

This work is licensed under a Creative Commons Attribution 4.0 International License.


Ovaj rad dostupan je za upotrebu pod međunarodnom licencom Creative Commons Attribution 4.0.



<https://doi.org/10.31820/f.37.1.1>

Jasmina Jelčić Čolakovac, Irena Bogunović

THE ROLE OF CONCEPTUAL METAPHORS AND L2 PROFICIENCY IN CROSS-LANGUAGE FACILITATION OF IDIOM COMPREHENSION

dr. sc. Jasmina Jelčić Čolakovac, Sveučilište u Rijeci, Pomorski fakultet
jasmina.jelcic@pfri.uniri.hr  *orcid.org/0000-0002-1241-1283*

dr. sc. Irena Bogunović, Sveučilište u Rijeci, Pomorski fakultet
irena.bogunovic@pfri.uniri.hr  *orcid.org/0000-0002-2956-7014*

izvorni znanstveni rad

UDK 81'243

81'373.612.2

811.163.42'373.72

811.111'373.72

rukopis primljen: 24. srpnja 2024; prihvaćen za tisak: 14. siječnja 2025.

This study investigates the role of the learners' L1 and L2 language in the formulaic transfer between the two languages in the case of metaphorical expressions which are either based on conceptual metaphors present in both languages (CM-motivated) or are culturally-specific (CS-motivated) to either L1 or L2 context. With the aim of investigating the direction and strength of L1-L2 and L2-L1 transfers respectively, a three-part instrument was used that included a learning profile survey, an English proficiency test, and the main questionnaire consisting of 19 Croatian idioms in English (L1-to-L2 items) and 19 English idioms in Croatian (L2-to-L1 items) respectively. Results showed both direction of transfer and underlying motivation (metaphor-related (CM) or culturally specific (CS) phrase origin) influence idiom comprehension in L2 context, with better comprehension recorded in the L1-to-L2 condition. In line with the dual route model, L2 proficiency was found to have a stronger effect under the L1-to-L2 condition. This suggests L2 learners were more successful in understanding L1 idioms in L2 context

with a higher rate of accuracy recorded for the CM-motivated phrases. Accordingly, lower accuracy rates were recorded for CS-motivated idioms without L1 translational equivalents, thus adding to the evidence on L2 learners' reliance on L1 conceptual systems.

Keywords: *conceptual metaphor; formulaic transfer; idioms; L2 proficiency; Croatian*

1. Introduction

Many studies to date have dealt with the issue of processing formulaic, i.e. figurative sequences both by native and non-native speakers of a given language. A number of these studies in which second language processing was under investigation looked at English idioms and how they are processed by non-native speakers of English (Bortfeld 2002; Carrol and Conklin 2014; Laufer 2000; Siyanova-Chanturia, Conklin, and Schmitt 2011). Fewer studies have looked into idiom processing in the Croatian context, by either placing emphasis on the L1 (Korajac and Stanojević 2018) or by exploring their *underlying motivation* (e.g. Broz 2015; Stanojević, Parizoska, and Stanojević 2007). The underlying motivation of idiomatic expression and figurative language in general is not a matter over which linguists agree and has been the focal point of different theories over the last few decades. One of the more prominent ones in literature is the Conventional Figurative Language Theory (CFLT) proposed by Dobrovol'skij and Elisabeth Piirainen (2005). CFLT proposes a typology of motivation that is based on the Cognitive Theory of Metaphor (Lakoff & Johnson 1980) without disregarding the historic, or etymological, origin of some expressions (Dobrovol'skij & Piirainen 2018). Idioms are thus seen as culturally embedded expressions that are, at the same time, motivated by different cognitive mechanisms.

In addition to difficulties in determining the idioms' underlying motivation, their versatile nature renders them particularly resistant to all attempts of categorization. The difficulties one encounters when researching idioms are tied to the inability to identify what differentiates them from other types of formulaic sequences, i.e. what demarcates idioms from other types of formulaic language such as collocations or phrasal verbs (Carrol, Conklin, and Gyllstad 2016). Moreover, knowledge of idioms reflects one's L2 metaphoric competence, which, in turn, is thought to be an indication of overall communicative competence in a foreign language (Littlemore and Low 2006). One of the more cited models in literature is

Bachman's (1990) model of language competence that encompasses two broader abilities, language and strategic, whereby language competence is understood through grammatical, textual, illocutionary, and sociolinguistic competences. Formulaic (or figurative) language has been referenced to within the scope of sociolinguistic competence, where it is identified as the ability to interpret cultural references and figures of speech. Littlemore and Low (2006) believe figurative language does not only support sociolinguistic competence but, rather, it is entwined with all aspects of linguistic competence. Figurative language is particularly interesting in this respect since it is "a major component of native-like communication" and it "enables a language learner to understand the thoughts, emotions and views of the speakers of the target language" (Yağiz and Izadpanah 2013: 953). Therefore, learning about idioms, "the natural decoders of customs, cultural beliefs, social conventions, and norms" (ibid.), will result in a more advanced communicative ability, which will demonstrate itself in a better understanding of L2 cultural norms (Samani and Hashemian 2012). This is to say, L2 learners with a highly developed metaphoric competence are more likely to exhibit higher L2 language ability, i.e. language proficiency in general. Idioms present a way of perceiving a learner's proficiency because they are seen as "most centrally involved in the process of composition at clause level, therefore potentially indicators of learners' acquisition" (Howarth 1998: 24).

The idea at the center of this research is that figurative competence fosters language proficiency; without the inclusion of figurative units and strategies for their effective retention into FLT curricula, we cannot hope to shape effective language learners who are able to apply their learning strategies in other learning contexts. The study aims to add to the understanding of learner's proficiency in L2, underlying motivation, and the learner's L1 role in L2 figurative language comprehension by exploring what Carrol, Conklin, and Gyllstad (2016) label *formulaic transfer* (transfer of knowledge of figurative meanings from one language into another). This paper first surveys the theoretical background on figurative language research in L2 context from the perspective of language proficiency, metaphor, and semantic transfer. It then presents the research framework of the current study, which tested the nature of semantic transfer between Croatian (L1) and English (L2) in the context of metaphorically motivated (CM) language based on conceptual metaphors and culturally specific (CS) idiomatic expressions. The data obtained through statistical analyses of the

collected responses are presented in the Results section. Finally, a conclusion is provided emphasizing the study's main contribution as well as its implications for further research.

