L2 idiom learning and L1-L2 similarity

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Abstract

Learning idiomatic language positively impacts L2 proficiency, but idiomatic expressions like *take the bait* pose difficulties to second language (L2) learners, possibly because only limited classroom time can be devoted to practicing idioms. Alternative methods providing practice through Computer Assisted Language Learning (CALL) systems have gained importance. A CALL study on German learners acquiring Dutch idioms suggested that learning L2 idioms may be affected by L1 and L2 similarity. To further investigate L2 idiom learning in relation to L1-L2 similarity, a study was conducted with L1 Arabic learners of Dutch L2. The results show that while CALL-based practice enhances L2 idiom knowledge, the degree of learning is affected by L1-L2 similarity.

Keywords: idioms, computer assisted language learning, L1-L2 similarity.

Introduction

Idiomatic expressions like *spin a yarn* pose difficulties to second language (L2) learners, while research shows that they are eager to learn idioms, that this positively impacts L2 proficiency and that idioms are essential L2 vocabulary, (Cieślicka 2006). Classroom activities can devote limited time to practicing idioms, so Computer Assisted Language Learning (CALL) systems (Türker 2016) have been proposed to practice idiomatic expressions. In a CALL study on German learners acquiring Dutch idioms (Cucchiarini, Hubers & Strik 2020) cross-language overlap (the degree to which L2 idioms correspond to L1 idioms) and idiom transparency (the degree of correspondence between the literal and the figurative meaning of an expression) had an impact on learning idioms.

Considering that idiomatic expressions are rooted in the linguistic and cultural background (Boers et al. 2004), L2 idiom learning might be affected by the specific L1-L2 combination, and, in particular, the degree of L1-L2 similarity (i.e., the linguistic distance between the L1 and the L2). Linguistic distance measures have indeed been shown to be impressive predictors of L2 proficiency scores between Indo-European L1s (Schepens, van der Slik & van Hout, 2016).

To investigate how cross-language overlap and transparency impact L2 idiom learning in relation to L1-L2 similarity, a study was conducted with L1 Arabic learners of Dutch L2 as in Cucchiarini et al. (2020) with German L2

learners. Since Arabic is less similar to Dutch than German, the current study would allow comparisons between different degrees of L1-L2 similarity. We address the following research questions:

1. To what extent does CALL-based practice contribute to L2 idiom knowledge in Arabic learners of Dutch?
2. To what extent is L2 idiom knowledge related to L1-L2 similarity and idiom properties such as transparency and cross-language overlap?

Method

A group of 14 Arabic L2 learners of Dutch (mean age 23, SD = 3.4; intermediate proficiency level, mean LexTale score 57.2, SD = 5.7) participated in this study. Their performance was compared to that of 42 comparable German L2 learners of Dutch studied in Cucchiarini et al. (2020). A pre-test post-test within subject-design was adopted. From our native benchmark database (Hubers et al. 2018, 2019) 60 idiomatic expressions were selected based on idiom properties and idiom knowledge scores, 30 expressions for intensive practice (12 presentations during practice) and 30 expressions for limited practice (2 presentations during practice). Cross-language overlap was determined by a Dutch-Arabic bilingual as in Cucchiarini et al. (2020), using the following categories: (1) Dutch idiom does not exist in Arabic (NE), (2) Dutch idiom does exist in Arabic, but in completely different words (DW), (3) Dutch idiom does exist in Arabic and has *n* content words in common (nW), and (4) Dutch idiom has a word-to-word correspondent in Arabic (AW). The subjects participated in four consecutive experimental CALL sessions in which they completed four exercise types on Dutch idioms and received instantaneous, automatic feedback from the CALL system. Through pre- and post-tests the participants' idiom knowledge (multiple-choice questions) and vocabulary knowledge (LexTale, Lemhöfer & Broersma 2012) were tested, see Cucchiarini et al. (2020) for details of the methodology.

Results

The idiom knowledge of the Arabic learners seems to improve after CALL-based training, but not as much as that of the German learners from Cucchiarini et al. (2020) (see Figure 1). To address our research questions and to statistically test the pattern found in Figure 1, we performed a logistic mixed effects regression analysis (Table 1). The performance on the multiple-choice questions (correct/incorrect) formed the dependent variable in the analysis. Five-point scalar Transparency scores were converted to a binary variable (Opaque and Transparent).

