

SIGN INTERPRETING AS A TYPE OF SIMULTANEOUS INTERPRETING

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Abstract. Sign interpreting, which involves transferring meaning between a spoken language and a signed language, represents a highly specialized form of simultaneous interpreting. Unlike spoken language interpreting, sign interpreting operates across modalities – auditory - vocal and visual – gestural - requiring unique cognitive, linguistic, and ethical competencies. This paper examines sign interpreting as a type of simultaneous interpreting by exploring its linguistic foundations, cognitive processes, strategies, challenges, and professional practices. Drawing on linguistic and interpreting studies, it highlights how simultaneity in sign interpreting presents both opportunities for immediate communication and difficulties related to cognitive load, spatial grammar, and modality constraints. The article also discusses the implications for interpreter training and professional standards.

Keywords: sign interpreting, simultaneous interpreting, modality, cognitive load, interpreter training, signed language

Interpreting is a professional activity that bridges linguistic and cultural gaps between speakers of different languages. Traditionally, interpreting has been divided into two major modes: “consecutive interpreting” and “simultaneous interpreting”. In consecutive interpreting, the interpreter waits for the speaker to finish a segment before delivering the translation. In contrast, simultaneous interpreting requires the interpreter to render the message almost at the same time as it is produced by the speaker.

“Sign language interpreting”, which involves translating between a spoken and a signed language, most often takes place in the “simultaneous mode”. This simultaneity allows Deaf and hearing participants to communicate in real time, which is especially vital in education, conferences, television broadcasting, and courtrooms.

However, unlike spoken simultaneous interpreting, sign interpreting operates between two “different modalities” - the auditory – vocal and the visual – gestural systems. This difference in modality significantly influences timing, processing, and strategies used by interpreters.

This article explores sign interpreting as a form of simultaneous interpreting, reviewing its linguistic foundations, cognitive mechanisms, techniques, and challenges, while also examining its implications for interpreter education and practice.

Sign interpreting is the process of transferring meaning from a spoken language (such as English, Uzbek, or Russian) into a signed language (such as American Sign Language - ASL, British Sign Language - BSL, or Uzbek Sign Language - UZSL), or vice versa. The purpose is not to provide a word-for-word translation but to “convey equivalent meaning” within the cultural and linguistic norms of each language.

The “simultaneous” aspect of sign interpreting refers to the interpreter’s ability to receive, process, and produce messages in real time. For example, when interpreting from spoken English to ASL, the interpreter listens to the speech and simultaneously produces the corresponding signs. The time lag - called “ear–voice span” or “lag time” - is usually 2 to 5 seconds.

Simultaneous interpreting in sign languages emerged with the professionalization of interpreting in the mid-20th century, particularly after the establishment of interpreter associations such as the “Registry of Interpreters for the Deaf (RID)” in the United States. As Deaf people gained access to education, media, and politics, simultaneous sign interpreting became the primary method for ensuring real-time accessibility (Napier, 2002).

The most striking difference between spoken and signed interpreting lies in their “modalities”. Spoken languages are “auditory–vocal”, while signed languages are “visual–gestural”. This difference affects how interpreters perceive and produce language.

In spoken simultaneous interpreting (e.g., English to French), interpreters can listen and speak at the same time because both processes occur within the auditory–vocal channel. In sign interpreting, however, interpreters must “listen with their ears” and “speak with their hands”, which involves using two different sensory–motor systems.

According to Pöchhacker (2004), modality differences influence interpreter performance, timing, and fatigue. The “visual–spatial structure” of signed languages also means that interpreters must transform spoken, linear syntax into spatially organized messages. For instance, a single sign in ASL may simultaneously express tense, subject, and verb agreement - information that is spread across multiple words in spoken English.

The modality difference thus makes simultaneous sign interpreting a “cross-modal translation process” that is cognitively demanding and requires exceptional coordination between perception and production [Napier & Leeson, 2016].

Cognitive processing in sign interpreting involves “listening (or watching)”, “comprehending”, “short-term memory storage”, “reformulating”, and “producing output” - all happening nearly simultaneously.

Gile’s (1995) “Effort Model” of simultaneous interpreting identifies four main efforts:

1. “Listening and Analysis Effort” – comprehending the source message;
2. “Production Effort” – producing the target message;
3. “Memory Effort” – storing segments temporarily;
4. “Coordination Effort” – managing all processes together.

In sign interpreting, an additional “visual management effort” must be included because interpreters must monitor both visual input (signer or speaker) and their own output.

Research by Nicodemus and Emmorey (2015) showed that interpreters experience significant “cognitive load” when switching between auditory and visual modalities. Interpreters rely on anticipation and context prediction to manage lag time effectively. For instance, while listening to a long English sentence, an interpreter predicts the upcoming structure and begins signing before the entire sentence is heard.

Such mental agility distinguishes professional interpreters from novices, highlighting the importance of practice and cognitive training in interpreter education [Napier and Leeson, 2016].

Sign interpreters employ several key strategies to maintain fluency and accuracy:

Interpreters group information into meaningful “chunks” and predict the speaker’s message using contextual clues. This reduces the cognitive burden of processing every word.

