphrasing to convey language-specific expressions/metaphors/idioms

ST	TT	Literal Translation of TT
So now those screens are <u>trash</u> on the public domain, because they're not used anymore.	所以大螢幕現在在公領域已經 <u>毫無利用價值</u> ，因為大家都不會再看這些大螢幕了。	So big screens now in public domain already <u>have no use value at all</u> , because everyone all will no longer look at these big screens.
The pandemic and unexpected turn of events have <u>put us on edge</u> .	我們碰到這些新的挑戰呢， <u>讓大家都更兢兢業業如履薄冰</u> 。	We face these new challenges, <u>making everyone even more cautious and as if walking on thin ice</u> .
Whenever the city is disseminating information, is <u>lost among them</u> .	這個市政府他發布了一些訊息，可是這些人卻 <u>很多人都收不到</u> 。	The city government it released some messages, but these people, however, <u>many people cannot receive</u> .

Language-specific expressions, metaphors or idioms, which often do not have direct equivalents in the target language, also need to be said in other words while interpreting. In the first example in Table 14, when the source text described the screens as “trash on the public domain,” the interpreter chose to paraphrase this to “have no use value at all.” This paraphrase removes the metaphorical and potentially negative connotation of “trash” and instead provides a clear and neutral statement about the screens' lack of utility. The second example translates “put us on edge” in the context of the pandemic to “even more cautious and as if walking on thin ice.” This paraphrasing captures the essence of being on edge and enhances it with a culturally relevant idiom, evoking a vivid image of extreme caution and carefulness. In the third example, the phrase “is lost among them” is paraphrased to many people cannot receive,” which maintains the original meaning while ensuring clarity and comprehension in the target language. It

can be observed from the examples that interpreters utilize paraphrasing to adapt language-specific expressions, metaphors and idioms from the source text into equivalent expressions that are idiomatic and culturally appropriate in the target language, ensuring clarity and comprehension for the audience.



Table 15

Examples of paraphrasing to make sense of convoluted expressions

ST	TT	Literal Translation of TT
So, I think the main thing is we must understand that, yes, COVID 19 19 pandemic, <u>it's like not nothing special or unusual</u> , and <u>for now will I have enough medicine for that, enough preparing, enough experience for that</u> . But we must understand <u>this process is still here</u> .	所以，我覺得，這裡的重點就是，我們當然必須要瞭解，確實新冠疫情... <u>其實他也許現在看起來沒什麼了不起的，現在也有相關的疫苗跟解藥問世了，大家有累積相關的經驗。</u> 但是重點是 <u>這個疫情，仍然是現在進行式。</u>	So, I think, the emphasis here is, we of course must understand, indeed the COVID-19 pandemic... <u>Actually, it perhaps now appears not very remarkable, now also have related vaccines and remedies come out, everyone has accumulated relevant experience.</u> But the emphasis is <u>this pandemic, still is present continuous tense.</u>

The example in Table 15 demonstrates how the interpreter uses paraphrasing to transform a convoluted and somewhat disjointed source speech into a more coherent and understandable target speech. The interpreter paraphrases “it's like not nothing special or unusual” into “it perhaps now appears not very remarkable.” Additionally, the interpreter translates “and for now will I have enough medicine for that, enough preparing, enough experience for that” as “now also have related vaccines and remedies come out, everyone has accumulated relevant experience,” removing awkward phrasing for

straightforwardness. Finally, the interpreter uses the phrase “present continuous tense,” an idiomatic expression in Chinese, to talk about the ongoing nature of the pandemic. Through these adjustments, the interpreter provides clear, coherent, and culturally appropriate renditions, effectively communicating the key message while making it accessible to the target audience.

4.3 Problem Triggers and Their Corresponding Strategies

In simultaneous interpreting, specific challenges, known as “problem triggers,” often arise and necessitate strategies to maintain clarity, coherence, and accuracy. In this study, problem triggers are broadly categorized into message-related and sender-related triggers based on Mankauskienė’s (2016, p. 145) classification, each requiring specific strategies to manage the inherent difficulties. This section explores how different problem triggers align with various types of strategies, as observed in the analysis of the Smart City Mayors' Summit corpus.

4.3.1 Message-Related Problem Triggers

Message-related problem triggers arise from the linguistic and contextual intricacies of the source speech. These include complex syntax, idiomatic expressions, cultural references, and detailed information such as names and numbers. The researcher observed that interpreters typically employ specific strategies to address such challenges.

For complex syntax and grammar, interpreters often use Morphosyntactic Reformulation (Type A strategies), which involve reordering sentence elements to fit the grammatical structure of the target language. For instance, Changing Order Within a Clause (A2) is frequently used to manage inherent differences between English and Mandarin Chinese sentence structures. Syntactic Segmentation (A1) also comes in handy

while navigating long and complex sentences. Additionally, Paraphrasing (Type D strategies) is employed when the source text's syntactic complexity is too intricate. Paraphrasing helps rephrase the content into more manageable and grammatically coherent forms in the target language.

