AN ERPS STUDY ON THE PROCESSING OF GERMAN PLACEMENT VERBS BY KOREAN L2 LEARNERS OF GERMAN

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INTRODUCTION The current study investigated the processing difficulty of Korean L2 learners of German using German sentences having spatial relations. In German, a verb should be differently chosen according to the angles between the target and place ('stellen' to put upright', 'legen' to put in a lying position, and 'setzen' to put in a sitting position) (De Knop, 2016). Each representation can also be mapped onto Korean verbs, such as **sey-wu-ta** to stellen, '**nwup-hi-ta**' to legen, and '**anc-hi-ta**' to setzen. However, according to Sung (2011), the verb "**noh-ta** (to put)" is preferred in Korean to express the placement regardless of the angle of the target. Therefore, we investigated whether the difference may cause difficulty for Koreans to process the German placement expressions.

PROCEDURE The brain responses of 16 Korean L2 learners of German (male 6, mean age 25.3, mean scores of proficiency test 55.2 out of 72) were recorded while they read the visually presented experimental sentences, including six conditions (Table 1), and a semantic acceptability task was followed. LL and SS condition was dealt with as a baseline (correct conditions). In the case of 'setzen', since the verb usage is too limited, we used the LZ and SZ conditions only to compare the degree of the violation to LS or SL incongruent conditions.

Table 1. Experiment conditions and material examples

Condition	Right verb	Used verb	Examples
LL	legen	legen	Maria hört, dass Peter den Teppich auf den Boden **legt.**
LS	legen	stellen	Maria hört, dass Peter die Zeitung auf den Boden **stellt.**
LZ	legen	setzen	Maria hört, dass Peter den Pullover auf den Boden **setzt.**
SS	stellen	stellen	Thomas hört, dass Anna die Lampe auf den Boden **stellt.**
SL	stellen	legen	Thomas hört, dass Anna das Fahrrad auf den Boden **legt.**
SZ	stellen	setzen	Thomas hört, dass Anna das Glas auf den Boden **setzt.**

RESULTS In the sentence acceptability task, the accuracy of SS(82%) was lower than LL(93%). Additionally, the accuracy was lower in when LS(29%) and SL(16%) conditions compared to the LZ(34%) or SZ(36%) conditions. The RT was shorter in LL(545ms) than SS(621ms) conditions, and they(LL & SS) were shorter than correct answers to incongruent conditions (LS 989 ms, LZ 1022 ms, SL 954ms, SZ 923 ms). Interestingly, the incorrect response time of incongruent conditions, i.e. RT of "Yes" answers to LS (668 ms), LZ (713 ms), SL (604ms), SZ (830 ms) was shorter than the correct response time of them, implying that the participants hesitated to determine the incongruent conditions as being not acceptable. In ERP analysis a marginally significant N400 was revealed in the central AOI in LS and LZ conditions compared to the LL condition. However, ERPs to SL or SZ was not differed from SS condition, meaning the discrimination of Korean learners to German place verbs was not completed yet, even though their German proficiency was over the intermediate level.

CONCLUSION Our results showed that processing German sentences with placement verbs was difficult for Korean L2 learners. The reason would be considered in two ways. First, the proficiency was not high enough to discriminate the usage of German placement verbs. The second reason is that the perception of place relationship varies according to the language learners natively use. In that case, it may be hard to reshape the perception and recognition of the placement relationship even if they have learned a second language for several years.

References

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