Is explicit teaching of second languages always helpful? An artificial language study

Hiroko Yamashita (Rochester Institute of Technology) &
Franklin Chang (Kobe University of Foreign Studies)
hxygsl@rit.edu

Second languages (L2) are typically taught through explicit classroom instruction, while first languages (L1) are often learned implicitly in natural situations. There is still debate about the role of explicit and implicit learning in L2 acquisition (Klapper & Rees 2003).

To examine this issue, we used an artificial language learning task that allowed us to examine language learning under controlled conditions. We manipulated whether or not participants were given explicit teaching about the language before they were exposed to the language. Since L1 and L2 similarity can be an important factor in language learning (e.g., Lado, 1957; Yamashita, 2008) and could interact with the type of teaching (e.g., explicit teaching may be more important for languages that are different from the L1), we also varied similarity of the artificial language to the learner's L1.

Thirty-five undergraduates participated in an artificial language learning study consisting of twenty-four words (eight animate NPs, eight inanimate NPs, eight transitive verbs) and two case-markers (NOM and ACC). The design crossed L1 similarity (similar/dissimilar) and overt instruction of grammar (yes/no). The subjects were monolingual speakers of Japanese, an SOV language with case markers attached after arguments. Figure 1 shows the similar and dissimilar structures they learned.

In two sessions separated by one/two days, subjects were exposed to the language through a computer program that played audio with images. They learned words by repeatedly listening to each word with corresponding picture and repeating it, then learned a transitive sentence structure by listening to and repeating multiple spoken sentences with corresponding image on the screen (Figure 1). The implicit group received no instruction before exposures to sentences, while the explicit group saw a PowerPoint slide where they were taught about the case-markers and the position of noun and verb categories. On both days, they were tested for the mastery of vocabulary by production, comprehension by listening, and production by describing sentences that match images. All received feedback on comprehension trials from the program; feedback on vocabulary and production trials were given by the experimenter.

We created a production score which represented the similarity of the produced and target utterance (5=perfect). Mixed models were fit to this score using language type (VSO/SOV) and day (1,2). The VSO language was learned better than the SOV language (β=0.47, p=0.040) and the performance on day 2 was higher than on day 1 (β=0.68, p<0.001) (Figure 2). Furthermore, performance on day 2 was higher for VSO overall compared to SOV (β=0.38, p=0.0063). Finally, there was a three-way interaction (β=0.7, p=0.0094), where the day 2 improvement was not seen for SOV in the instructed condition.

The results show that the L1 dissimilar language (VSO) was learned equally well from pure exposure or with additional explicit instruction. The L1 similar language (SOV) was also learned well from pure exposure. But surprisingly, we found that explicit instruction appears to negatively impact the learning of the SOV language. Possible reasons for this may be that explicit instruction has caused participants to depend heavily on explicit L1 knowledge and they did not carefully learn the constraints in the language, or their L1 knowledge caused competition in lexical retrieval in the production process.

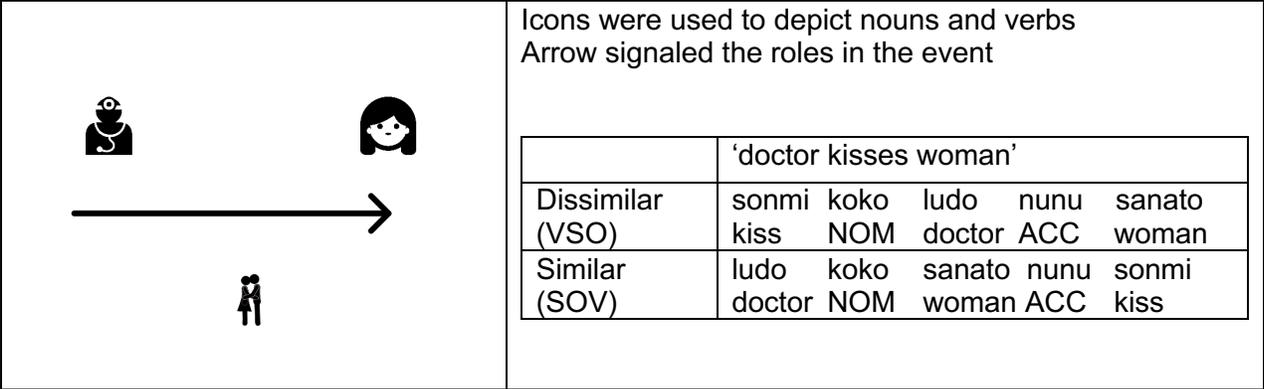|	Icons were used to depict nouns and verbs Arrow signaled the roles in the event				
		'doctor kisses woman'			
Dissimilar (VSO)	sonmi kiss	koko NOM	ludo doctor	nunu ACC	sanato woman
Similar (SOV)	ludo doctor	koko NOM	sanato woman	nunu ACC	sonmi kiss