2. Theoretical background

2.1. Idiom comprehension in L2 context

Many theoretical models have been proposed for idiom processing and comprehension in L1 context that offered contradictory views on idiom *compositionality* (a property of idiomatic expressions that refers to the degree to which the meaning of the entire phrase can be inferred from the meaning of individual phrasal constituents). While some theories view idioms from the noncompositional perspective, i.e. their meanings are retrieved as a whole (e.g. the *Lexical Representation Hypothesis* (Swinney and Cutler 1979); the *Direct Access Model* (Gibbs 1994)), others (e.g. the *Idiom Decomposition Model* (Gibbs, Nayak, and Cutting 1989), the *Configuration Model* (Cacciari and Tabossi 1988), the *Constraint-Based Model* (Libben and Titone 2008)) approached idiom processing from the compositional perspective, i.e. individual phrasal constituents are analyzed separately on both literal and figurative levels of meaning. Idiom processing and comprehension has also been theorized in the L2 context, but to a considerably lesser extent. Abel's (2003) *Model of Dual Idiom Representation* focuses on the role of idiom decomposability and familiarity, with the degree of decomposability and idiom frequency determining its lexical representation. In cases where no idiom entries exist, conceptual representations are accessed during comprehension. Lontas' (2002) *Idiom Diffusion Model of Second Languages* presupposes idiom comprehension is carried out in two separate stages; in the initial, *prediction phase*, learners use the idiom's lexical constituents in a context-free scenario in order to derive the meaning; in the second, *confirmation or replacement, reconstructive phase*, the meaning is derived with the help of the provided context by gradually eliminating multiple possible interpretations. In the same vein, another study by Cieśllicka (2006) yielded results in favor of the compositional approach to idiom processing and comprehension. The data of her cross-modal priming study on Polish students of English led to the formation of the *Literal Salience Assumption*, according to which, in L2 idiom comprehension, literal interpretation is always given priority over figurative one, "even if these idioms are embedded in a rich figurative context and if their figurative

interpretation is well known to L2 learners” (Cieślicka 2006: 116). It seems that, in the case of figurative language in the bilingual context, literal meanings are just as relevant to L2 learners as figurative meanings are. Not only are literal interpretations accessed more quickly, but they are also prioritized in biased contexts (Siyanova-Chanturia, Conklin, and Schmitt 2011).

The recent development in compositional theories stressed the importance of L1 in figurative language comprehension and processing. This is to say, investigations into L2 idiom processing should not proceed without taking into account the influence of speakers’ first language (L1) since “L1 has considerable influence on how L2 metaphorical expressions are processed... even at higher levels of proficiency” (Türker 2016: 25). Moreover, the influence of L1 needs to be accounted for before any theoretical models of figurative processing in L2 contexts are proposed. Research has shown that L1 conceptual knowledge, which can be defined as “non-linguistic knowledge involving perceptual, inferential and subjective experience” (Türker 2016: 27), can be accessed in learning L2 figurative language and that learners “can benefit from measured comparisons... to the commonalities of the conceptual systems” (Buckingham 2006: 41). Earlier studies also found that learners are more likely to correctly interpret idioms that are frequently used in everyday speech and have a simple structure (Irujo 1986), and which are more transparent, i.e., whose literal and figurative interpretations are seen as close together (Gibbs 1994; Hubers, Cucchiaroni, and Strik 2020; Jelčić 2014). Cooper (1999) aimed to explore the extent to which L1 idiom comprehension models could be applied to L2 contexts. He conducted a study on 18 non-native speakers of English with different L1 backgrounds (Russian, Japanese, Spanish, etc.). The results were then analyzed in order to discern which strategies were most frequently employed by the participants in their attempt to understand the idiomatic meaning. The most successful strategies that led to correct interpretations were guessing from context, using the literal meaning of the idiom, and using background knowledge. Liontas (2002: 168-) also found that context had a major effect on the participants’ success in idiom comprehension. In his study involving adult third-year learners of Spanish, French, and German he found that translation (37.67%) was by far the most frequently used strategy in idiom comprehension in context-free scenarios, whereas translation and guessing decreased proportionally as the amount of provided context increased. It might be concluded that, in comparison to native

speakers' comprehension of idioms, non-native speakers are more prone to employing a variety of strategies in order to retrieve the correct interpretation of the target item (Pavičić Takač and Umiljanović 2008). Native speakers are not required to do so because their proficiency in language is far more advanced, meaning that less thought process is involved even when dealing with novel expressions. Cooper (1999) believes a heuristic approach best describes the trial-and-error approach taken by the participants in his study and concludes that models of L1 idiom comprehension, such as idiom-list hypothesis, the lexical representation hypothesis, the direct access model, and the composition model, are "too limited in scope to account for the variety of strategies employed by the participants" (Cooper 1999: 255). On the other hand, Howarth (1998) recognizes L1 transfer as a strategy employed by L2 learners in L2 figurative language. In his study of collocations in L2 context, he differentiates between five different strategies employed by L2 learners when faced with figurative language: avoidance, experimentation, transfer, analogy, and repetition. Transfer as a strategy refers to those instances in which the L2 learner makes use of their L1 in order to comprehend or produce the target item in L2. Analogy constitutes another strategy, which encompasses transfer, albeit within L2, where one collocational element is replaced by another. This is perhaps more evident in collocations, such as *start a family*, unlike idioms, which demonstrate a far more fixed structure and allow little substitution to take place.

A number of studies have investigated the relationship between L2 figurative language competence and learner's general proficiency in L2. A consensus seems to exist that there is a positive correlation between figurative language competence and language proficiency. When faced with a figurative phrase, Matlock and Heredia (2002) claim L2 speakers will first attempt to find a literal translation in L1, access its literal meaning in the attempt to understand it, and then access the phrase's figurative meaning if one exists in their mental lexicon. In their study on monolinguals and bilinguals of different L1 backgrounds, they found corroborative results in favor of bilinguals relying on the literal interpretations of figurative expressions. This is particularly true in the case of late bilinguals (even with high proficiency in L2) while early bilinguals seem to process figurative language in a similar fashion as monolinguals do (Matlock and Heredia 2002). Other studies have explored additional factors that might influence the L2 learner's ability to differentiate between literal and figurative use. Jiménez Muñoz and Lahuerta Martínez (2022) collected data on language level and

informal learning opportunities, such as pastimes and activities carried out in L2, which might influence the learners' overall comprehension of L2 figurative language. Their study on Spanish L1 students of ESP (Business, Chemistry and Geography) pointed to a significant progress in figurative awareness as the competence in L2 increases. The participants in the study, who, through self-report, placed themselves at higher proficiency levels, showed greater sensitivity to context and were more successful in identifying figurative and literal interpretations. In other words, it would seem that "once L2 learners have reached a reasonable and acceptable level of L2 proficiency ... they are able to understand metaphorical and metonymic language" and that "students below B2 may have greater difficulty in discerning the difference between figurative and literal expressions in a tertiary-education context" (Jiménez Muñoz and Lahuerta Martínez 2022: 200-201). However, research suggests figurative competence can be facilitated even in less proficient L2 learners through explicit instruction. Chen (2019) looked at effects of proficiency levels on performance on a sentence-judgment task pre- and post-instruction. The study revealed a positive effect of explicit instruction in metaphoric awareness on the post-test scores in comparison to pre-test results irrespective of the participants' proficiency levels. However, higher-proficiency learners outperformed the lower-proficiency learners under post-test conditions, indicating an existing struggle with more abstract conceptual mappings in students at low and intermediate levels of proficiency.