When dealing with idiomatic expressions and cultural references, interpreters utilize Expansion (Type C strategies). Explanatory Additions (C1) provide context or clarify cultural references that may not have direct equivalents in the target language. Paraphrasing (Type D strategies) also play a significant role in adapting idiomatic expressions to culturally appropriate and understandable terms in the target language. As highlighted by Chang (2005), interpreters often grapple with the challenge of translating idiomatic expressions and cultural references. For instance, participants in Chang's study frequently opted for meaning-based translations over literal ones when dealing with complex idioms, reflecting a strategic use of paraphrasing to ensure clarity and cultural relevance in the target language (Chang, 2005, pp. 85-92). The Expansion and Paraphrasing strategies observed in the present study aligns with Chang's (2005) empirical findings, underscoring their importance in effective interpretation.

For detailed information such as names and numbers, interpreters often resort to Synthesis (Type B strategies). Generalization (B1) simplifies specific details into broader categories, making it easier for the audience to grasp the essential information without getting bogged down by exact figures or specific names. Deletion (B3) is used to remove non-essential details that may overwhelm the audience or disrupt the flow of interpretation.

4.3.2 Sender-Related Problem Triggers

Sender-related problem triggers stem from the speaker's delivery, such as incomplete thoughts and convoluted expressions. Such challenges can significantly impact the interpreter's ability to accurately understand and convey the message. In this study, it was found that Paraphrasing (Type D strategy) is the primary strategy that interpreters utilize to tackle sender-related problem triggers which, in this particular corpus-based study, mainly stem from the speakers' non-native status. It was also found that interpreters dynamically combine Paraphrasing with other strategies to tackle sender-related problem triggers. For example, when a speaker's sentence structure is complex and fragmented, interpreters break down the sentence into clear and logically ordered segments (A1 Syntactic Segmentation), eliminating the fragmented thoughts (B2 Simplification or B3 Deletion) and providing a coherent explanation of the intended message. Synthesis (Type B strategies) is helpful when dealing with non-native speakers' convoluted expressions, particularly when the source speech is unnecessarily lengthy. By selectively omitting information, interpreters are able to directly state the essential points and eliminate unnecessary elements, making it easier for the audience to grasp the main message. To provide clarity when the speaker's language limitations cause vagueness and incoherence, Paraphrasing also comes hand in hand with Expansion (Type C strategies). This mixed approach helps ensure that the audience can follow the speaker's main points without confusion. This finding of the present study echoes with Gumul & Bartłomiejczyk's (2022) finding that explicitation, which can be linked to Expansion and Paraphrasing in the present study, helps maintain coherence and cohesion (Gumul & Bartłomiejczyk, 2022, p. 176). Cases illustrating these strategies will be provided in the following section.

4.3.3 Illustrative Cases

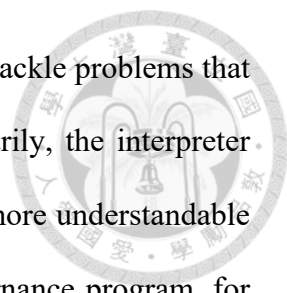
This section presents illustrative cases that demonstrate the practical application of various interpreting strategies in response to specific problem triggers encountered during the Smart City Mayors' Summit. These examples highlight how interpreters dynamically employ a range of strategies, such as syntactic segmentation, paraphrasing, additions, and deletions, to address the complexities and challenges posed by the source speeches.

Case 1

ST: We must look for the governance program, for these municipality programs to support them, to make a very efficient motivation system that to have warriors in that war, because it is war, and we must have to say anything, and we have one interesting idea that... If you would like to have a peace, you must be ready for the war. So we must be ready for that and that in case we will have victory against this pandemic and COVID-19.

TT: 我們要透過政府的專案，比如說市區的專案，提供第一線醫護人員更多的協助，讓他們有更有效率的系統，希望能夠幫助更多的人，因為這其實就像是戰爭規模一樣的一個疫情。所以，如果要有和平的話，你要先有備戰的準備，這其實是一體兩面喔。所以疫情也是一樣的。

(We must, through government projects, such as city projects, provide frontline medical personnel with more support, allowing them to have more efficient systems, hoping to help more people, because this is actually like a war-scale pandemic. Therefore, if you want peace, you must first be prepared for war, these two aspects are actually two sides of the same coin. So, the pandemic is the same.)



In Case 1, the interpreter employed a variety of strategies to tackle problems that make the segment challenging to comprehend and interpret. Primarily, the interpreter employed Paraphrasing to make complex and redundant segments more understandable and coherent. For example, the phrase “we must look for the governance program, for these municipality programs to support them” was interpreted as “we must, through government projects, such as city projects, provide frontline medical personnel with more support.” Here, an indirect and somewhat vague phrase was changed to a more direct and specific one. The original sentence starts with a verb phrase (“look for”) that implies an action without specifying how or why, while the paraphrased sentence begins with a prepositional phrase (“through government projects”) that immediately indicates the method or means [PROBLEM: vague message; STRATEGY: Type D Paraphrasing]. Furthermore, the paraphrased version provides clarity by specifying “frontline medical personnel” based on context instead of using a vague pronoun (“they”) [PROBLEM: vague message; STRATEGY: Type C1 Explanatory Addition].

