

**Theses of Doctoral (PhD) Dissertation**

**The role of L1 in figurative language production by  
Hungarian learners of English**

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## 1. Objectives and topics

My dissertation examines the influence of Hungarian L1 transfer on English figurative language use, specifically focusing on metaphor and idiom production. Two experiments are conducted: the first analyzes metaphor errors in English essays written by Hungarian students (B1-C2 levels), exploring how L1 affects their use of metaphors. The second experiment investigates idiom production, analyzing the impact of idiom motivation and predictability on students' scores. By identifying L1 transfer's role in metaphor and idiom errors, the study aims to provide insights that could inform more effective language teaching strategies for Hungarian learners of English.

The literature on metaphors and metaphor acquisition discusses the different theories and frameworks of metaphor literature in general at the beginning of the dissertation. The Conceptual Metaphor Theory (CMT), introduced by, among others, Langacker (1987) and Lakoff and Johnson (1999), posits that metaphors are not just linguistic expressions but fundamental to human thought. According to CMT, our cognitive system is structured by conceptual metaphors, where one domain of experience (source domain) is mapped onto another (target domain) to make sense of abstract concepts. Giora's (2002) Graded Salience Hypothesis suggests that familiar or salient meanings of words or expressions are processed more quickly than less frequent or less conventional meanings. The comprehension of idioms is influenced by factors such as frequency and prototypicality, making familiar metaphorical expressions easier to understand than novel or non-conventional ones. The Dual Idiom Representation Model (DIR) by Abel (2003) distinguishes between decomposable and non-decomposable idioms. Decomposable idioms can be understood by analyzing the meaning of their individual components, while non-decomposable idioms require a separate mental lexicon entry. This model also suggests that frequent idioms, whether decomposable or not, are stored separately in the lexicon. Cieślicka's (2006a) Literal Salience Model, improves on the Graded Salience Hypothesis by proposing that L2 learners tend to first interpret the literal meaning of an idiom, even if they know its figurative meaning. The figurative interpretation comes only as a second step, highlighting the challenges L2 learners face in processing idioms.

In my dissertation, the Dual Idiom Representation Model (DIR) seems to be particularly relevant, as it accounts for both the lexical and conceptual aspects of idioms. This model offers a framework for understanding how retrieve idiomatic expressions in their production. Since the my ratings in the idiom testing (the motivation test and predictability ratings) involve evaluating how subjects see the relation between the literal and non-literal meanings of idioms,

DIR's emphasis on decomposability and frequency fits well with the structure of the research. By using this model, the research addresses how idioms are stored in the mental lexicon and how L2 learners process them.

Following a discussion of metaphor theory and metaphor acquisition, I review the literature on second language acquisition in terms of idioms and metaphors. The literature suggests that idioms are particularly difficult for L2 learners due to such expressions' figurative nature, cultural specificity, and variability in decomposability. The Contrastive Analysis and the Error Analysis have traditionally been used to understand language learning errors, including idiomatic expressions. Although Lennon (2008: 51) notes that the Contrastive Analysis (CA) has often neglected cultural aspects, literature highlights how idiomatic differences and similarities can still be effectively compared across languages. For example, Dobrovol'skij and Piirainen (2022) discuss phraseological false friends, which are idioms that appear similar but differ in meaning across languages. Alousque (2011: 120) discusses how idioms like *set on one's high horse* in English and its French equivalent *monter sur ses grands chevaux* ("get on one's high horses") share a similar structure but rely on different conceptual metaphors: PRIDE IS UP and ANGER IS UP, respectively. This complicates learning since learners must navigate cultural and metaphorical differences.

Error Analysis (EA) and Contrastive Error Analysis (CEA) are tools for identifying common errors in L2 idiom usage. Learners often make errors by directly translating idioms from their L1, particularly when idioms do not have equivalent forms in the L2. For example, Budai (2010: 264-265) gives examples of English-Hungarian idiomatic errors, such as *green with envy* (*sárga az irigységtől*) and *turn the air blue* (*káromkodik, mint egy kocsis*), where the metaphors vary between the two languages.

In addition to idioms, the acquisition of cognates and false cognates also plays a role in SLA. Studies by Otwinowska and Szewczyk (2019) show that learners often find it easier to acquire cognates (words that are similar in form and meaning across languages) compared to false cognates, which look similar but have different meanings. False cognates pose unique challenges because learners must recognize the differences in meaning before they can be fully understood and used correctly.

