

AL-FARABI KAZAKH NATIONAL UNIVERSITY
International Relations Department
Chair of Diplomatic Translation
Translation business in the field of international and legal relations
“Simultaneous Translation of Monologue and Dialogical Speech”
2022-2023 academic year fall semester

Lecture 1

Module I. Tenets of Translation Studies

Lecture 1: Introduction to the course. Basics of mental training of simultaneous interpreters

Plan of the lecture

1. Introduction
2. Different aspects of mental training of interpreters
3. Conclusion
4. References

Aspects of the lecture

1. Enhancing mental processes in simultaneous interpreting training
2. Patterns of brain activity
3. Main aspects of simultaneous interpretation
4. A large-scale study of novice interpreters

Goals of the lecture

1. Introduce main tenets of oral interpretation
2. Explain peculiarities of oral interpretation
3. Familiarize with sight translation
4. Introduce aspects of speech perception, comprehension and production processes in SI

Basic concepts

ST - source text, TT – target text, SL – source language, TL – target language, CI - consecutive interpretation, SI - simultaneous interpretation, sight translation, conference interpretation, notetaking techniques, sentence-by-sentence interpreting and etc.

The task of simultaneous interpretation is one of the most complex and demanding linguistic challenges that exist.

Interpreters are required to appropriately manage and deploy their cognitive resources in order to be able to monitor an incoming speech stream, buffer it, extract the units of meaning, convert them into a form appropriate for expression in the target language, and monitor their own output simultaneously - all of this in real time. In a bid to better understand how the process works, the task has historically been examined from various behavioral and, more specifically, psycholinguistic perspectives with the overall task broken down into component tasks so as to understand the cognitive processes involved. The attention of psycholinguists has been focused on component tasks such as auditory speech processing, phonetic disambiguation, word recognition, syntactic parsing, meaning assembly, articulatory suppression, syntactic and semantic anticipation, and many others. As it has traditionally been assumed that interpreters, especially those working in the consecutive mode, have phenomenal memory skills, interpreters' bilingual and multilingual memory processes, such as encoding, rehearsal and retrieval have been explored in an attempt to explain their superior performance. Cognitive models of the interpreting process have been developed, most notably in the 1970s and 80s, to describe the temporal flow of simultaneous interpreting, to bring structure into the complexity of the process and to identify task overlap.

Our research has built on this knowledge base and has focused on complementing this level of analysis with data that can help to illuminate the relationships between interpreting and other cognitive tasks by looking at the patterns of brain activity that underlie simultaneous interpretation. Until recently, very little was known about what the brain of a simultaneous interpreter is doing while on task. The first study to examine this was published in 2000 by a team of researchers based in Finland. J-O Rinne, J. Tommola, M. Laine, B.J. Krause, D. Schmidt, V. Kaasinen, M. Teräs, H. Sipilä, and M. Sunnari[1] employed a brain imaging technique called positron emission tomography (PET) to examine the neural bases of simultaneous interpretation. PET enables us to observe the brain's metabolic activity in vivo.

In their study, Rinne and colleagues asked eight experienced interpreters to simultaneously interpret auditorily presented speech, from both English into Finnish and Finnish into English. In order to be able to determine which brain responses were specifically due to the cognitive, multilingual components of interpreting and not just to the relatively more mechanical aspects of the task (hearing and articulating speech), they also recorded brain activity while participants simultaneously repeated speech, without converting it to a different language (shadowing).

They found that interpreting from English to Finnish (i.e. from a foreign to the native language) recruited, over and above those areas recruited by shadowing speech, a portion of the left inferior frontal gyrus involved in the retrieval and maintenance of semantic information, and in the supplementary motor area, which is involved in planning speech output. When the interpreters were asked to interpret from Finnish into English (which they would not regularly do), two additional areas were found to be involved – the left inferior temporal lobe, which is related to word-finding and semantic processing, and the cerebellum, which is a structure associated with action-pattern storage and refinement.

Follow-up questions

1. What do we mean by cognitive models of the interpreting?
2. The difference between translation and interpreting
3. Describe the research conducted for working memory and cerebral adaptations
4. Describe advantages of multilingual individuals

References

1. Rinne, J. O., Tommola, J., Laine, M., Krause, B. J., Schmidt, D., Kaasinen, V., . . . Sunnari, M. (2000). The translating brain: cerebral activation patterns during simultaneous interpreting. *Neurosci Lett*, 294(2), 85-88. doi: 10.1016/S0304-3940(00)01540-8
2. Hervais-Adelman, A., Moser-Mercer, B., Michel, C. M., & Golestani, N. (2015). fMRI of Simultaneous Interpretation Reveals the Neural Basis of Extreme Language Control. *Cereb Cortex*. doi: 10.1093/cercor/bhu158
3. Hervais-Adelman, A., Moser-Mercer, B., & Golestani, N. (2015). Brain functional plasticity associated with the emergence of expertise in extreme language control. *Neuroimage*, 114, 264-274. doi:10.1016/j.neuroimage.2015.03.072