

The Application of Short-Term Memory in Liaison Interpreting

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Abstract

As a real-time, face-to-face translation form, liaison interpreting requires interpreters to accurately convey information and maintain its accuracy and fluency within a short period of time, which places extremely high demands on their short-term memory capacity. Short-term memory capacity is a crucial factor for the success of interpreting; thus, improving this capacity helps enhance the work efficiency and quality of liaison interpreters. This paper first elaborates on the theoretical frameworks of short-term memory and liaison interpreting, then explores the application of short-term memory in liaison interpreting as well as corresponding training methods. The ultimate goal is to improve interpreting quality and provide useful references for interpreting practice.

Keywords

Short-term memory, liaison interpreting, application.

1. Introduction

With the acceleration of globalization, international communication and cooperation have become increasingly frequent. As an important method of cross-lingual communication, liaison interpreting differs from other types of interpreting by focusing more on practical communication in daily life. It covers a wide range of areas such as welcoming guests, daily arrangements, business visits, and tourism reception, which plays a crucial role in multiple fields including business, politics, and culture. Liaison interpreting requires interpreters to possess a high degree of concentration, rapid and accurate information processing abilities, as well as good short-term memory skills. Short-term memory, as a core part of information processing, has a vital impact on the quality of interpreting.

Short-term memory refers to the stage of memory where information is retained for a short period, usually no more than one minute [9]. In the process of liaison interpreting, interpreters need to rely on short-term memory to store, process, and transform source language information in order to accurately convey it to the target language audience within a short time. However, the capacity of short-term memory is limited, generally around seven information units (chunks). How to efficiently utilize short-term memory has become the key to improving the quality of interpreting.

Although existing studies have explored the application of short-term memory in liaison interpreting, there are still deficiencies in terms of influencing factors, training methods, and the relationship between short-term memory and other cognitive abilities. This study aims to deeply analyze the application of short-term memory in liaison interpreting, discuss its impact on the quality of liaison interpreting, and explore how effective training can improve interpreters' short-term memory abilities, thereby providing a theoretical basis and practical guidance for enhancing the quality of liaison interpreting.

2. Short-term Memory Theory

2.1. Definition of Short-term Memory

Short-term memory refers to the processing, encoding, temporary storage, and limited capacity of information that humans handle. In other words, it is a memory system that stores and processes information within a brief period. Lu Xinzhaoh pointed the chunking theory for short-term memory, suggesting that the capacity of short-term memory can be measured in terms of chunks [7]. A chunk is a single stimulus entity that individuals have become sufficiently familiar with through past experiences, such as a letter, a word, a number, a proverb, and so on. He pointed that the capacity of short-term memory is around 7 ± 2 chunks, or 5-9 information units. The duration of short-term memory retention is relatively short, typically lasting from a few seconds to a minute. During interpreting, the limited capacity of short-term memory, combined with the large amount of source language information and the potential for new information to interfere with stored information, increases the difficulty of interpreting.

2.2. Working Principle of Short-term Memory

In the process of interpreting, the human brain involves three types of memory systems when processing input information, namely, sensory memory, short-term memory, and long-term memory. Sensory memory serves as the source of information and is a prerequisite for interpreting. Short-term memory acts as a bridge between sensory memory and long-term memory. It retrieves relevant knowledge from long-term memory through certain retrieval methods, then combines both to process and store language information.

According to the Atkinson-Shiffrin model, short-term memory plays a crucial role in information processing. It acts as a transitional stage from sensory memory to long-term memory, where information is initially encoded and processed [1]. For instance, when reading a text, short-term memory helps temporarily retain the content we see, facilitating understanding and analysis. However, if these pieces of information are not further processed and consolidated, they are likely to be forgotten easily. Thus, short-term memory plays a pivotal role in interpreting by bridging the gap between sensory and long-term memory, functioning as a central processing unit.

In summary, short-term memory plays a critical role in our daily lives and interpreting, but its capacity and retention time are limited. We need to continually review and reinforce information to transform it into long-term memory.