2.2. Conceptual metaphors and transfer

Despite the lack of consensus on L1 and L2 idiom processing, observable similarities seem to exist between L1 and L2 contexts on the conceptual level. Bortfeld (2002: 292) draws from her results the following conclusion: "Given the striking similarities between native and non-native speakers' images ... these findings indicate that specific conceptual structures underlie at least some subset of languages' idiomatic phrases." In other words, it seems that similarities in idiom processing between L1 and L2 speakers of English can be, at least in part, explained by the existence of what Bortfeld (2002) labels "specific conceptual structures" and what are more commonly known as *conceptual metaphors* (CMs). First introduced by Lakoff and Johnson in their seminal work *Metaphors We Live By* (1980), conceptual metaphors have since then been explored from various research perspectives, including their potential application in foreign language instruction.

In other words, learners whose L1 is similar to their L2 might be more prone to draw connections between the two languages. If the two languages share a conceptual metaphor, but differ in specific linguistic instantiations of that metaphor, “ontological mappings may help learners to build up conceptual links between the distinct linguistic expressions of the two languages” (Chen 2019: 3). In case of non-shared metaphors, epistemic mappings will assist the learner to tie their knowledge of the familiar domain to the unfamiliar one. The categorization of metaphoric mappings into ontological and epistemic was first introduced by Lakoff and Kövecses (1987) and then further developed into *metaphoric mapping instruction* (MMI) by Kövecses (2001), who theorized about CMs’ potential applications in the field of foreign language teaching. However, it remains unclear the extent to which conceptual metaphors can aid the comprehension of culturally-motivated, i.e. oligosemic expressions, since the line between what is cultural knowledge in a language and what is not is often blurred (Stanojević, Parizoska, and Stanojević 2007). Thus the term underlying motivation refers to the twofold nature of idioms and regards them as expressions that are motivated by cognitive mechanisms such as conceptual metaphors, but at the same time indistinguishable from the culture from which they originated (Dobrovol’skij and Elisabeth Piirainen 2005). Depending on their individual characteristics such as phrase transparency and degree of compositionality (the degree to which the meaning of the phrase can be deduced from the meanings of phrasal constituents), some idioms will be categorized as motivated by an underlying conceptual metaphor and others as culturally-motivated.

Many studies have since tested the theory from the FLT approach and a consensus seems to be that learners with raised metaphoric awareness tend to understand idioms better than those without it, irrespective of their L1 (Boers’ (2000b) experiments involved Dutch L1 participants; Beréndi, Csábi, and Kövecses (2008) investigated the effect of CMs on Hungarian learners of English; Geld, Tadić, and Stanojević (2014) explored the role of conceptual metaphors in teaching L2 vocabulary to sighted and blind Croatian learners, etc.). However, it seems the facilitative effect of CMs also depends on individual learners’ profiles as well as the L2 context they are introduced to (for example, Jiménez Muñoz and Lahuerta Martínez (2022) found Business students benefited from metaphoric instruction more than Chemistry or Geography students, which they attributed to higher L2 proficiency of the Business group). In another

er study by Boers' (2000b) the issue of L1 in metaphoric instruction is investigated by testing Dutch learners of English on their retention of idioms. The case of one idiom used in that study (*add fuel to the fire*) showed L1 transfer not only facilitates the learning process between languages that are seemingly alike (in this case English and Dutch), but it can sometimes lead to incorrect translations as well (several participants responded with *add oil to the fire* instead of *add fuel to the fire*). It could be that the learners resorted to what Cooper (1999) identifies as an L1 idiom strategy of learning (relying on L1 equivalents to retrieve the meaning of an L2 item). Vasiljevic (2011) also investigated L1 transfer in idiom comprehension among Japanese learners of English and concluded metaphoric instruction to be more effective when CMs are presented and explained in the learners' L1. Boers (2000a), on the other hand, experimented with enhanced metaphoric awareness in an ESP context with French students of Economics by choosing idioms that did not have equivalents in the students' L1 and obtained results indicative of CM facilitation in ESP idiom comprehension. Türker (2016) studied the comprehension of emotion metaphors among advanced English learners of Korean in both context and context-free conditions. Her data corroborated previous findings in favor of the influence of L1's conceptual knowledge on the comprehension of L2 figurative language. The participants found the expressions with L1-L2 similarities to be easier to process in the context-free condition than the Korean expressions whose equivalents in English do not exist. This is to suggest that, when they are denied context as a reference, learners will "pay more attention to linguistic form" and "access their L1 conceptual knowledge" (Türker 2016: 41). In another study by Carrol, Conklin, and Gyllstad (2016), advanced learners of English were presented with three types of idioms - L2-only idioms, translations of L1-only idioms, and congruent idioms of the same form in both languages - in order to investigate the influence of L1 as well as learner's competence in understanding L2 figurative language. The results of their eye-tracking study pinpointed previous findings; idioms familiar in the L1 context were understood more readily in the L2, whereas in the case of L2-only idioms the experience in the L2 context exhibited a clear facilitatory effect. The authors concluded idioms often cross the language barrier, "likely because of the universal conceptual metaphors that underpin them in many cases, but also due to linguistic and geographical proximity and interaction" (Carrol, Conklin, and Gyllstad 2016).

3. Method

The goal of the present study is to discern the role of the learners' L1 and L2 language in the formulaic transfer between the two languages when it comes to metaphorical expressions which are either based on conceptual metaphors present in both languages (CM-motivated) or are culturally-specific (CS-motivated) to either L1 or L2 context. The study was conducted in the effort to provide answers to the following research questions:

RQ1: In what ways does L2 proficiency relate to the direction of transfer observed between Croatian (L1) and English (L2) with respect to the underlying motivation (CM or CS) of idiomatic expressions? RQ2: Is transfer stronger in the case of metaphorically motivated (CM) language than in the case of culturally specific (CS) language?

