

Memory Training in Interpreting

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Abstract

This paper discusses memory training in interpreting. According Gile's Effort Model (a Processing Capacity Account), short-term memory is an essential part in the process of interpreting. This paper analyzes the major characteristics of Short-term Memory (STM) and their implications for interpreters' memory training. The author believes that interpreting is an STM-centered activity, which includes encoding of information from the Source Language, storing of information, retrieval of information, and decoding of information into the target language. The training of STM skills is the first step in training a professional interpreter. Tactics for memory training for interpreters like retelling, categorization, generalization, comparison, shadowing exercises, mnemonics, etc. are presented in this paper.

Key Words: Interpreter Training, Memory Training, Short-Term Memory, Effort Model

Résumé:

Ce document traite de la formation de la mémoire dans l'interprétation. Selon LE MODELE de l'EFFORT de Gile (un compte de traitement des capacités), la mémoire à court terme est un élément essentiel dans le processus d'interprétation. Cet article analyse les principales caractéristiques de la mémoire à court terme (STM) et leurs implications pour la formation de la mémoire des interprètes. L'auteur estime que l'interprétation est une activité de STM-centrée, qui comprend le codage de l'information à partir de la langue source, le stockage de l'information, la récupération de l'information, et le décodage de l'information dans la langue cible. La formation des compétences de la STM est la première étape dans la formation d'un interprète professionnel. LES Tactiques pour la formation de la mémoire pour les interprètes comme récit, la catégorisation, la généralisation, la comparaison, exercices ombrage, mnémoniques, etc. sont présentés dans le présent document.

1. Why Memory Training?

Interpreting is defined as "oral translation of a written text" (Shuttleworth & Cowie: 1997:83). Mahmoodzadeh gives a more detailed definition of interpreting:

Interpreting consists of presenting in the target language, the exact meaning of what is uttered in the source language either simultaneously or consecutively, preserving the tone of the speaker (1992:231).

Whether novice or experienced, all interpreters find this profession demanding and challenging. Phelan says that "when an interpreter is working, he or she cannot afford to have a bad day. One bad interpreter can ruin a conference" (2001:4). In discussing the qualifications required for an interpreter, Phelan mentions that:

"The interpreter needs a good short-term memory to retain what he or she has just heard and a good long-term memory to put the information into context. Ability to concentrate is a factor as is the ability to analyze and process what is heard" (2001:4-5).

Mahmoodzadeh also emphasizes that a skillful interpreter is expected to "have a powerful memory." (1992:233). Daniel Gile (1992,1995) emphasizes the difficulties and efforts involved in interpreting tasks and strategies needed to overcome them, observing that many failures occur in the absence of any visible difficulty. He then proposes his *Effort Models* for interpreting. He says that "*The Effort Models* are designed to help them [interpreters] understand these difficulties [of interpreting] and select appropriate strategies and tactics. They are based on the concept of Processing Capacity and on the fact that some mental operations in interpreting require much Processing Capacity." (1992:191) According to Gile, Consecutive Interpreting consists of two phases: a listening and reformulation phase and a reconstruction phase (1992:191, 1995b:179):

Phase One: $I=L+M+N$

I=Interpreting, L=listening and analyzing the source language speech, M=short-term memory required between the time information is heard and the time it is written down in the notes, and N=note-taking.

Phase Two: $I= Rem+Read+P$

In this Phase Two of Consecutive Interpreting, interpreters retrieve messages from their short-term memory and reconstruct the speech (Rem), read the notes (N), and produce the Target Language Speech (P). Gile's Effort Model for Simultaneous Interpreting is:

$SI=L+M+P$

SI=Simultaneous Interpreting.

L=Listening and Analysis, which includes "all the mental operations between perception of a discourse by auditory mechanisms and the moment at which the interpreter

either assigns, or decides not to assign, a meaning (or several potential meanings) to the segment which he has heard."

M=Short-term Memory, which includes "all the mental operations related to storage in memory of heard segments of discourse until either their restitution in the target language, their loss if they vanish from memory, or a decision by the interpreter not to interpret them."