3. Liaison Interpreting Theory

3.1. Definition and Characteristics of Liaison Interpreting

Liaison interpreting is crucial aspects in the field of interpreting. As highlighted by Wang Binhua in his book *Liaison Interpreting* also known as “successive interpreting” or “dialogue interpreting,” this form of interpreting involves the same interpreter performing both directions of translation within the same setting [10]. In Western countries, this practice is often referred to as community interpreting, with community interpreters being those who provide interpreting services to clients within a specific community [2]. While community interpreting and liaison interpreting share many similarities, they should not be conflated. Community interpreting primarily focuses on interpreting activities within the realm of public services, whereas liaison interpreting encompasses a broader scope. The communicative nature and mode of expression in liaison interpreting define its unique characteristics:

Firstly, liaison interpreting is inherently communicative. The interpreting activities unfold within specific contexts, serving as social interactions aimed at achieving specific objectives [9]. Consequently, various factors related to the communicators, such as their roles, status,

occupation, and relationships, as well as the topics of discussion, can influence the interpreter's performance.

Secondly, liaison interpreting is bidirectional. As an activity based on listening and speaking, it can be conceptualized as a process involving comprehension, translation, and expression. Thus, liaison interpreting can be viewed as a two-way communicative activity aimed at conveying information. The interpreter must engage in dialogue with the speaker to ensure the accurate transmission of information.

Lastly, interpreting is characterized by its immediacy. Throughout the interpreting process, different stages can be identified, yet the intake of information, understanding of meaning, and expression occur almost simultaneously [5]. The interpreter must translate on the spot, with little time for reflection or editing. This necessitates that the interpreter must be "quick".

The characteristics of liaison interpreting dictate that the interpreter must rapidly comprehend, analyze, and organize the target language to facilitate the exchange of information between two languages and accurately convey this to the audience in a short time-frame.

3.2. Application Situations of Liaison Interpreting

"Liaison interpreting" refers to the interpretation that takes place in various settings such as communities, schools, hospitals, courts, police stations, tourist attractions, corporate entities, construction sites, government service departments, media organizations, and training or competition venues [9]. Interpreters conduct this type of interpretation on-site or through remote technology, primarily using liaison interpreting and sometimes whisper interpreting methods [8]. Liaison interpreting encompasses a wide range of scenarios and diverse forms, requiring interpreters to be adaptable. In this section, the author mainly lists four application situations of liaison interpreting.

3.2.1. Business Negotiation

In international business meetings, interpreters assist both parties in effective communication. They are not only responsible for accurately translating the words of both parties, but also for understanding the intentions and needs of both sides to better facilitate the negotiation process. Interpreters need to possess good communication skills and business knowledge, enabling them to communicate effectively in different cultural contexts.

3.2.2. Diplomatic Activities

In international diplomatic settings, interpreters ensure smooth communication between representatives from various countries. They need to be well-versed in the political, economic, cultural, and other aspects of different countries, in order to better translate the words of both parties. Interpreters also require good diplomatic etiquette and communication skills to facilitate effective communication in different cultural contexts.

3.2.3. Medical Consultation

In hospitals or clinics, interpreters assist in communication between doctors and patients. They need to be knowledgeable about medical terminology and medical knowledge to better translate the words of both parties. Interpreters also require good communication skills and patience to facilitate effective communication in different cultural contexts.

3.2.4. Legal Procedure

In courts or police investigations, interpreters facilitate communication between judges, lawyers, and parties. They need to be knowledgeable about legal terminology and legal procedures to better translate the words of both parties. Interpreters also require a strong understanding of legal knowledge and communication skills to effectively communicate in diverse cultural contexts.

In summary, liaison interpreting has a wide range of applications in areas such as business negotiations, diplomatic activities, medical consultations, and legal procedures. Interpreters need to possess excellent language skills, professional knowledge, and communication skills to better fulfill their interpreting tasks.