3.1. Participants

The main study involved 95 undergraduate-level students (mean age 20.01; range 19–23) enrolled at the Faculty of Maritime Studies, University of Rijeka, who studied English as a foreign language as part of their curricula. Over half of the participants were first-year students ($n = 48$) whereas 25 participants were in their second year, and 22 participants were in their third year of study at the time of testing. The study involved 67 male students and 28 female undergraduate students. The language learning survey revealed the majority of the participants acquired their L1 either in school (53,7%), or family (13,7%), or both (21,1%) by means of books (25,3%), internet sources (20,0%), or newspapers and magazines (16,8%). 31,6% of participants listed English under “other languages you speak”, followed by English and Italian (27,4%), and English and German (12,6%). Similar response distribution was recorded for the “other languages you read or write” category where English was again the prevalent answer (47,4%), followed by English and Italian (17,9%) and English and German (11,6%). As for their L2 language learning background, the majority of the participants declared they have been studying English for either 12 (20,0%), 13 (27,4%), or 15 years (22,1%). 52,6% participants said understanding English is “never difficult” whereas 45,3% of them stated it was “sometimes difficult”. Similar responses were obtained for reading in English where 67,4% found it “never difficult” and 31,6% found it “sometimes difficult”. As for speaking and writing in English, the majority opted for the “sometimes difficult” response (55,8% and 60,0% respectively), followed by “never difficult”

(40,0% and 35,8% respectively). The majority of the participants expressed they listened (75,8%) and read (65,3%) material in English “very frequently”, however, only 22,1% spoke it with the same frequency (most participants responded they “sometimes” spoke English in their daily routines, 56,8%). Only 30,5% of the participants replied they write in English very frequently; most of them sometimes write in English (49,5%).

3.2. Procedure

Nineteen English (L2) idioms were preselected for inclusion in the instrument which have previously been found unfamiliar to the heterogeneous sample of university students (this was conducted to exclude prior knowledge as an extraneous variable) (see Table 1). Out of 19 L2 idioms, 10 were based on shared conceptual metaphors ANGER IS FIRE and ANGER IS A HEATED FLUID IN A CONTAINER and nine idioms were selected from maritime and baseball, two cultural domains which have proven most productive in terms of idiomatic expressions found in contemporary English language (Boers 2003; Jelčić Čolakovac 2020). English-Croatian dictionaries of idioms were used to find equivalent Croatian (L1) expressions for the 19 L2 idioms. In the case of culturally-specific English expressions, Croatian idioms with equivalent or similar meaning were employed.

Table 1. A comprehensive list of L2 idioms included in the study (N = 19).

CM		CS	
ANGER IS FIRE	ANGER IS A HEATED FLUID IN A CONTAINER	MARITIME	BASEBALL
blow off steam	blow your stack	batten down the hatches	have to strikes against you
add fuel to the fire	hit the ceiling	stay on an even keel	go to bat
fan the flames	have kittens	sail under false colors	throw a curve
take the heat	blow your top	be on beam ends	step up to the plate
get hot under the collar	burst a blood vessel		be off base

In the testing, the 19 L2 items were presented in Croatian and their L1 equivalent expressions in English in order to determine the nature of formulaic transfer. L1 idioms were presented in L2 sentential context as literal translations (see (1)), and vice versa, the literal translations of L2 idioms were presented in L1 sentential context (see (2)). For example, Croatian idiom *ispuhati ventile* ('do something to feel release') appeared as a literal translation in L2, and English idiom of the same meaning (*blow off steam*) appeared as a literal translation in the learners' L1. Literal translations are an established method for collecting data on cross-linguistic influence (e.g. Carrol, Conklin, and Gyllstad 2016; Irujo 1986; Laufer 2000) since they support form activation, i.e. recognition of specific word combinations, in both source and target languages.

(1) English

Playing team sports is a good way to release your valves.

'Playing team sports is a good way to let off steam'.

(2) Croatian

Ispuhujete-li paru, imate dvostruko veću

blow-PRS-2PL steam-ACC have-PRS-2PL double big

you blow steam you have double big

opasnost za moždani udar nego oni

danger-ACC for brain stroke-ACC than 3PL-they

danger for brain stroke than they

koji se obuzdavaju.

who REFL-3PL 3PL-restrain-PRS.

who them restrain.

'If you let off steam, you are in double danger of having a brain stroke than those who restrain themselves.'

A written instruction as well as an example of a solved item was provided in the participants' L1 (Croatian) to ensure their understanding of the task. The written instruction was read aloud by the person implementing the experiment making sure the participants understood the assignment: explanations of the underlined expressions in bold, and not translations were required of them; explanations should be provided in their L1 (Croatian); L1 translations for less frequently used vocabulary

items will be provided in parentheses. Two versions of the instrument were administered that differed only in the ordering of questionnaire items so as to minimize the effect of fatigue upon the results. Data collection took place at the Faculty of Maritime Studies in Rijeka during regular class hours. The participants were given all the time they required to complete all three sections of the instrument in paper-and-pencil format (most participants took around 40 minutes to complete all the required sections). The participation was kept anonymous by asking participants to provide codes that would allow for data matching in the later stage of the study.

The participants' interpretations of the expressions included in the testing were categorized as either 'null' (no response provided), 'correct' (matching or close to target idiom definition), or 'incorrect' (partial target idiom definition or far removed from target idiom definition). The subjective perspective of one rater was avoided by employing an additional rater to provide two independent data categorization sets which were subsequently analyzed for percentage of agreement. Cohen's κ was run to determine if there was agreement between the raters' judgement on whether the participants interpreted the expressions correctly. There was good agreement between the raters' judgements, $\kappa = .635$ (95% CI, .282 to .932), $p < .0005$.

A pilot study preceded the main research in order to test the validity of the instrument on a heterogeneous population of students ($N = 40$). In order to provide additional support to the methodological design, the instrument's internal consistency of items was further tested using a Cronbach Alpha. A high Cronbach Alpha ($\alpha = .92$) confirmed all the items from the pilot study contributed to the overall assessment of formulaic transfer to a similar degree, meaning no items needed to be omitted from the testing.

The instrument used in the main study comprised a three-part structure: learning profile survey on L1 and L2 skills, general English proficiency test (the *Oxford Placement Test*), and the main questionnaire consisting of 19 Croatian idioms in English (L1-to-L2 items) and 19 English idioms in Croatian (L2-to-L1 items) respectively. The purpose of the learning profile survey was to gain some basic insight into the participants' language learning sources and activities as well as other languages they speak and write. The participants were also requested to describe their ability in L2 according to how well they understand, speak, read, and write in English. The English proficiency test results served as a tool for participants' categorization according to their general ability in English on the *Common European Framework of Reference* (CEFR) scale (Council of Europe 2001). The main questionnaire

comprised 38 items in total all of which were represented in sentential context followed by a brief glossary in cases where such was deemed necessary in order to deter the potential interference of prior knowledge with the results. For example, the participants will not perform poorly on the *batten down the hatches* idiom simply because they are unaware of the meaning of the nominal constituent ‘hatches’. The items were preceded by specific instructions and an example of an item with a corresponding response in order to discourage one-to-one translations in the case of L1-to-L2 items. To ensure ethical standards of research are upheld and maintained throughout the course of the study, all the pilot and main study participants were fully informed on the nature of the study and were requested to sign an informed consent form in order to ensure voluntary participation.

4. The study results

We now present results on the participants’ language proficiency, direction of transfer and underlying motivation. Frequencies for all measured variables (underlying motivation, CM and CS; direction of transfer, L1-to-L2 and L2-to-L1) can be found in Table 2.