The interpreter also addressed the metaphor of “to have warriors in that war, because it is war” by paraphrasing and adding information, interpreting it as “hoping to help more people, because this is actually like a war-scale pandemic.” The original phrase uses the metaphor of “warriors in that war” to describe the efforts needed to combat the pandemic. This metaphor might be confusing or overly dramatic in some contexts. The interpreter paraphrased it into “hoping to help more people,” which conveys the same intention but in a more straightforward and universally understandable manner [PROBLEM: confusing metaphor; STRATEGY: Type D Paraphrasing]. The interpreter also clarified the metaphor “because it is war” by explaining that the pandemic is “actually like a war-scale pandemic.” This explanatory addition helps the audience understand the scale and seriousness of the situation without relying on the original

metaphor, which might not translate well across cultures or languages [PROBLEM: confusing metaphor; STRATEGY: Type C1 Explanatory Addition].

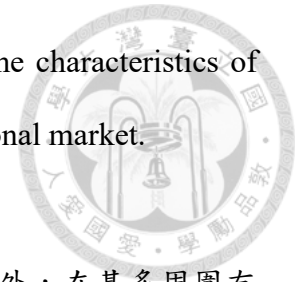
The phrase “and we must have to say anything, and we have one interesting idea that...” was omitted in the interpretation. The strategy of omission here is likely for the purpose of enhancing clarity, coherence, and relevance in the target language, as this phrase is redundant and does not add meaningful information to the overall message [PROBLEM: redundancy; STRATEGY: Type B3 Deletion].

Following the deletion of redundant message, the interpreter added “therefore” to provide logical connection between messages [PROBLEM: incoherence; STRATEGY: Type C2 Addition to Maintain Coherence]. Then, following “if you want peace, you must first be prepared for war,” the interpreter added “these two aspects are actually two sides of the same coin,” which was non-existent in the source speech, to encapsulate the idea that readiness for war and achieving peace are interconnected. This addition provides a more vivid and relatable way of understanding the relationship between preparation and victory over the pandemic [PROBLEM: confusing metaphor; STRATEGY: Type C4 Addition Proper]. “So we must be ready for that and that in case we will have victory against this pandemic and COVID-19” was simplified into “so, the pandemic is the same,” removing unnecessary repetition and condensing the message into a more straightforward and concise statement [PROBLEM: redundancy; STRATEGY: Type B2 Simplification].

Case 2

ST: We have obliques scenes and technology to en... enhance the produce capacities of the our lungs, taking advanced, uh, advantage of this unique characteristics of volcanic soils and improving especially and high-altitude coffee seeds, which are cultivated from

a thousand two hundred to a thousand eight hundred meters of time characteristics of around around and unique flavors, very appreciated by the international market.

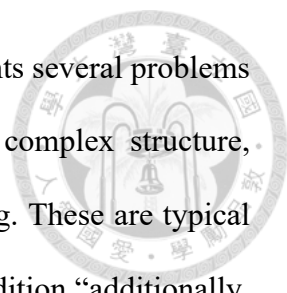


TT: 因此，科技的整合，能夠讓我們提升環境的利用程度。另外，在基多周圍有非常多的火山土壤，以及非常高的海拔。那，因此呢，我們的海拔大約平均是兩千八百公尺，所以我們可以種出非常多特殊的植物，獲得國際農業市場的歡迎。

(Therefore, the integration of technology can allow us to enhance environment utilization degree. Additionally, around Quito have very many volcanic soils, and very high altitude. So, therefore, our altitude approximately average is 2,800 meters, so we can grow very many special plants, receive international agricultural market's welcome.)

In Case 2, the source text is one lengthy, convoluted, and somewhat fragmented sentence. The interpreter broke down the sentence into several manageable segments [PROBLEM: lengthy sentence; STRATEGY: Type A1 Syntactic Segmentation], while utilizing a range of strategies to transform the source text into a clear and coherent.

The phrase “We have obliques scenes and technology to en... enhance the produce capacities of the our lungs” was paraphrased to “the integration of technology can allow us to enhance environment utilization degree.” Based on context, the researcher believes that the “lungs” in the source text could actually be accented “lands.” Here, the interpreter managed to make sense of the source text by paraphrasing [PROBLEM: non-native speaker, unclear message; STRATEGY: Type D Paraphrasing]. Besides, redundant elements such as “obliques scenes” and repeated phrases were omitted, removed unnecessary information that could confuse the audience and focusing on the essential points [PROBLEM: redundancy; STRATEGY: Type B3 Deletion]. The segment of “taking advanced, uh, advantage of this unique characteristics of volcanic



soils and improving especially and high-altitude coffee seeds” presents several problems for interpreters, including fragmentation, redundancy, ambiguity, complex structure, unclear relationships, incomplete thoughts, and inconsistent phrasing. These are typical problems in non-native speakers’ speeches, and the interpreter’s rendition “additionally, around Quito have very many volcanic soils, and very high altitude” embodies a combination of several strategies, primarily Paraphrasing and Simplification [PROBLEM: non-native speaker; STRATEGIES: Type D Paraphrasing]. By ensuring that the details about high-altitude cultivation and international market appreciation were clearly conveyed, the interpreter maintained the original message's intent while making it accessible and relevant to the target audience.