P=Production, which includes "all the mental operations between the moment at which the interpreter decides to convey a datum or an idea and the moment at which he articulates (overtly produces) the form he has prepared to articulate" (1995a:93).

Gile emphasizes that the memory effort is assumed to stem from the need to store the words of a proposition until the hearer receives the end of that proposition. The storage of information is claimed to be particularly demanding in SI, since both the volume of information and the pace of storage and retrieval are imposed by the speaker (1995a:97-98).

In both models, Gile emphasizes the significance of Short-term Memory. It is actually one of the specific skills which should be imparted to trainees in the first stage of training. Among all the skills and techniques which are required for a good interpreter, memory skill is the first one which should be introduced to trainee interpreters.

2. Memory in Interpreting

2.1 Short Term vs. Long Term Memory

Psychological studies of human memory make a distinction between Short-Term Memory (STM) and Long-Term Memory (LTM). The idea of short-term memory simply means that you are retaining information for a short period of time without creating the neural mechanisms for later recall. Long-Term Memory occurs when you have created neural pathways for storing ideas and information which can then be recalled weeks, months, or even years later. To create these pathways, you must make a deliberate attempt to encode the information in the way you intend to recall it later. Long-term memory is a learning process. And it is essentially an important part of the interpreter's acquisition of knowledge, because information stored in LTM may last for minutes to weeks, months, or even an entire life. The duration of STM is very short. It is up to 30 seconds. Peterson (1959) found it to be 6 - 12 seconds, while Atkinson and Shiffrin (1968) and Hebb (1949) state it is 30 seconds. Memory in interpreting only lasts for a short time. Once the interpreting assignment is over, the interpreter moves on to another one, often with different context, subject and speakers. Therefore, the memory skills which need to be imparted to trainee interpreters are STM skills.

2.2 Major Characteristics of STM

Input of information: It is generally held that information enters the STM as a result of applying **attention** to the stimulus, which is about a quarter of a second according to the findings of both Sperling (1960) and Crowden (1982). However, McKay's (1973, in Radford and Govier, 1991: 382) findings do not fully support this, asserting that unattended information may enter the STM.

Capacity: As mentioned in the previous section, the capacity of STM is limited and small. Atkinson and Shiffrin (1968) propose that it is seven items of information (give or take two). Miller (1956) says it is seven "chunks." Another possibility may be that the limiting factor is not the STM's storage capacity, but its processing capacity (Gross:1990:55).

Modality: To store information in STM, it must be encoded, and there is a variety of possibilities as to how this operates. There are three main possibilities in STM: (1) **Acoustic (Phonemic) coding** is rehearsing through sub-vocal **sounds** (Conrad, 1964 and Baddeley:1966). (2) **Visual coding** is, as implied, storing information as pictures rather than sounds. This applies especially to nonverbal items, particularly if they are difficult to describe using words. In very rare cases some people may have a "photographic memory," but for the vast majority, the visual code is much less effective than this (Posner and Keele: 1967). (3) **Semantic coding** is applying meaning to information, relating it to something abstract (Baddeley:1990, Goodhead:1999)

Information Loss: There are three main theories as to why we forget from our STM: (1) **Displacement**—existing information is replaced by newly received information when the storage capacity is full (Waugh and Norman:1965) (2) **Decay**—information decays over time (Baddeley, Thompson and Buchanan, 1975). (3) **Interference**—other information present in the storage at the same time distorts the original information (Keppel and Underwood:1962).

Retrieval: There are modes of retrieval of information from STM: (1) **Serial search**—items in STM are examined one at a time until the desired information is retrieved (Sternberg:1966). (2) **Activation**—dependence on activation of the particular item reaching a critical point (Monsell:1979, Goodhead:1999).

3. Memory Training

The purpose of memory (STM) training in interpreting is to achieve a better understanding of the source language, which will lead to adequate interpreting. As Lin Yuru et al. put it, "Memory in consecutive interpreting consists of nothing more than understanding the meaning, which is conveyed by the words" (Lin et al., 1999:9). Understanding is the first step in successful interpreting; therefore, memory training is to be provided in the early stage of interpreter training. Memory functions differently in consecutive and simultaneous interpreting, because the duration of memory is longer in CI than in SI. There are different methods of training STM for CI and SI respectively. Interpreting starts with the encoding of the information from the original speaker. According to Gile's Effort Model, interpreting is an STM-centered activity; the process of interpreting could be re-postulated into:

Encoding of information from the Source Language + Storing Information + Retrieval of Information + Decoding Information into the Target language.