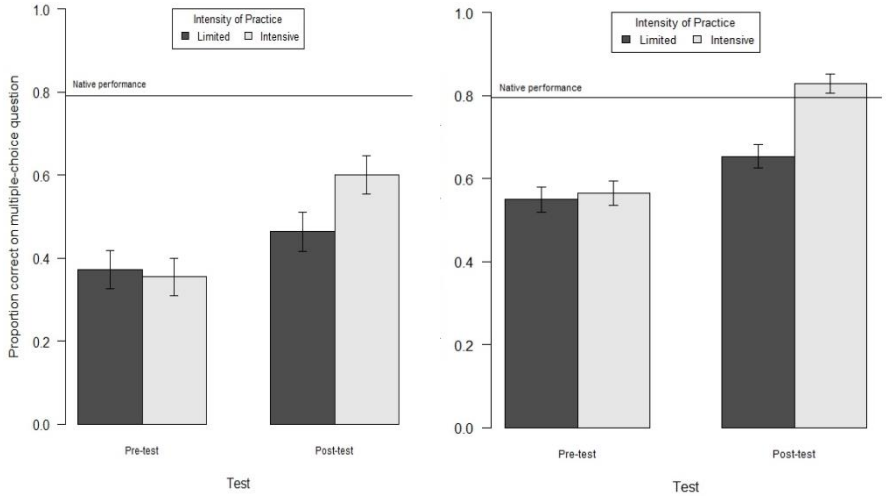

Figure 1. Mean proportion correct and SEs (pre- and post-test) for idioms with limited and intensive practice for Arabic (left panel) and German (right panel) L2 learners. Horizontal line shows mean native performance from a previous study.

Table 1. Final logistic mixed effects regression model.

Fixed effects		**Beta**	**Std. Error**	**z value**
(Intercept)		-4.3690	1.6585	-2.634 **
Pre-test vs. Post-test		-0.4898	0.1532	-3.197 **
Intensive vs. Limited practice		0.7071	0.1533	4.612 ***
Opaque vs. Transparent		0.4043	0.2059	1.964 *
Cross-language overlap DW vs. NE		0.3846	0.2597	1.481
Cross-language overlap nW vs. NE		0.0646	0.3976	0.163
Cross-language overlap AW vs. NE		-0.3291	0.6659	-0.494
LexTale score		0.0674	0.0286	2.354 *
Pre-test x Intensive		-0.7301	0.2184	-3.343 ***
Random effects		**Variance**	**Std. Deviation**	
Idiom	Intercept	0.2547	0.5047	
Participant	Intercept	0.3325	0.5767	

Fixed effects in the final model were: (1) Test (reference category: Post-test), (2) Intensity of Practice (reference category: Limited), (3) Transparency (reference category: Opaque), (4) Cross-Language overlap (reference category: NE), (6) LexTale score, and (7) Test x Intensity of Practice. Idioms and Participants (both random intercepts only) were added to the model as random effects. Other interactions did not significantly improve the model fit and were

excluded from the analysis. A significant interaction effect emerged between Test and Intensity of Practice ($p < .001$). In the pre-test no significant difference was found between the idioms with respect to Intensity of Practice (releveled version of the model: $\beta = -0.23$, $SE = 0.16$, $p = .883$), while in the post-test the Arabic L2 learners performed better on idioms that received intensive practice than on idioms that received limited practice ($p < .001$). Both at pre- and post-test the participants performed significantly better on transparent idioms than on opaque idioms ($p < .05$). While vocabulary knowledge positively affected their performance ($p < .05$), cross-language overlap did not.

Discussion and conclusions

CALL practice had a significant, positive impact on idiom learning. Cross-language overlap significantly impacted idiom learning in the German speakers (see Cucchiarini et al. 2020), but not in the Arabic speakers. For transparency an effect was observed only at post-test for the German learners (Cucchiarini et al. 2020), while for the Arabic learners the effect was already visible at pre-test. These results lead us to conclude that while CALL-based practice enhances L2 idiom knowledge, the degree of learning is affected by L1-L2 similarity.

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