Case 3

ST: We have a international airport, where the back up all the flights from New York, from JFK, so, means all the immigrants, you know, stay in Newark, decided, you know, when they fly to Newark and decided to stay in Newark.

TT: 我們的這個國際機場非常、非常的大，來自世界各地的飛機都會降落在紐瓦克市。所以呢，很多人移民到美國的時候，就在紐瓦克落地生根。

(Our this international airport very, very big, from all over the world airplanes all will land in Newark. So, when many people immigrate to the United States, at Newark settle down and take root.)

In Case 3, the interpreter faced a problem of redundancy and lack of clarity in the source text. To address this, the interpreter removed redundant phrases like “you know, stay in Newark, decided, you know” [PROBLEM: unclear and redundant message;

STRATEGY: B3 Deletion]. Additionally, the interpreter broke down the long and convoluted sentence into shorter, clearer clauses [PROBLEM: convoluted sentences; STRATEGY: A1 Syntactic Segmentation]. By rephrasing the segment “all the immigrants, you know, stay in Newark” to “when many people immigrate to the United States, at Newark settle down and take root,” the interpreter ensured that the message was clear and culturally appropriate, enhancing comprehension for the audience [PROBLEM: vague message; STRATEGY: D Paraphrasing, C1 Explanatory Addition].

Case 4

ST: So, there are challenges and opportunities that ICT presents us as a small country, and in terms of that, there's opportunities for public-private partnerships. We, our ICT sector is still underdeveloped, and so there are opportunities for public private partnership.

TT: 好。當然我們同時面對 ICT 帶來的這個挑戰跟契機。那我們身為一個小國，我們當然希望能夠善用公私合營的契機。我們的 ICT 部門現在還在發展當中。所以呢，我覺得未來要透過跟私部門合作來發揮潛力。

(Okay. Of course, we face the challenges and opportunities that ICT brings. As a small country, we naturally want to leverage the opportunities for public-private partnerships. Our ICT sector is still developing. Therefore, I believe we should work with the private sector to realize its potential in the future.)

In Case 4, the interpreter addresses several issues related to redundancy and vagueness, enhancing clarity and coherence in the target language. The source text repeats the phrase “opportunities for public-private partnerships” twice, mentioning the potential of public-private partnerships without fully explaining the benefits. The first time this

phrase is mentioned, the interpreter adds “we naturally want to leverage” to clarify the message [PROBLEM: incomplete explanation; STRATEGY: Type C1 Explanatory Addition]. For the second time this phrase is mentioned, the interpreter rephrases it entirely, rendering it as “I believe we should work with the private sector to realize its potential in the future” [PROBLEM: repetitive phrasing; STRATEGY: Type D Paraphrasing]. This helps the audience understand the speaker’s intended emphasis on collaboration and its benefits.

Another challenge in the source text is the vague phrase "in terms of that," which does not provide specific information. Rather than translating this unclear expression, the interpreter omits it entirely, focusing on the main ideas without introducing ambiguity [PROBLEM: vague expression; STRATEGY: Type B3 Deletion]. This choice enhances the clarity of the interpretation by removing elements that do not contribute meaningfully to the message.

Finally, the interpreter rephrases “the ICT sector is still underdeveloped” as “the ICT sector is still developing.” Here, the interpreter reframes “underdeveloped” as “still developing,” subtly shifting the tone to imply potential and progress rather than lack. This reflects Paraphrasing by rewording the original phrasing while preserving the intended meaning [PROBLEM: negative connotation; STRATEGY: Type D Paraphrasing].

Through these strategies, the interpreter delivers a concise, coherent, and accessible interpretation, effectively balancing technical accuracy with the speaker's intended message for the audience.

Chapter 5 Conclusion



This study investigates the challenges and strategies in English-Chinese simultaneous interpreting within the context of the Smart City Mayors' Summit from 2021 to 2023. The initial sections introduced the significance of understanding how interpreters address problem triggers to maintain clarity, coherence, and accuracy in multilingual communication. The literature review then provided a foundation by exploring key theories and studies on interpreting strategies and problem triggers. Foundational models, such as Gile's Effort Model and Mankauskienė's classification, offered insights into the cognitive and linguistic challenges interpreters face. Empirical studies on strategy use illustrated how interpreters adapt dynamically to various complexities. The methodology section outlined the research approach, including data collection and analysis. A parallel corpus of source and target texts from the Summit recordings enabled both quantitative and qualitative analysis of interpreting strategies. By categorizing strategies such as Morphosyntactic Reformulation, Synthesis, Expansion, and Paraphrasing, the study set the stage for identifying strategy frequency and patterns. The results and discussion highlighted quantitative insights into strategy usage and qualitative examples of interpreters' responses to complex syntax, cultural nuances, and non-native speaker issues.