4. Application of Short-memory in Liaison Interpreting

In the application of liaison interpreting, short-term memory plays a critical role, especially when dealing with rapid and continuous streams of information. Interpreters need to swiftly receive, process, and store large amounts of information, which they must then accurately and flawlessly convey into another language when required. This ability is crucial for maintaining the flow of the conversation and ensuring the accuracy of the information being transmitted. The utilization of short-term memory in consecutive interpreting primarily manifests in the following ways:

4.1. Reception and Processing of Information

In the context of liaison interpreting, interpreters are confronted with the necessity of assimilating an extensive array of information within an abbreviated time-frame. This encompasses the speaker's declarations, inquiries, and perspectives. It is imperative for them to expeditiously discern the information presented by the speaker, engage in the processing and encoding of this data, and subsequently transmit it in a different linguistic mode [6]. For example, within the framework of an international conference, the liaison interpreter is required to swiftly apprehend the introductory remarks of the chairperson, the queries posed by participants, and the expert's presentation, all with the aim of delivering precise interpretations during the subsequent phase of dialogue.

4.2. Instantaneous Transformation of Information

Upon acquiring information, interpreters are tasked with the immediate comprehension of the content and its subsequent conversion into a different linguistic form. This process is contingent upon their proficiency in swiftly processing information within the confines of short-term memory. For example, in the situation where a foreign entrepreneur presents a sophisticated business strategy, the liaison interpreter must promptly discern the speaker's intentions and expeditiously render the content into Chinese, thereby enabling the Chinese audience to grasp the message and provide an appropriate response without delay.

4.3. Short-term Storage and Retrieval of Information

In the context of simultaneous interpretation, it is often necessary for liaison interpreters to momentarily retain and access critical information over brief intervals. This enables them to cite or elaborate on these details as needed during the ongoing dialogue. Furthermore, the information preserved in short-term memory has the potential to trigger corresponding data stored in long-term memory, thereby facilitating the interpretation process. By aligning and integrating the newly acquired information with the established knowledge in long-term memory, interpreters can enhance their comprehension and ensure the precision of their translations. For example, when negotiating the specific clauses of a technological collaboration agreement, liaison interpreters may have to promptly commit to memory a pertinent legal term or technical nuance, ensuring its precise communication to the other party.

4.4. Addressing Emergency Situations

Liaison interpreters confront heightened translation complexities due to the intricate and dynamic nature of the scenarios they navigate. Emergencies, such as abrupt information discontinuities, misinterpretations, the challenge of deciphering unfamiliar speakers' accents, or a sudden increase in the speaker's speaking rate, can materialize. In these instances,

interpreters are required to adeptly manage a variety of emergencies and elicit prompt responses. They must leverage their short-term memory to swiftly reorient the dialogue flow, thereby ensuring the seamless and precise transmission of information. For example, if a participant introduces an off-topic perspective during a gathering, the liaison interpreter must promptly grasp the context and readjust their interpretive approach to guarantee the precise communication of the information.

The proficient application of short-term memory enables interpreters to navigate complex and fluctuating environments with greater efficacy in processing and disseminating information. This not only preserves the fluidity of the conversation but also upholds the accuracy of information exchange, thereby enhancing the overall quality of interpretation and playing an indispensable role in fostering international communication.

5. Training Methods for Short-term Memory

In the context of liaison interpreting, the cultivation of short-term memory typically encompasses a variety of techniques and strategies designed to enhance the interpreter's capacity for swift reaction and efficient information processing in the face of intricate and dynamically evolving conversations. As Liu Heping pointed, The acquisition of skills is contingent upon a certain quantum of practice [6]. Consequently, interpreters aspiring to augment their short-term memory proficiency must select appropriate and effective methodologies for rigorous training, while concurrently engaging in the systematic reflection and distillation of their experiences. The following paragraphs delineate several prevalent training approaches employed in this domain.

5.1. Rapid Response Training

This involves training interpreters to quickly comprehend and translate information in situations that mimic emergencies or rapidly changing dialogues [3]. This can include exercises such as rapid reading, dictation, and quick question-and-answer sessions, which help interpreters enhance their ability to swiftly grasp and process information. To improve, interpreters should engage in extensive reading to boost their reading speed and comprehension. For instance, a series of rapidly changing news articles or reports can be provided, requiring the interpreter to read and summarize key information within a set time limit. Such practice aids in developing the interpreter's capability to quickly capture and process large volumes of information.