Because sign languages often express concepts more concisely than spoken languages, interpreters may “compress” information. Conversely, they sometimes “expand” concepts to explain culturally specific ideas from the spoken language [Russell, 2005].

When interpreting into a signed language, interpreters must reorganize linear spoken sentences into spatially structured signed messages. For example, “The teacher gave the student a book” may require establishing spatial references for “teacher” and “student” before producing the verb “give.”

Facial expressions and body movements convey grammatical and emotional information in sign languages. Skilled interpreters ensure that non-manual markers are synchronized with manual signs for accuracy and naturalness.

Due to physical and mental fatigue, simultaneous sign interpreting often involves “teamwork”. Interpreters alternate every 20–30 minutes to maintain concentration and prevent errors [Napier, 2002].

Sign interpreters experience high levels of “cognitive fatigue” because of the dual demands of listening and producing in different modalities. The need for constant visual attention adds additional strain.

Directionality refers to whether interpreters work into their first language (A-language) or second language (B-language). Research shows that interpreting into one’s dominant language generally results in higher accuracy [Nicodemus and Emmorey, 2015]. However, Deaf interpreters - whose first language is a signed language—often interpret from sign into spoken languages with high accuracy.

Signed languages use ****space**** grammatically - for example, to indicate subjects, objects, or verb agreement. Interpreters must quickly establish spatial references and maintain them throughout the interpretation. This requires planning and mental visualization skills.

Lighting, background color, and camera angle significantly affect visual clarity. In remote interpreting or televised contexts, poor video quality can lead to misunderstandings [Leeson, 2010].

Sign interpreters also navigate ethical challenges, such as confidentiality, neutrality, and ensuring equitable access for Deaf participants. According to RID standards, interpreters must balance accuracy with cultural sensitivity [RID, 2021].

The digital era has introduced “Video Remote Interpreting (VRI)” and “Video Relay Services (VRS)”, enabling interpreters to work remotely. These technologies became essential during the COVID-19 pandemic and continue to expand access.

However, remote interpreting introduces latency, poor image quality, and restricted visual framing, which can negatively affect comprehension (Napier et al., 2021). Interpreters must adapt by using clearer signing, adjusted pacing, and enhanced teamwork with technicians to ensure effective delivery.

Technological literacy has therefore become an essential component of interpreter training.

Training programs for sign interpreters emphasize “bilingual–bicultural competence”, “interpreting theory”, and “practicum experience”. According to Napier and Leeson (2016), successful programs combine linguistic study of signed languages, sociolinguistics, ethics, and hands-on interpreting practice.

Curricula should include:

- Practice in both directions (spoken → sign, sign → spoken);
- Simulation of real-life settings (classrooms, legal hearings, media broadcasts);
- Training in visual attention management and ergonomic techniques;
- Familiarity with interpreting technology and remote tools.

Professional accreditation (e.g., through RID or national interpreting agencies) ensures that interpreters meet standards of accuracy, ethics, and confidentiality.

Deaf interpreters - whose first language is a signed language - play a crucial role in the interpreting profession. They often work in ****relay interpreting****, collaborating with hearing interpreters to ensure accurate communication for Deaf clients who use non-standard sign varieties or have limited language proficiency.

Their presence enhances cultural and linguistic equivalence, particularly in sensitive contexts like healthcare or legal interpreting (Stone, 2009). Deaf–hearing interpreting teams are especially effective in simultaneous interpreting contexts that demand high accuracy and cultural competence.

Ethical conduct is central to interpreting practice. Interpreters must maintain confidentiality, impartiality, and professionalism. The “RID Code of Professional Conduct (2021)” emphasizes respect for consumers’ language and cultural identity.

Culturally, interpreters serve as “mediators”, not just translators. They bridge not only languages but also communication norms - such as turn-taking, politeness strategies, and eye gaze behaviors. Mismanagement of these aspects can lead to misinterpretation or offense.

As sign languages are deeply tied to Deaf culture, interpreters must approach their role with “cultural humility”, recognizing that Deaf communities are linguistic minorities with distinct values and norms.

Despite progress, more research is needed on the following areas:

- Cognitive processing: eye-tracking and neurocognitive studies can clarify how interpreters manage visual attention and memory.
- Technology adaptation: studies should test how different video qualities affect comprehension.
- Training methodologies: comparative research on interpreter education outcomes across countries.
- Ethical decision-making: exploring interpreters’ choices in high-stakes contexts like emergency broadcasts or court proceedings.

Expanding empirical data will strengthen both theoretical understanding and practical training for future interpreters.

Sign interpreting as a form of simultaneous interpreting represents a fascinating intersection of language, cognition, and technology. Its cross-modal nature distinguishes it from spoken interpreting, requiring interpreters to process auditory and visual input simultaneously, manage cognitive load, and navigate spatial grammar.

Through effective strategies, team collaboration, and continuous professional development, interpreters ensure real-time communication between Deaf and hearing communities.

As accessibility and inclusion gain global importance, the demand for skilled simultaneous sign interpreters continues to rise. Sustained investment in research, training, and ethical practice will ensure that sign interpreting remains a cornerstone of linguistic equality and human rights.

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