This chapter summarizes the key findings, discusses the implications of these results for interpreter training and practice, highlights the limitations of the study, and proposes directions for future research. By providing detailed insights into the strategies used to handle linguistic and contextual difficulties, this study contributes to a deeper understanding of simultaneous interpreting and offers practical recommendations for enhancing interpreter performance in diverse settings.

5.1 Summary of Findings

This study's analysis reveals that interpreters frequently employ Type D strategy (Paraphrasing) to adapt to the grammatical conventions, language specificity, and fragmented thoughts of non-native speakers. Paraphrasing allows interpreters to transform convoluted and incomplete sentences into clear and coherent messages, ensuring the audience comprehends the speaker's points despite the linguistic challenges posed by non-native speech patterns. Additionally, the study highlights the use of Type A strategies (Morphosyntactic Reformulation), Type B strategies (Synthesis), and Type C strategies (Expansion) as vital strategies to manage complex syntax, detailed information, and cultural references in the source speech.

The findings also emphasize the importance of addressing message-related problem triggers, such as complex syntax, idiomatic expressions, and detailed information, by employing various strategies to maintain coherence and enhance clarity. Sender-related problem triggers, such as non-native accents and convoluted expressions, are managed through paraphrasing combined with other strategies, enabling interpreters to provide accurate and comprehensible interpretations.

Research Question 1: What strategies do professional interpreters utilize in general and in response to specific problem triggers?

Interpreters utilize a variety of strategies to manage different problem triggers encountered during conference interpretation. Morphosyntactic reformulation, synthesis, expansion, and paraphrasing are adopted in a dynamic manner to cope with message-related and sender-related problem triggers.

Paraphrasing stands out as a versatile technique utilized by interpreters, with occurrences surpassing other types of strategies. It is utilized to adapt to syntax and

grammar, language specificity, as well as to cope with non-native speakers. Paraphrasing to adapt to syntax and grammar involves restructuring sentences to conform to the grammatical conventions of the target language while preserving the meaning of the source text. Examples include transforming negative clauses into positive ones and rephrasing language-specific expressions into idiomatic equivalents. Paraphrasing is also employed to cope with non-native speakers by clarifying convoluted, complex expressions and adjusting messages to enhance coherence and comprehension.

In addition to paraphrasing, interpreters employ morphosyntactic reformulation to handle message-related problem triggers, providing syntactical coherence and grammatical accuracy in the target language. This involves altering the structure and syntax of sentences or clauses to fit the grammatical conventions and stylistic preferences of the target language. By rearranging words or phrases within a clause, adjusting the placement of modifiers, or breaking down complex sentences into smaller segments, interpreters make sure that the translated text flows naturally and is syntactically coherent. Syntactic segmentation is another valuable strategy used by interpreters to handle lengthy sentence structures. By breaking down complex English sentences into smaller, more manageable segments that reflect the structure of the target language, interpreters can accurately convey the intended meaning while maintaining grammatical correctness. This strategy allows interpreters to handle prepositional phrases separately and ensure clarity and comprehension for the audience.

Expansion and Synthesis are utilized to tackle both message-related and speaker-related problem triggers. Interpreters employ expansion to enhance clarity, lexical accuracy, and coherence in interpretation. By adding information such as formality, explanations, synonyms, or logical continuity, interpreters clarify vague or incoherent messages to boost comprehension. Synthesis is used to simplify and condense the source

speech, making it clearer and more concise in the target language. Interpreters delete non-essential words or phrases, simplify complex language, and generalize specific details into broader terms or categories to ensure that the main message is communicated without unnecessary linguistic complexity. This resonates with Gile's (1995) Effort Model, which suggests that interpreters prioritize key information to reduce cognitive load, especially during simultaneous interpreting.

Interpreters often dynamically combine these strategies to tackle specific problem triggers, particularly when dealing with non-native speakers. For example, paraphrasing may be combined with synthesis to simplify convoluted expressions, or with expansion to add necessary context and clarity. This mixed approach helps interpreters manage linguistic and contextual challenges, ensuring accurate and coherent communication.

Research Question 2: What are the major problem triggers for conference interpreters?

Based on the analysis of the parallel corpus established by this research, the major problem triggers for conference interpreters can be categorized into two main groups: message-related problem triggers and sender-related problem triggers.

Message-related problem triggers primarily involve difficulties related to syntax, grammar, language specificity, and detailed information in the source text. Interpreters are challenged in conveying the meaning of the source text due to differences in sentence structures, idiomatic expressions, or cultural norms between languages. For instance, interpreters need to clarify metaphors and idioms, which often do not have direct equivalents in the target language, to ensure that the target audience comprehends the intended message accurately.

Sender-related problem triggers stem from characteristics of non-native speakers' speeches, such as convoluted language or incomplete sentences, which may impede comprehension and pose challenges for interpreters in conveying their intended message. Interpreters need to navigate complex expressions and clarify ideas to enhance comprehension, particularly when non-native speakers use convoluted language or speak in an incoherent manner.

Based on the findings, the major problem triggers for conference interpreters revolve around the need to adapt to linguistic, cultural, and communicative differences between languages, as well as to effectively convey the intended message in a clear and comprehensible manner.