Figure 1: Production stimulus for 'doctor kisses woman' with sentences in each language.
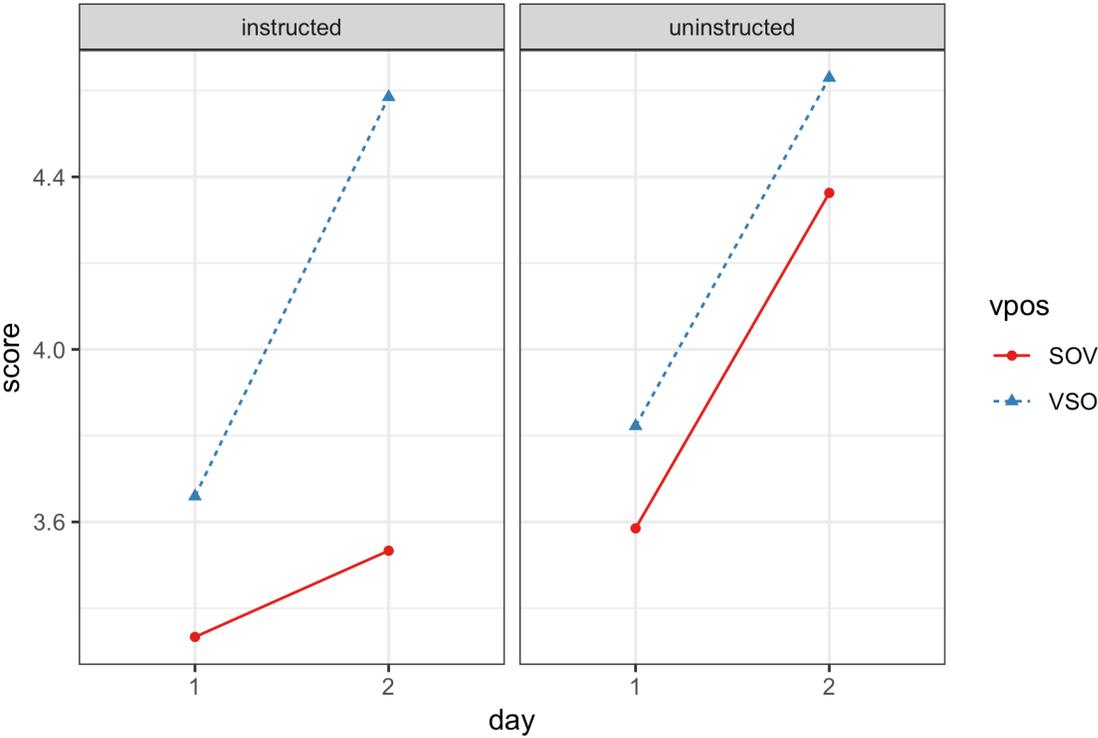

Figure 2: Production Scores for instructed and uninstructed condition for both SOV/VSO languages.

References

[1] Klapper, J., & Rees, J. (2003). Reviewing the case for explicit grammar instruction in the university foreign language learning context. *Language Teaching Research*, 7.3, 285–314.
[2] Lado, R. (1957). *Linguistics across cultures: Applied linguistics for language teachers*. University of Michigan Press: Ann Arbor.
[3] Yamashita, H. (2008). Effects of the processing strategy proximity on the comprehension of second languages. *Second Language*, 7, 43–82.