Table 2. *Descriptive analysis for the frequencies recorded across the measured variables (underlying motivation, CM and CS; direction of transfer, L1-to-L2 and L2-to-L1) (N = 95).*

	Range	Min	Max	Sum	Mean	Std. Deviation	Variance	Kurtosis	
								Statistic	Std. Error
TOTAL CM	19	0	19	1141	12.01	3.63	13.16	.76	.49
TOTAL L1_L2	18	0	18	1035	10.89	3.95	15.63	.41	.49
TOTAL L2_L1	14	0	14	748	7.87	3.07	9.43	.73	.49
TOTAL CS	13	0	13	642	6.76	3.23	10.42	-.49	.49
TOTAL CM L1_L2	10	0	10	636	6.69	2.22	4.94	.79	.49
TOTAL CM L2_L1	9	0	9	505	5.32	2.11	4.43	.42	.49
TOTAL CS L1_L2	8	0	8	399	4.20	2.19	4.78	-.57	.49
TOTAL CS L2_L1	5	0	5	243	2.56	1.44	2.08	-.68	.49

Language proficiency

Frequency analysis performed on the total number of proficiency tests collected revealed the distribution of the study participants across the six CEFR levels of language proficiency (Figure 1) which can be grouped under three broader categories as follows: Basic User (Elementary A1 and Pre-intermediate A2), Independent User (B1 Intermediate and B2 Upper-intermediate), and Proficient User (C1 Advanced and C2 Proficient). The data indicated over 70% of our participants were independent or proficient users of English (32,6% were categorized as B2-level users and 37,9% as C1-level users). Eta square was calculated as a measure of association between the participants' proficiency in English and direction of transfer. The coefficient of determination calculated for L1-to-L2 transfer demonstrated a moderately strengthened relationship between levels of proficiency and direction of transfer ($r^2 = .36$) whereas the relationship was weaker in strength for L2-to-L1 direction of transfer ($r^2 = .21$).

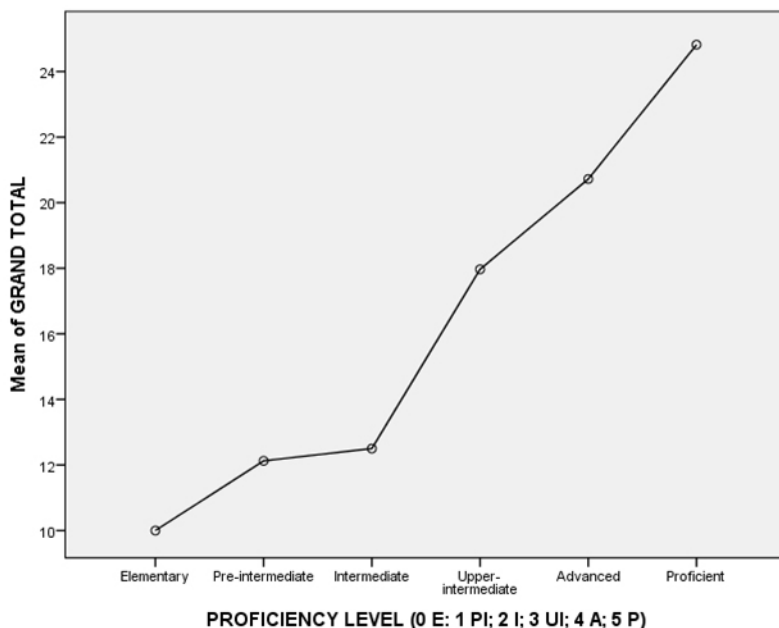


Figure 1. Sample ($N=95$) distribution across CEFR levels of language proficiency.

A moderate strength of relationship was also observed for CM-motivated items ($r^2 = .31$) whereas a weak relationship was observed between proficiency level and CS-motivated items ($r^2 = .29$) (Figure 2).

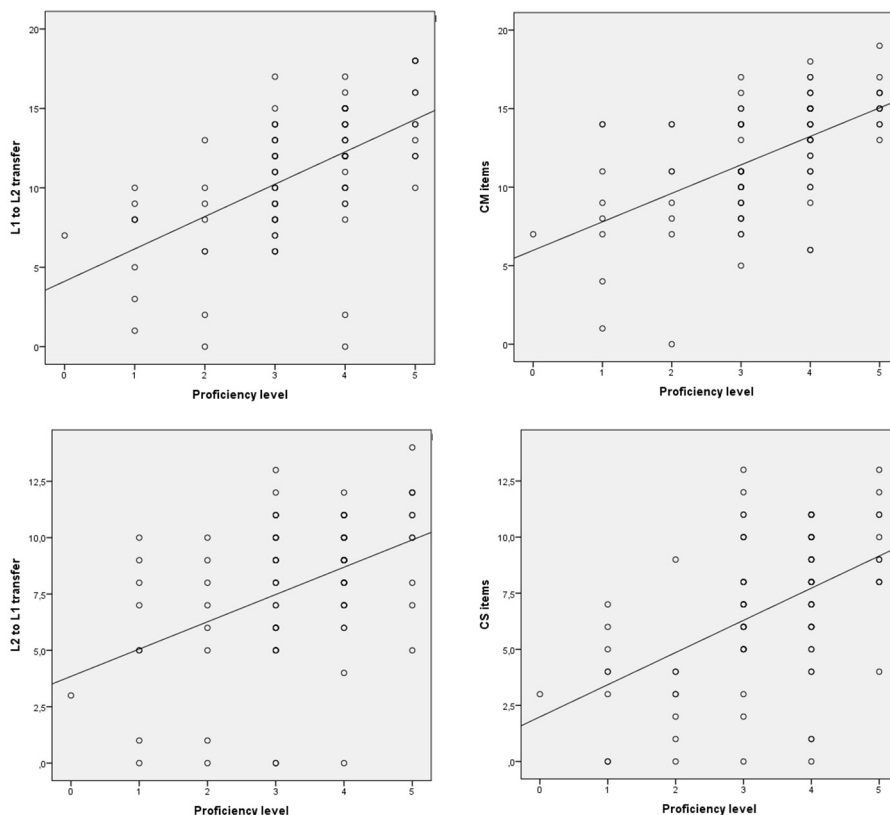


Figure 2. Scatter plots showing the relationship between proficiency levels (A1 to C2) and direction of transfer (L1 to L2 and L2 to L1) and underlying motivation (CM and CS items).

Direction of transfer and underlying motivation

Analysis of the correct responses and their corresponding frequencies revealed the participants were more successful in their attempts to interpret CM-motivated items than they were in the case of CS-motivated items. They were equally more successful in providing their responses in the case

of Croatian idioms in English, i.e. L1-to-L2 transfer, than was the case with English idioms in Croatian, i.e. L2-to-L1 transfer (Table 2). An ANOVA statistical test was performed on the data in order to determine whether there was a significant effect of one or both factors investigated in the study, i.e. direction of transfer and underlying motivation. There was a significant effect of the direction of transfer on the number of correct idiom interpretations observed at the $p < .05$ level [$F(1) = 5.69, p = .023$]. Statistically significant differences were also observed for underlying motivation [$F(1) = 11.23, p = .002$], however, there was no statistical significance obtained for the interaction between the two factors [$F(1) = .11, p = .74$].