In summary, professional interpreters dynamically utilize a combination of strategies to overcome specific problem triggers and ensure accurate and effective communication. These strategies enable interpreters to navigate linguistic, cultural, and communicative differences between languages, facilitating smooth and comprehensible interpretation for the audience.

5.2 Pedagogical Application

The findings of this study have several implications for interpreter training programs, particularly in the development of adaptive strategies to manage problem triggers. Given the prominence of Paraphrasing (Type D) and Expansion (Type C) strategies, training should emphasize flexibility in reformulation, allowing trainees to rephrase complex or culturally specific segments effectively. Practicing these strategies could help trainees navigate non-native speaker variations and intricate syntax with

greater ease, reflecting Gile's (2008) emphasis on managing cognitive load by prioritizing essential information.

Furthermore, integrating corpus-based analysis into interpreter training could enable students to study real-life examples of strategy use. By examining actual conference interpretations, trainees can observe how experienced interpreters balance clarity and conciseness, especially when employing Synthesis (Type B) strategies like Deletion and Simplification. Such exercises can strengthen their decision-making skills, allowing them to streamline content while maintaining message integrity.

In addition, simulated interpreting sessions using diverse speaker styles and complex subject matter could be used to familiarize students with sender-related problem triggers. Structured practice in recognizing and responding to accents, non-native language use, and rapid delivery will equip trainees with strategies to handle high-pressure interpreting environments. Overall, a focus on these adaptive techniques in training can build resilience and confidence, preparing future interpreters to manage a wide range of linguistic and contextual challenges in professional settings.

5.3 Research Limitations

The findings in this study are subject to certain limitations. First, the research methodology relied solely on analyzing a corpus of interpreted texts, without additional context regarding whether certain segments involved simultaneous interpretation with accompanying text, if interpreters had prior access to the text, or if technical issues like inaudible input occurred. Consequently, the inability to discern these factors presents a limitation to the study's scope and the interpretation of its findings.

Another limitation of this study is the absence of raters in the process of identifying and categorizing the strategies observed in the intertextual analysis and their

corresponding problem triggers. The researcher independently performed these tasks, which may introduce subjectivity and potential biases into the categorization process. While efforts were made to maintain consistency and rigor in the categorization process, the lack of independent raters to validate the classifications could affect the reliability and robustness of the findings.

Furthermore, the corpus is limited to a specific event and time frame, which may not fully capture the variability in interpreting practices across different settings and contexts. Additionally, the summit's focus on smart city topics might not reflect the challenges encountered in other fields.

5.4 Contributions and Future Directions

The corpus analysis conducted in this study offers insights that can aid interpreters in developing their reformulation strategies. By examining the strategies identified in the corpus, this study provides a deeper understanding of the linguistic challenges inherent in simultaneous interpreting and the various techniques employed to overcome them.

One of the primary contributions of this research is the detailed categorization and analysis of strategies used by interpreters. This analysis highlights the frequency and context of different types of strategies. Understanding these patterns allows interpreters to recognize common problem triggers and the most frequently used strategies for addressing them. Moreover, this knowledge can inform interpreter training programs by providing concrete examples and practical guidance on how to adapt interpreting techniques to different linguistic contexts and problem triggers.

This study's focus on the Smart City Mayors' Summit provides a unique context that showcases the real-world application of these strategies in a high-stakes, technical environment. This context-specific analysis adds depth to the existing body of research

on simultaneous interpreting and highlights the adaptability and skill required by professional interpreters in such settings.

To build on this research, future studies could explore different conference settings to understand how contextual factors influence interpreting strategies. For instance, analyzing interpreting practices at medical conferences, legal proceedings, or international film festivals could reveal how interpreters adapt their strategies to different types of content and audience expectations. Each of these settings presents unique challenges and requires tailored approaches to ensure effective communication.

Moreover, expanding the corpus to include additional language pairs would provide a broader perspective on the strategies used by interpreters working in different linguistic contexts. Comparative studies between languages with different syntactic structures, such as English-French, English-Arabic, or English-Japanese, could highlight how language-specific challenges impact the use of strategies. Understanding these differences can contribute to more effective training programs and better support for interpreters working in diverse language pairs.

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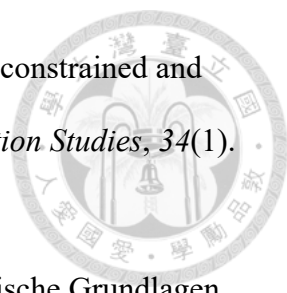
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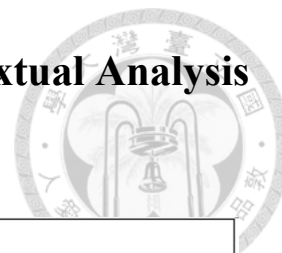
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Appendix. Extracts from the Corpus for Intertextual Analysis

