How do interpreting trainees manage cognitive problem triggers in simultaneous interpreting with text?

Insights from eye-tracking and retrospective interviews

The role of speech scripts in simultaneous interpreting with text (SIMTXT) has been a widely discussed topic. Some previous studies suggested that the additional written input may pose challenges for attention management and increase risk of interference; other experimental and corpus-based studies suggested that scripts can facilitate interpreting by reducing memory load and improving output quality. However, most previous research, typically conducted in strictly controlled lab settings or analysed with corpora lacking detailed metadata, has not illuminated how typical problem triggers in real-life SI might influence interpreters' interaction with the script. To address this issue, this study explores how advanced interpreting trainees engage with script in SIMTXT when faced with typical cognitive problem triggers including fast speech rates, numbers, proper names and speaker's deviations from text.

Utilizing a descriptive-explorative approach, we focused on two main questions: 1) How do problem triggers affect trainees' cognitive effort and allocation of visual attention during SIMTXT? 2) How do trainees perceive the utility of scripts during SIMTXT with typical problem triggers? Methodologically, we integrated eye movement data and retrospective interviews for both quantitative and qualitive analysis. Fifteen trainees from a Master of Conference Interpreting Program were recruited to perform English-to-Chinese SIMTXT tasks under one baseline condition and four 'problem-triggering' conditions characterized by the aforementioned four problem triggers. Bimodal stimuli are used in the tasks, including the in-situ script and the speech video extracted from the speech delivered in the real-life conference.

Major findings are summarized as follows: 1) About the cognitive effort for script processing, the conditions with numbers, proper names, or fast speech delivery elicited longer average fixation duration on the script than the baseline, which indicates greater intensity and effort for script processing, albeit not statistically significant. 2) Speaker's deviations from the script triggered the most disruptive effect on visual attention allocation, marked by a significantly decreased dwell time proportion on the script and by the increased probabilities of attention shift between the script and the speech video. Additionally, numbers also modified attentional control, resulting in a significantly higher percentage of dwell time on the script compared to the baseline. 3) Generally, most participants displayed a flexible pattern of visual attention distribution, which was adaptive to the cognitive demand associated with problem triggers. 4) Trainees held mixed perceptions about the utility of scripts. While some found working with text comforting even in the case of deviation, others perceived it as potential distractions, unless they were offered sufficient time for text preparation. Despite these inconsistent views, most deemed the script a useful visual aid for handling input containing numbers and proper

names.

Key words: simultaneous interpreting with text; problem triggers; eye-tracking; cognitive effort; visual attention allocation

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