5.2. Listening Training

Interpreters need to enhance their adaptability to different accents, speaking speeds, and tones. This can be achieved through listening to recordings of speakers from various backgrounds, watching international news broadcasts or movies, and participating in multilingual dialogue exercises. For materials translated from Chinese, one can choose from the "CCTV" program. For materials translated into Chinese, slow-speed broadcasts like VOA or BBC can be used.

Additionally, dictation training is an effective means to improve short-term memory. In this practice, interpreters need to listen to a rapidly changing dialogue or speech while accurately and correctly transcribing its content [4]. For example, a conversation with a mix of multiple languages can be played, requiring the interpreter to understand the conversation and simultaneously transcribe it in another language. Such training helps interpreters improve their listening comprehension and the speed of language conversion.

5.3. Simulated Interpretation Practice

In practical operations, simulating emergency situations is also an important way to enhance interpreters' short-term memory capabilities. Practicing interpretation in simulated real-life

situations, such as simulated conferences, business negotiations, press conferences, etc., which can help interpreters improve their information processing speed and accuracy under pressure. For example, a series of emergency rescue situations can be designed, requiring interpreters to quickly understand the information from rescue personnel in a tense atmosphere and accurately translate it to personnel from other linguistic backgrounds. This simulated training can effectively enhance the working ability of interpreters under pressure and the stability of their short-term memory.

At the same time, rapid question-and-answer sessions are another exercise to improve short-term memory capabilities. In this situation, interpreters need to quickly answer a series of questions, which often involve complex concepts or details. For example, a situation of an international conference can be simulated, where interpreters are required to answer questions from representatives of different countries within a short time. This training can help interpreters improve their ability to quickly understand and respond to information.

In addition to the three training methods mentioned above, the most fundamental aspect is to strengthen the memory of professional vocabulary, industry terminology, and common sentence patterns, so that they can be quickly retrieved and used when needed. Through these methods, liaison interpreters can significantly enhance their ability to process information in complex and changing environments, thereby providing more efficient and accurate translation services in actual work.

6. Conclusion

The role of short-term memory in liaison interpreting is indispensable, as it directly impacts the quality and effectiveness of communication across languages. In an era of accelerated globalization, the demand for skilled liaison interpreters who can navigate complex and dynamic conversations is on the rise. This paper has explored the significance of short-term memory in liaison interpreting, its working principles, and its application in various fields such as business, diplomacy, healthcare, and legal proceedings.

Short-term memory's capacity to process and store information within a limited time-frame is crucial for interpreters to maintain the flow of conversation and ensure the accuracy of information transmission. The study has highlighted the challenges interpreters face in utilizing their short-term memory effectively, including the rapid assimilation of information, the transformation of data into another language, and the retrieval of stored information for use in the interpretation process.

To enhance short-term memory capabilities, the paper has proposed several training methods, such as rapid response training, which involves exercises that mimic emergency situations, and listening training, which helps interpreters adapt to different speaking styles. These methods aim to improve interpreters' ability to process information quickly and accurately, which is essential for their professional development and the success of international communication.

The findings of this study contribute to the understanding of short-term memory in liaison interpreting and provide practical guidance for interpreters and trainers. By addressing the limitations of existing research and offering comprehensive training strategies, this study aims to elevate the standards of liaison interpreting and facilitate more effective cross-cultural communication. As globalization continues to shape the world, the importance of skilled interpreters with robust short-term memory skills cannot be overstated, and this research serves as a foundational step towards achieving that goal.

Acknowledgements

I would like to express my deepest gratitude to my supervisor, for her invaluable guidance and rigorous academic insights throughout the research and writing of this paper. Her patient instructions on theoretical frameworks and academic writing norms have greatly shaped the quality of this work. I also appreciate the anonymous reviewers of this journal for their constructive comments and suggestions, which have helped to improve the rigor and completeness of this paper.

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