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lessons. We had no time to have rehearsals. We just must to have response right here right now.	辦法先預演，我們就必須要馬上、當下的做出應變。	C3
And if to say the main lesson, what I and my colleagues reach from this last pandemic lessons, it was the world will never be the same. The world probably will never be the same safe like we felt it before. And of course, now we can speak like it's overcome pandemic, like the first second third wave, like it's overcome, but it's still right here.	那當然，我們在現在階段都慢慢的步出疫情的影響，可是全球的樣貌已經跟我們以前大不相同。當然，我們現在在這裡講的，好像就是說，我們已經步出疫情，那好像第二波、第三波爆發，都已經穩度成功，可是疫情還是現在進行式，	C4 D
So the main lessons we achieved from this great challenge, it was we must be ready for the next wave of the pandemic, because it's changed, it's still exists, it's still somewhere, so we must be ready every time and everywhere in each of our city.	因此我們從疫情當中學到的關鍵啟示是什麼呢？ 語者 2 01:04:20,743 就是我們一定要做好準備，為下一波、下一個形式的疫情做好準備，因為，現在疫情還是現在進行式，有可能會有下一波，所以我們每一次隨時在各地都應該要跟在城市當中做好準備。	D A1 D
And, of course, what we learned mostly, how it's important to have a doctor, to have a nurses nursing, to have paramedics, to have very efficient ambulance. And of course I do not like speak about things like uh special equipment, special materials for them. Now we must have it ready forever.	語者 2 01:04:38,104 當然，我們從疫情當中學到什麼樣的啟示呢？就是我們醫護人員的人力配置非常重要，還要有足夠的救護車，當然還有一些不證自明的一些資源，像是一些特殊的護具、攝部的特別的原材料等等。當然，我們現在必須，現在就要找到新的解決方案，大家共同研擬相關的	C1 B1 D
And lastly, while of course the country is among the lowest in terms of greenhouse gas emissions, we also remain vulnerable, and like Taiwan, we are geographically challenged from the effects of climate change. However, we don't see this as a as a as a big challenge, but indeed also as an opportunity for the Philippines to serve as hot spot for climate solutions and resilience technologies which can be scaled up globally. And I would like to see in the future that Taipei together with all the other cities here present along with the Philippines could collaborate in building smart communities, specially in testing resilience technologies in the Philippines. Thank you very much.	最後，當然現在...菲律賓在全球碳排算是排名比較低的，但是我們跟台灣都一樣，在地理上面都面臨氣候變遷的延續挑戰，但是呢我們也覺得危機就是轉機。我們應該要把像是菲律賓當作一個推動氣候解決方案以及韌性科技的重要時政熱點，從菲律賓立足，同時可以在全球佈建，所以我這裡本人要提議的就是，展望未來，台北跟所有的城市代表，當然還有包括菲律賓，都應該要攜手合作，打造智慧的社區，特別是在菲律賓開始測試韌性相關的科技。謝謝。	C1 D B3 A2 B2 A2 D D C4
Thank you Miss Aldaba for pointing out the key areas, easier access to citizen services, at the same time also providing smarter solutions to create digital transformation, make it easier and more accessible, and also the implementations the Philippines is undertaking right now.	好，非常感謝 Aldaba 博士點出我們在哪些重要的地方，像是要更便利的取得服務，還有透過智慧的解決方案來打造數位轉型，讓服務更容易的取得、更便利，同時也可以跟我們瞭解一下菲律賓推動的作法。	C4 C1 C3
Now we're going to also listen to what Tainan City's smart city strategies are currently. So ladies and gentlemen, may I please also welcome our next	接下來要了解的是台北的智慧城市策略是什麼。各位女士、各位先生，我們現在以熱烈掌聲歡迎我們下一位講者，台	D A2 D

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1:19:02 We also have our vision to become a data capital of Europe, and we're working hard to achieve that as well.	那我們希望也成為一個這個資料的、資、資，呃，首都。	B3
1:19:08 Of course, I'm disappointed not to be here in there in taipei again this year but look forward to joining you all next year. And also to say thank you to Taipei and Taiwan for the help that they've given to the UK during COVID, and I'll join with my Polish colleague Polish colleagues in Slava Ukraine.	當然很不好意思，今年沒辦法實際在台北與會，不過呢很期待明年可以實地的到台北與會。所以也要感謝台北台灣在疫情的時候對於英國提供的一些援助。	D A2 B3
1:19:27 And next slide, please. Um, so my side, as you were the capital of Scotland with a population of just over a half million home. World heritage site, which can sometimes make it quite difficult for us to modernize into new technology in a new world where we have an ancient capital city to work around as well.	好，我們看一下下一張投影片。好。我們是，...，我們其實大概有五十萬的人口，那其實我們有的時候有很多的遺跡，所以沒辦法這麼快的採取現代當代的科技，可是我們是一個首都的地位，所以我們必須，	D A2 C1 D
The seat of four key universities, some of the best in the world. And we'll have nearly five million visitors come to our city every year to enjoy the festivals. And Edinburgh and the region around	裡面有四大的大學是世界頂尖的學府，那每年有五百萬人的旅客到訪，來參與我們的愛丁堡相關的節慶啊，活動等等。那區域是到我們全國各地的地方，	C4
but also with our methane gas generation and our solar farms.		
1:36:49 Next slide, please. So, as a wrap-up, um, last but not least uh, we've we've heard how you know human beings can be affected uh by global issues nowadays. We're just seeing that geopolitical uh playing out at the moment.	所以最後呢，我想要強調的就是，其實人類很容易受到全球議題的影響，包括了地緣政治現在所發生的危機。	C4 A2 D
The city of Palmerston North's really committed to acting actively, invested with our global city partners. We have a number of sister city and strategic city partners in China, Japan the USA, Vietnam, Taiwan, and the Netherlands.	因此，Palmerston North 我們真的非常希望能夠和全球的城市一起合作。我們有一些，姐妹市位在中國、越南、台灣、日本、荷蘭、美國等等。	C2 D
1:37:22 And we exchange our knowledge, um culture, business and trade ideas, and most of all, city to city and uh community development. And this really helps us to tackle some of those most pressing issues at a local issue or local level, such as climate change and sustainability. I'll leave it at that, but thank you. It's an honor to present to you. And again, acknowledge my fellow mural colleagues. [Maori] Kia ora. Thank you.	我們也希望能夠交流我們各式各樣的文化還有想法，不管是在社區規劃還是城市發展上面。那，向彼此交流學習，能夠讓我們去解決這些非常重大的問題，包括了氣候變遷還有永續的問題。我就講到這裡。非常感謝大家的聆聽，也再一次的祝賀所有的貴賓，謝謝大家。	C4 D C4 B3
	語者 1 01:37:49,048	

