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The role of explicit instruction in cross-script cognate recognition: The case of Ukrainian-speaking EAP learners☆

Rena Helms-Park [a, *], Zhanna Perhan [b]

[a] Centre for French and Linguistics, University of Toronto Scarborough, Toronto, Ontario, Canada
[b] Ontario Institute for Studies in Education (OISE), University of Toronto, Toronto, Ontario, Canada

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ABSTRACT

This study aims to determine to what extent the following 90-minute classroom interventions facilitate the acquisition of Ukrainian-English cognates: (i) explicit instruction (EI) and elaborative processing (Craik, 2002; Hulstijn, 2003) and (ii) reading texts containing a sizeable number of cognates (RC). Two intact classes of an English-for-Academic-Purposes (EAP) course at a Ukrainian university underwent EI and RC treatments respectively, while a third served as a Control group. A comparison of pre-test and two post-tests ratings of the EI group, evaluated via an adapted version of the Vocabulary Knowledge Scale (Paribakht & Wesche, 1997), a discontinuous scale charting shifts in knowledge quality, revealed significant gains in the meanings of cognates and their use in sentences. The RC group did not outperform the Control group; instead, both the RC and Control groups displayed gains in cognate meaning but without concomitant improvement in using cognates in sentences. These findings are interpreted in light of: (i) phonological and script differences (Cyrillic versus Latin) that potentially camouflage inter-lexical connections; (ii) views positing the automaticity of cognate recognition; (iii) the value of repeated encounters with orthographic forms of cognates in the L2 script, even if decontextualized; (iv) favourable test effects in lexical acquisition; and (v) pedagogical practices in Ukrainian universities.

1. Introduction

Publications on the theoretical, empirical, and pedagogical aspects of L2 vocabulary learning have abounded during the last couple of decades, displaying the converging interests of applied linguists, psycholinguists, and cognitive scientists in lexical research (e.g., Costa, Caramazza, & Sebastian-Galles, 2000; Costa, Santesteban, & Caño, 2005; Jiang, 2004; Kroll & Dijkstra, 2002; Meara, 2009; Schmitt, 2010; Wolter, 2006; Zareva, 2007). The central issue today is not whether vocabulary should be prominent in an L2 curriculum but rather whether some approaches to teaching vocabulary are more effective than others (e.g., De Groot & Van Hell, 2005; Nation, 2013). The study being presented here centers on the acquisition of cognates,

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* Corresponding author.
E-mail address: rhelms@utsc.utoronto.ca (R. Helms-Park).

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and more specifically, on how undergraduates with Ukrainian as a first language (L1) can best acquire cognates in English, their second language (L2), in an English-for-Academic-Purposes (EAP) setting.

For the purposes of this study, "cognates" or "semantically overlapping cognates" are considered to be words that overlap phonologically/orthographically and semantically. This definition, which considers phonological/orthographic and meaning overlap without examining etymology, is the one that is regularly adopted in psycholinguistic research (Carroll, 1992). Words that overlap considerably at the phonological or orthographic level but partially at the semantic one are "partially overlapping cognates" (Sunderman & Schwartz, 2008). When the semantic differences are considerable enough to potentially mislead new learners, such pairs are "deceptive cognates" (nicknamed "false friends" in the literature).

1.1. Cognate facilitation

The role of cognate facilitation in the L2 vocabulary learning process has been supported by a substantial body of empirical research. In bilinguals, cognates are learned and translated faster than non-cognates (Kroll, Van Hell, Tokowicz, & Green, 2010; Lotto & De Groot, 1998). Where there is only a partial overlap in meaning, translation is slower. Such partial overlap is illustrated by English *glass*, which has two possible Spanish "equivalents", *vidrio* and *vaso*, but only *vidrio* can represent "windowpane" and only *vaso* can represent "blood vessel" (*vaso sanguine*) (Tokowicz & Kroll, 2007). In picture naming tasks with monolingual and bilingual participants, bilinguals, unlike monolinguals, have shorter naming times for cognates than non-cognates and more pronouncedly when naming is taking place in the non-dominant language (Costa et al., 2000). Cognate facilitation has been witnessed in masked priming studies, and some findings have shown such facilitation is robust irrespective of degree of orthographic overlap between cognates (e.g., *lamp* ~ *lampara*; *clear* ~ *claro*), or direction (L1-to-L2 or L2-to-L1) (Davis et al., 2010). Furthermore, over the long term, cognates are less vulnerable to attrition than non-cognates (De Groot & Keijzer, 2000; Lotto & De Groot, 1998).

Cognate facilitation has been accounted for by models of the bilingual lexicon that have language-specific representations for non-cognates and shared representations similar to those of morphologically related words within a single lexicon (Lotto & De Groot, 1998; Sánchez-Casas & García-Albea, 2005). In short, instead of creating a new lexical entry (as is the case when a translation equivalent is created), the learner simply modifies the corresponding L1 lemma (Lotto & De Groot, 1998). An alternative view (among others) is that cognates have separate entries in the two languages, but facilitation is said to take place in dual ways. First, form overlap means that parts of the lexeme (phonological/orthographic form) are already in place. Second, there is facilitative semantic transfer. For example, in the word-association stage of lexical learning, as posited by Kroll (e.g., Kroll et al., 2010), the L2 lexeme is automatically coupled with the lemma of an L1 translation equivalent. In the case of semantically overlapping cognates, this postulated L1 "lemma-mediation" (Jiang, 2000) greatly benefits the learner since it provides a major chunk of the meaning of the word.

The theoretical framework within which this study has been conducted proposes dual entries for all L1 and L2 items, with degrees of overlap among them. Dual entries are compatible with an L2 lexical learning scenario where L2 learners (i) acquire the L2 cognate in a different context from an L1 context (Peeters, Dijkstra, & Grainger, 2013); and (ii) sometimes do not automatically recognize the resemblances between L2 and L1 cognate forms. The dual-entry view was compatible with our impression that, prior to participating in the current study, several students found Ukrainian and English to be very different.

This study investigates the mechanism via which cognate recognition takes place. The view that cognate recognition results from the *automatic* activation of immediate neighbours of a phonological form, whether in the L1 or the L2 (Carroll, 1992; Costa et al., 2005; Hall, 2002), has been confirmed by recent research using Event-Related Potentials (ERP), which are electroencephalographic measurements of electrical charges in the scalp emanating from changes in the brain's electrical activity in response to cognitive events. Midgley, Holcolm, & Granger's (2011) ERP research on English L1 and French L2, for instance, revealed bidirectional activation even when L2 proficiency was low. Within a language, for example, an auditory stimulus such as *preponderance* would also activate *preposterous*, but only until the end of the overlapping section (*prep*), as per Marslen-Wilson's Cohort Model (1989). An example of phonological activation of semantically overlapping forms would be *lamp* and *lampara* (Spanish) (Costa et al., 2005). In theory, therefore, cognates would generally require fewer encounters than would translation equivalents before their meanings were discovered.

1.2. Cognates: potential impediments to recognition

One of the main questions addressed by this study is whether cross-script cognates can be recognized through exposure. Hall (2002, p. 69) characterizes cognate recognition as automatic: "At the level of phonological and orthographic form … significant overlaps with existing forms, i.e. cognates, are automatically detected." While most laboratory-based psycholinguistic research indicates that cognates indeed have a better rate of recognizability than non-cognates, classroom-based studies indicate that cognates often go unrecognized for a variety of reasons, of which we will concentrate on those most pertinent to the current study.