Language production practice improves comprehension performance on grammatical dependencies in early L2 learning

Whereas research in L2 acquisition has emphasized the role of comprehension practice in learning (Krashen, 2003; VanPatten, 2013), memory research has suggested that language production provides a better learning opportunity than comprehension (Hopman & MacDonald, in press; MacLeod & Bodner, 2017). We tested the hypothesis that production practice yields improved second language learning and comprehension compared to comprehension practice itself, using an artificial language learning task. The language, which described a cartoon world, consisted of 20 different words of 7 word types. Four word types (Det., Adj., Noun, Verb) contained suffixes agreeing in number and noun class (Fig. 1a). English speakers learned the language via a Comprehension, Production, or Mixed learning method (52 participants in each). All conditions had the same number of learning trials and intermixed passive spoken language exposure with an active task. Comprehension learners matched an auditory phrase with a picture, but never spoke. Production learners described pictures aloud in the artificial language, with no comprehension task. Mixed learners had both production and comprehension (matching) practice in a ratio of 1 production to 5 matching trials. Afterwards, participants were tested on speed and accuracy comprehending grammatical dependencies in spoken phrases (Fig. 1b). A contrast analysis confirmed our hypothesis: production-based learners performed best on comprehension speed and accuracy, followed by the mixed learners and then comprehension-based learners (Fig. 2). Our results are in line with other research suggesting that production practice can help improve second language learning (DeKeyser & Sokalski, 1996; Izumi, 2003; Swain & Lapkin, 1995), and contribute to the growing knowledge base about the merits of comprehension-based versus production-based L2 instruction (Shintani, Li & Ellis, 2013). Inconsistency with prior L2 critiques of production learning may be resolved by distinguishing the full sentence generation here vs. simple repetition used as "production" practice in some L2 classrooms.



Fig. 1 In the real experiment, all language input was auditory, participants never saw written language. a) Participants learn the language during passive exposure trials by seeing videos (represented here by still frames) and hearing phrases. b) example test item (correct answer left).

Fig. 2. Results of the forced choice test of suffix understanding, collapsed over grammatical dependency. Both for accuracy and reaction time a contrast analysis supports our hypothesis that the Production participants perform best, followed by the Mixed and finally the Comprehension condition (better = more accurate, shorter reaction time).



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