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We have excellent expertise in terms of software development. Our universities are very engaged in both teaching and research in Internet of things, and this all contributes to the UK smart cities um ecosystem. Um transport is is another one. Uh with transport, for for London, having smart cities at the center of their their transport policy, uh, hydrogen buses is obviously a a big part of that, and and lots of that best practice has been rolled out um around the world. Next slide, please. Um, so you'll hear more from both Bristol and um Greenwich, but I I just wanted to briefly mention um both both of those. And Bristol uh has this initiative called Bristol is Open, which is a joint venture between the city of Bristol uh and uh the university, and this has developed one of the strongest 5G network testbeds uh in the world as well as in in the UK. And this is enabling companies to come in and and test their technology and try to find solutions that that support the citizen, which is ultimately what what it's all about, um uh ways to ensure that the	另外，我們也有非常優秀的軟體發展的強項，比如說我們的學研機構，在教學研究方面，也大有著力，還有物聯網等等，這一些都可以讓歐洲、英國的智慧城市發展得更順利。 另外，交通運輸也很重要，尤其是對於倫敦在智慧城市底下的交通發展政策，比如說氫氣、氫氣電池的公車等等，還有很多最佳的作法，現在都在全球開始落地生根。 所以呢今天大家會聽到布里斯托還有格林威治兩地代表的演講，會聽到更多的細節。不過，在我這邊呢先提到一些在布里斯托 bristol 這個地方有一個叫做 bristol is open 開放布里斯托這個專案。它其實是由布里斯托的市議會跟布里斯托大學一起共同推動的開放計畫。他可以說是目前非常強勁的 5G 測試場域，全球數一數二，在英國也是一樣，是首屈一指。 這個計畫讓企業願意進駐，去試驗他們的技術，希望能夠找到解決方案，能夠讓市民受惠。這個其實就是大家努力的一個目標。希望透過不同的方法讓市民能夠真正的受惠。這個才是重點。所以	C2 A2 D C4 D B3 D C1 A2 A1 A1 D
Vancouver. It's it's a pretty great um bus system. Uh, next slide, please. 1:24:40 So what we are doing in Langley city is because we were we're one of the smaller communities within the metro Vancouver area, and we really need to grow up. So what we're doing is we are planning transit orientated developments uh around our SkyTrain stations. So we'll have one SkyTrain station in Langley city, and around it within a 10 minute walking distance, we want everything available for all ages, so whether that be, we have an innovation boulevard we're going to be developing, we have um we're redoing our official community plan. So within our city hall area where the SkyTrain will end up, we're looking at creating a very central hub where we have uh cinema, all that. We already have a recreation center. We've got a casino across the way. We're looking at revitalizing our downtown. So like I said, everything would be within, and we're looking at smart growth, which would be within a 10-minute walking distance of getting off	所以現在我們在蘭里市呢，因為我們算是溫哥華大都會區裡頭一個比較小的一個城鎮，我們呢必須要更進一步的擴大才行，所以我們現在正在發展這個我們城市架空列車車站附近的一些設施。 我們現在有一個車站，那麼在十分鐘的路程腳程之內，我們希望呢讓所有人都能夠有他需要的一些設施。那我們當然就需要更多的這個創新的計畫。所以呢，我們除了這一個最後的終點站是市政府之外，我們也希望可以有一個中心的樞紐，這個可以有電影城啦，或者是一些休閒娛樂的設施，甚至呢還有賭場。 我們也希望能夠振興我們的市中心。就如同我剛才所說的，我們希望可以在十分鐘的腳程之內。那這個就必須要是一個智慧型的成長。所以希望大家，下車之後十分鐘之內就可以走到這些地方。	B3 A2 D B2 D C4 C1 B1