5. Discussion

The data showed around 35% of correct responses recorded in the L1-to-L2 category were influenced by proficiency level ($r^2 = .36$) and only around 21% of L2-to-L1 correct responses showed a connection to the participants' levels of proficiency ($r^2 = .21$). Our results on the influence of learners' L2 proficiency on their comprehension of L2 idioms are thus in line with the data obtained in previous studies (Irujo 1986; Matlock and Heredia 2002). Having investigated formulaic transfer from the bidirectional perspective, we can now add to the conclusions from earlier studies by expanding on the idea that the higher the L2 proficiency, the better the comprehension of L2 figurative language is achieved. As expected, the role of L2 proficiency played a lesser role in the L2-to-L1 scenario whereas it only exhibited a moderate effect on the comprehension of idioms in the L1-to-L2 scenario. Furthermore, more proficient L2 learners outperformed the less proficient learners under both L1-to-L2 and L2-to-L1 conditions, suggesting higher proficiency leads to higher awareness of sentential context and greater ability to differentiate between literal and figurative uses (in line with Jiménez Muñoz and Lahuerta Martínez's (2022) study). Also, our data does not seem to support the popular belief that the role of L1 in figurative language comprehension tends to diminish as L2 proficiency increases (e.g. Blum and Levenston 1978; Giacobbe 1992; Kellerman 1977, 1978). The stronger effect of proficiency in the case of L1-to-L2 idioms suggests that L1 influences L2 learners' comprehension even at higher proficiency levels (cf. Jiang 2004; Türker 2016).

In the case of underlying motivation, around 31% of CM expressions were influenced by proficiency level as opposed to 29% of CS idioms. This

suggests general proficiency in English expectedly yielded more support in the case of idioms based on metaphors present in both languages, which is in line with previous studies on the facilitatory effect of both idiom congruence and language proficiency in idiom comprehension (e.g. Charteris-Black 2002; Yamashita and Jiang 2010). On the other hand, proficiency provided less support when learners were presented with culturally specific idioms without L1 equivalents. Culturally specific idioms fall under the category of non-congruent expressions (whose equivalents do not exist in L1). Such vocabulary proved most challenging to process in other studies on idioms as well adding to the body of proof in favor of L2 learners' tendency to rely on L1 conceptual systems (Kecskes 2000). The interaction between underlying motivation (CM or CS) and direction of transfer yielded no statistical significance suggesting that both the idioms based on shared metaphors and those culturally-specific were interpreted with the same amount of difficulty in either of the two (L1-to-L2 or L2-to-L1) scenarios. Moreover, we might have obtained lower scores for CS idioms not only because culturally specific items do not lend themselves to CM categorization, but also because L1 equivalents are non-existent in the learners' first language. It might be argued that learners require alternative approaches to learning vocabulary, a need which is even more evident with culture-specific items that are related to sources not as productive or evident in the learners' L1 (e.g., baseball phrases in Croatian). In this way, learners are denied two of the strategies, which are most frequently employed by non-native speakers, L1 transfer and using the literal meaning of the idiom (Cooper 1999).

There was a statistically relevant difference observed when direction of transfer was concerned. Learners were more accurate in grasping the meaning of Croatian idioms in English (e.g. **have a yellow minute* for the Croatian idiom *imati žutu minutu* 'to experience one's sudden change in demeanor') suggesting that formulaic transfer was stronger in the L1-to-L2 than it was in the L2-to-L1 direction. Learners therefore appear to rely on their native language conceptual systems when interpreting idioms in a foreign language. This might be the case because the learner's L1 conceptual systems are expectedly far more advanced than their L2 systems irrespective of individual levels of L2 proficiency. Likewise, this result indicates that learners may find it easier to apply existing L1 conceptual representations onto novel L2 expressions than to create entirely new conceptual representations for L2 idioms. The same result observed on Chinese learners of English in Carrol and Conklin's (2014) study was interpreted as evidence in favor of

the dual route model of formulaic language processing that presupposes novel meanings are accessed via computation and figurative meanings are accessed either by computation or direct access, which, in the case of idioms, allows access to both lexical constituents and figurative meaning (Wray and Perkins 2000). In other words, L2 learners respond to idioms translated from L1 more readily because they are already familiar with the phrase. Our participants thus translated Croatian idioms presented in English back to their L1, which, in turn, activated a known L1 lexical configuration.

6. Conclusion

The present study aimed to identify the role of conceptual metaphors and L2 proficiency in L1-to-L2 and L2-to-L1 facilitation of both metaphor-related (CM) and culturally-specific (CS) idioms. We looked at the direction of formulaic transfer between Croatian (L1) and English (L2) and whether observable differences existed with respect to underlying motivation of idiomatic expressions. Our results showed CM items were interpreted better than CS items and both CM and CS items were understood more readily in the L1-to-L2 scenario. Statistically significant effects were therefore observed for both direction of transfer and underlying motivation, while no statistical significance was observed for the interaction of these two variables. As for L2 proficiency, it proved to exert greater influence in the L1-to-L2 scenario than in the L2-to-L1 context, which is in line with the dual route model that suggests L2 learners respond to idioms translated from L1 more readily because they are already familiar with the phrase. From our findings we conclude that both factors - direction of transfer and underlying facilitation - exert influence on idiom comprehension in L2 context. Awareness of conceptual metaphors might offer a helping hand to the learner, but additional awareness-raising lessons need to be implemented before learners are dissuaded from resorting to L1 transfer strategies and applying CM motivation as an active learning tool. Before metaphoric instruction is applied in the ELT context, research limitations of our and similar studies need to be addressed, namely testing the facilitatory effect of conceptual metaphors in relation to other types of figurative language (our study looked at idioms only) such as collocations, which are especially important in the ESP context. Additionally, while such research on figurative language comprehension exists for L1 contexts, not many studies have

used methods such as eye-tracking and evoked brain potentials (ERP) to explore figurative comprehension in the L2 context, especially with reference to conceptual metaphors and direction of transfer.

Acknowledgements: This paper was funded under the project line ZIP UNIRI of the University of Rijeka, for the project UNIRI-ZIP-2103-18-22.