In Consecutive Interpreting, there is probably up to 15 minutes (depending on the speaker's segments) for the interpreter to encode and then store the information. This is the first phase of Gile's *Effort Model* for CI. In the second phase of Gile's Model, the interpreter starts to retrieve information and decode it into the target language. In SI, encoding and decoding of

information happen almost at the same time. The duration for storing the information is very limited. Therefore, in the first step of interpreting, encoding (understanding) information uttered in the SL is the key to memory training.

According to the previous description, there are three main possibilities of storing information in STM: (1) Acoustic Coding; (2) Visual Coding and (3) Semantic Coding. Visual coding may be used by interpreters in conference situations with multimedia. Notes in interpreting are to assist in such visual coding of information. But in most interpreting contexts, interpreters will depend on acoustic and semantic coding. Therefore, exercises should be designed for this purpose. The following methods are recommended:

Retelling in the Source Language: The instructor either reads or plays a recording of a text of about 200 words for the trainees to retell in the same language. The trainees should not be allowed to take any notes. In the first instance, trainees should be encouraged to retell the text in the same words of the original to the largest possible extent. The following tactics should be used by the trainees after a certain time of training on retelling: *Categorization:* Grouping items of the same properties; *Generalization:* Drawing general conclusions from particular examples or message from the provided text; *Comparison:* Noticing the differences and similarities between different things, facts and events; *Description:* Describing a scene, a shape, or size of an object, etc. Trainees are encouraged to describe, summarize, and abstract the original to a large extent in their own words in exercises (2) to (5). *Shadowing Exercise:* Which is defined as "a paced, auditory tracking task which involves the immediate vocalization of auditorily presented stimuli, i.e., word-for-word repetition in the same language, parrot-style, of a message presented through a headphone" (Lambert 1899:381). This kind of exercise is recommended for training of Simultaneous Interpreting, especially the splitting of attention skills and the short-term memory in SI.

There is another tool which is effective in memory training: *Mnemonic to Memory.* Mnemonic is a device, such as a formula or rhyme, used as an aid in remembering. Mnemonics are methods for remembering information that is otherwise quite difficult to recall. A very simple example of a mnemonic is the '30 days hath September' rhyme. The basic principle of Mnemonics is to use as many of the best functions of the human brain as possible to encode information.

The human brain has evolved to encode and interpret complex stimuli—images, color, structure, sounds, smells, tastes, touch, spatial awareness, emotion, and language—using them to make sophisticated interpretations of the environment. Human memory is made up of all these features.

Typically, however, information presented to be remembered is from one source—normally words on a page. While reading words on a page reflects one of the most important aspects of human evolution, it is only one of the many skills and resources available to the human mind. Mnemonics seek to use all of these resources. By encoding language and numbers in sophisticated, striking images which flow into other strong images, we can accurately and reliably encode both information and the structure of information to be easily recalled later (Manktelow:2003).

It is also advisable that Exercises with Interference (e.g. noises) be provided in order to prevent information loss in the Short-Term Memory, since the environment and other information present in the storage may reduce the information encoded. Recording speeches with specially 'inserted' noises as a background is a recommended classroom practice, since this is a very effective method to enable the students to concentrate and thus strengthen their STM duration.

Conclusion:

Short-Term Memory is an essential part of interpreting, but memory training has long been ignored by professional trainers. From the above analysis, we can conclude that memory skills in interpreting could be acquired by effectively designed exercises. With a well-'trained' short-term memory, interpreters are actually equipped with an effective tool for the encoding and decoding information. It is, therefore, advised that institutions of interpreter training include "memory training" in the design of their courses.

Notes:

1. Training of professional interpreters has a three-part structure: the first stage is introduction to skills specific to interpreting, for example through memory training and note-taking exercises. This is followed by intensive classroom practice. The third stage involves work experience and observation where the main focus is on task achievement.

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