References

- Abel, Beate (2003) "English Idioms in the First Language and Second Language Lexicon: A Dual Representation Approach." *Second Language Research* 19 (4): 329–58. <https://doi.org/10.1191/0267658303sr226oa>.
- Bachman, Lyle F. (1990) *Fundamental Considerations in Language Testing*. Oxford university press.
- Beréndi, Márta, Szilvia Csábi, and Zoltán Kövecses (2008) "Using Conceptual Metaphors and Metonymies in Vocabulary Teaching." *Applications of Cognitive Linguistics* 6, 65–99.
- Blum, Shoshana, and Eddie A. Levenston (1978) "Universals of Lexical Simplification." *Language Learning* 28 (2): 399–415.
- Boers, Frank (2000a) "Enhancing Metaphoric Awareness in Specialised Reading." *English for Specific Purposes* 19 (2): 137–47.
- Boers, Frank (2000b) "Metaphor Awareness and Vocabulary Retention." *Applied Linguistics* 21 (4): 553–71.
- Boers, Frank (2003) "Applied linguistics perspectives on cross-cultural variation in conceptual metaphor." *Metaphor and Symbol*, 18 (4), 231–238.
- Bortfeld, Heather (2002) "What Native and Non-Native Speakers' Images for Idioms Tell Us about Figurative Language." In *Advances in Psychology: Bilingual Sentence Processing*, edited by Roberto R. Heredia and Jeanette Altarriba, 134, 275–95. North-Holland. [https://doi.org/10.1016/S0166-4115\(02\)80015-2](https://doi.org/10.1016/S0166-4115(02)80015-2).
- Broz, Vlatko (2015) "Frazelogija sve u šesnaest: motiviranost značenja numeričkih frazema u hrvatskome." *Filologija* 64, 37–56.
- Buckingham, Louisa (2006) "A Multilingual Didactic Approach to Idioms Using a Conceptual Framework." *Language Design: Journal of Theoretical and Experimental Linguistics* 8, 35–45.

- Cacciari, Cristina, and Patrizia Tabossi (1988) "The Comprehension of Idioms." *Journal of Memory and Language* 27 (6): 668–83.
- Carrol, Gareth, and Kathy Conklin (2014) "Getting Your Wires Crossed: Evidence for Fast Processing of L1 Idioms in an L2." *Bilingualism: Language and Cognition* 17 (4): 784–97.
- Carrol, Gareth, Kathy Conklin, and Henrik Gyllstad (2016) "Found in Translation: The Influence of the L1 on the Reading of Idioms in a L2." *Studies in Second Language Acquisition* 38 (3): 403–43.
- Charteris-Black, Jonathan (2002) "Second Language Figurative Proficiency: A Comparative Study of Malay and English." *Applied Linguistics* 23 (1): 104–33.
- Chen, Yi Chen (2019) "Teaching Figurative Language to EFL Learners: An Evaluation of Metaphoric Mapping Instruction." *Language Learning Journal* 47 (1): 49–63. <https://doi.org/10.1080/09571736.2016.1185798>.
- Cieślicka, Anna (2006) "Literal Salience in On-Line Processing of Idiomatic Expressions by Second Language Learners." *Second Language Research* 22 (2): 115–44.
- Cooper, Thomas C. (1999) "Processing of Idioms by L2 Learners of English." *TESOL Quarterly* 33 (2): 233–62.
- Dobrovol'skij, Dmitrij, and Elisabeth Piirainen (2005) *Figurative language: Cross-cultural and cross-linguistic perspectives*. Amsterdam: Elsevier.
- Dobrovol'skij, Dmitrij, and Elisabeth Piirainen (2018) "Conventional Figurative Language Theory and idiom motivation." *Phraseology*, 2018 (1), 1–30.
- Geld, Renata, Tomislav Tadić, and Mateusz-Milan Stanojević (2014) "Uloga konceptualne metafore u poučavanju vokabulara kod videćih i slijepih učenika engleskog jezika." In *Metafore koje istražujemo: suvremeni uvidi u konceptualnu metaforu*, edited by Mateusz-Milan Stanojević, 255–277. Zagreb: Srednja Europa.
- Giacobbe, Jorge (1992) "A Cognitive View of the Role of L1 in the L2 Acquisition Process." *Interlanguage Studies Bulletin (Utrecht)* 8 (3): 232–50.
- Gibbs, Raymond W. (1993) "Why Idioms Are Not Dead Metaphors." *Idioms: Processing, Structure, and Interpretation*, 57–77.
- Gibbs, Raymond W. (1994) *The Poetics of Mind: Figurative Thought, Language, and Understanding*. Cambridge: Cambridge University Press.

- Gibbs, Raymond W., Nandini P. Nayak, and Cooper Cutting (1989) "How to Kick the Bucket and Not Decompose: Analyzability and Idiom Processing." *Journal of Memory and Language* 28 (5): 576–93. [https://doi.org/10.1016/0749-596X\(89\)90014-4](https://doi.org/10.1016/0749-596X(89)90014-4).
- Howarth, Peter (1998) "Phraseology and Second Language Proficiency." *Applied Linguistics* 19 (1): 24–44.
- Hubers, Ferdy, Catia Cucchiari, and Helmer Strik (2020) "Second Language Learner Intuitions of Idiom Properties: What Do They Tell Us about L2 Idiom Knowledge and Acquisition?" *Lingua* 246. <https://doi.org/10.1016/j.lingua.2020.102940>.
- Irujo, Suzanne (1986) "Don't Put Your Leg in Your Mouth: Transfer in the Acquisition of Idioms in a Second Language." *Tesol Quarterly* 20 (2): 287–304.
- Jelčić, Jasmina (2014) "Croatian EFL Learners' Comprehension of Idiom Use: Context, Decomposability and Age Factors." *Jezikoslovlje* 15 (2–3): 373–93.
- Jelčić Čolakovac, Jasmina (2020) "Where Culture and Metaphor Meet: Metaphoric Awareness in Comprehension of Culturally-Specific Idioms." *Open Journal for Studies in Linguistics*, 3 (2): 67–82. <https://doi.org/10.32591/coas.ojsl.0302.03067j>.
- Jiang, Nan (2004) "Semantic Transfer and Its Implications for Vocabulary Teaching in a Second Language." *The Modern Language Journal* 88 (3): 416–432. <https://doi.org/10.1111/j.0026-7902.2004.00238.x>.
- Jiménez Muñoz, Antonio José, and Ana Cristina Lahuerta Martínez (2022) "Analysis of the Relationship between Students' Proficiency Level and Their Ability to Identify Figurative Language: The Effect of Individual Factors and Extracurricular Activities." *Iberica* 2022 (43): 179–204. <https://doi.org/10.17398/2340-2784.43.179>.
- Kecskes, Istvan (2000) "Conceptual Fluency and the Use of Situation-Bound Utterances in L2." *Links & Letters* 7: 145–61.
- Kellerman, Eric (1977) "Towards a Characterization of the Strategy of Transfer in Second Language Learning." *Interlanguage Studies Bulletin* 2 (1): 58–145.
- Kellerman, Eric (1978) "Giving Learners a Break: Native Language Intuitions as a Source of Predictions about Transferability." *Working Papers on Bilingualism* 15: 59–92.

- Korajac, Aida, and Mateusz-Milan Stanojević (2018) "Dubinsko procesiranje frazema sa se u hrvatskome kao inome jeziku." In *Jezik i Um: XXXII Međunarodni Znanstveni Skup*, edited by Diana Stolac and Magdalena Nigoević, 78–78. Rijeka: Hrvatsko društvo za primijenjenu lingvistiku (HDPL), Srednja Europa.
- Kövecses, Zoltán (2001) "A Cognitive Linguistic View of Learning Idioms in an FLT Context." *Applied Cognitive Linguistics II: Language Pedagogy*, 87–115.
- Lakoff, George, and Mark Johnson (1980) "The Metaphorical Structure of the Human Conceptual System." *Cognitive Science* 4 (2): 195–208. [https://doi.org/10.1016/S0364-0213\(80\)80017-6](https://doi.org/10.1016/S0364-0213(80)80017-6).
- Lakoff, George, and Zoltán Kövecses (1987) "The Cognitive Model of Anger Inherent in American English." In *Cultural Models in Language and Thought*, edited by Dorothy Holland and Naomi Quinn, 195–221. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511607660.009>.
- Laufer, Batia (2000) "Avoidance of Idioms in a Second Language: The Effect of L1-L2 Degree of Similarity." *Studia Linguistica* 54 (2): 186–96. <https://doi.org/10.1111/1467-9582.00059>.
- Libben, Maya R., and Debra A. Titone (2008) "The Multidetermined Nature of Idiom Processing." *Memory and Cognition* 36 (6): 1103–21. <https://doi.org/10.3758/MC.36.6.1103>.
- Liontas, John (2002) "Context and Idiom Understanding in Second Languages." *EUROSLA Yearbook* 2: 155–85. <https://doi.org/10.1075/eurosla.2.11lio>.
- Littlemore, Jeannette, and Graham Low (2006) "Metaphoric Competence, Second Language Learning, and Communicative Language Ability." *Applied Linguistics* 27 (2): 268–94.
- Matlock, Teenie, and Roberto R. Heredia (2002) "Understanding Phrasal Verbs in Monolinguals and Bilinguals." In *Advances in Psychology*, edited by Roberto R. Heredia and Jeanette Altarriba, 134: 251–74. [https://doi.org/10.1016/S0166-4115\(02\)80014-0](https://doi.org/10.1016/S0166-4115(02)80014-0).
- Pavičić Takač, Višnja, and Ana Umiljanović (2008) "Odnos između znanja vokabulara i strategija učenja vokabulara u engleskom kao stranom jeziku." *Strani jezici: časopis za primijenjenu lingvistiku* 37 (4): 411–22.

- Samani, Elham Rahmani, and Mahmood Hashemian (2012) "The Effect of Conceptual Metaphors on Learning Idioms by L2 Learners." *International Journal of English Linguistics* 2 (1): 249–56.
- Siyanova-Chanturia, Anna, Kathy Conklin, and Norbert Schmitt (2011) "Adding More Fuel to the Fire: An Eye-Tracking Study of Idiom Processing by Native and Non-Native Speakers." *Second Language Research* 27 (2): 251–72. <https://doi.org/10.1177/0267658310382068>.
- Stanojević, Mateusz-Milan, Jelena Parizoska, and Marek-Mladen Stanojević (2007) "Kulturni modeli i motivacija frazema." *Jezik i Identiteti*, 569–77.
- Swinney, David A., and Anne Cutler (1979) "The Access and Processing of Idiomatic Expressions." *Journal of Verbal Learning and Verbal Behavior* 18 (5): 523–34. [https://doi.org/10.1016/S0022-5371\(79\)90284-6](https://doi.org/10.1016/S0022-5371(79)90284-6).
- Türker, Ebru (2016) "The Role of L1 Conceptual and Linguistic Knowledge and Frequency in the Acquisition of L2 Metaphorical Expressions." *Second Language Research* 32 (1): 25–48. <https://doi.org/10.1177/0267658315593336>.
- Vasiljevic, Zorana (2011) "Using Conceptual Metaphors and L1 Definitions in Teaching Idioms to Non-Native Speakers." *Journal of Asia TEFL* 8 (3): 135.
- Wray, Alison, and Michael R. Perkins (2000) "The Functions of Formulaic Language: An Integrated Model." *Language & Communication* 20 (1): 1–28.
- Yağiz, Oktay, and Siros Izadpanah (2013) "Language, Culture, Idioms, and Their Relationship with the Foreign Language." *Journal of Language Teaching & Research* 4 (5): 953–57.
- Yamashita, Junko, and Nan Jiang (2010) "L1 Influence on the Acquisition of L2 Collocations: Japanese ESL Users and EFL Learners Acquiring English Collocations." *Tesol Quarterly* 44 (4): 647–68.

SUMMARY

Jasmina Jelčić Čolakovac, Irena Bogunović

ULOGA KONCEPTUALNIH METAFORA I POZNAVANJA DRUGOG JEZIKA U MEĐUJEZIČNOM OLAKŠAVANJU RAZUMIJEVANJA FRAZEMA

Upotreba metaforičkih preslikavanja u eksplicitnom poučavanju engleskog jezika (English Language Teaching, ELT) može olakšati procese povezivanja figurativnih koncepata iz prvog i drugog jezika, posebno u onim slučajevima gdje je figurativni jezik vezan za podudarne metafore koje postoje u oba jezika. Istraživanje upotrebe konceptualnih metafora (CM) u poučavanju jezika pokazuje da su učenici s višom razinom poznavanja jezika J2 uspješniji u svom pristupanju metaforičkom znanju od učenika s nižom jezičnom sposobnošću. Također je lakše pristupiti metaforičkom znanju koje postoji u učenikovom prvom i u drugom jeziku. Ovaj se rad stoga bavi smjerom figurativnog prijenosa između hrvatskog (J1) i engleskog (J2) jezika (iz J1 u J2 i iz J2 u J1) te istražuje postoje li uočljive razlike kada je riječ o pozadinskoj motivaciji frazema (metaforički motivirani (CM) ili kulturološki specifični frazemi (CS)). Na temelju rezultata zaključujemo da oba čimbenika (smjer prijenosa i pozadinska motivacija) utječu na razumijevanje frazema u kontekstu J2, pri čemu je poznavanje jezika J2 značajnije u smjeru prijenosa iz J1 u J2, što ide u korist dvostrukog modela pristupa (dual route model) obradi figurativnog jezika. Važnost ovog istraživanja leži u području poučavanja stranih jezika gdje se facilitacijski učinak metaforičke svijesti može primijeniti u razvijanju metoda poučavanja vokabulara.

Ključne riječi: *konceptualna metafora; figurativni prijenos; frazemi; poznavanje drugog jezika; hrvatski*