Accordingly, I employed CA in addition to CMT to idioms across the English and Hungarian languages, focusing on full equivalence (where idioms share meaning, structure, and imagery), partial equivalence (where they differ in structure or imagery), and non-equivalence (where no direct counterpart exists). This analysis helps inform idiom teaching strategies by

identifying where learners may struggle, as seen in Alousque's (2011) comparative work on English, Spanish, and French idioms.

In the dissertation I examine metaphor variation as well, focusing on the differences in metaphorical expressions across languages and cultures, with a particular emphasis on Hungarian and English. Key factors influencing these variations include conceptualization, cultural context, cognitive embodiment, and metaphor productivity. Additionally, I also investigate whether language proficiency affects metaphor use. Through a comprehensive literature review, I synthesize findings from various studies to clarify how metaphors function across linguistic and cultural boundaries.

To summarize the above, in my dissertation I examine the transfer effects of Hungarian on English figurative language use, focusing on the use of metaphors and idioms. The theoretical background of the research draws on several linguistic theories such as conceptual metaphor theory and the dual idiom representation model. From the linguistic data obtained through the applied methods, i.e. essay analysis and idiom experiments, I attempt to characterize the English metaphor and idiom production of native Hungarian speakers. In the following section, I present the two methods I used.

## **2. Methods applied**

### **2.1 Essay analysis**

#### **2.1.1 Experimental design**

Chapters 5 and 6 revolve around the methodology of finding metaphors and metaphorically used expressions. This method works with authentic and natural linguistic material which is likely to include various figures of speech (Xia 2019: 10), therefore, I opted for this method. The essay analysis aims to examine the metaphorical use of English and the influence of L1 on English essays by analyzing metaphorical errors made by Hungarian students. Two research questions guide this investigation:

1. What types of metaphorical errors occur in L2 essays by Hungarian students at B1-C2 levels?
2. To what extent can L1 transfer explain these errors?

The essay analysis involved 15 Hungarian students, averaging 22 years old, who were enrolled at the University of Nyíregyháza. Their English proficiency levels were determined using the Oxford Placement Test (Lukács 2022: 92). The study utilized student essays and placement test

results to gather linguistic data. First, the subjects wrote argumentative essays on the topic “How did Covid-19 change our lives?” within 60 minutes.

The processing of the essays included error and metaphor identifications, and error classification. Correctly identifying metaphorical errors requires native speaker intuition, dictionary references, and corpus data. For instance, identifying the correct form of expressions such as *win someone* versus *win someone over* requires discerning the deviation from standard English norms (Lukács 2022: 94-95). Following the metaphor identifying principles of MIPVU (Steen et al. 2010), the study identifies three types of metaphors: direct, implicit, and indirect. In the example below, the segment in italics (direct metaphor) displays a shift from the topic of computer science towards medicine, in a way that they use direct language to establish mappings between system developers’ and doctors’ domains (Steen et al. 2010: 57): “But of course the users don’t know what they want, so they end up getting another duff system. An effective analyst provides the same service to the business as *the doctor provides to the patient*” (Steen et al. 2010: 57). We can understand how a system developer deals with a user because we know how a doctor treats a patient (Steen et al. 2010: 57). This comparison of a systems developer to a doctor and the user to a patient helps us understand the differences between the two (Steen et al. 2010: 57). In MIPVU, using a special tag, we mark all content words being a part of a text which is incongruent with the rest of the text (Steen et al. 2010: 57).

Implicit metaphors are words, usually pro-forms, that refer to other words used metaphorically. For instance, *it* refers to *step* in the following sentence: “*Naturally, to embark on such a step is not necessarily to succeed immediately in realising it*” (Steen et al. 2010: 15). In this case, *step* is used metaphorically, *it* simply refers to it (Steen et al. 2010: 15). Indirect metaphors employ the conceptualization of a target domain through its source domain (referring to Steen et al. 2010: 10, Lukács 2022: 97), which means that indirect metaphors are conceptual metaphors, for example HUMANS ARE MACHINES in the case of *drive* in *The/ warders/ would/ then/ drive/ us/ harder* (Nokele 2017: 84).

The MIPVU involves the dictionary-based comparison of the contextual and basic meanings of lexical units to determine metaphorical usage (Lukács 2022: 97). The assessment of metaphoricality also hinges on the interplay between what the students intended to write and what they actually wrote. For example, Nacey (2013), who analyzed the English essays written by English learners with Norwegian L1, regards *spectre* metaphorical in *It is in this huge spectre of merchandise and inventions* since *spekter* means ‘range’ or ‘spectrum’ in Norwegian (referring to Nacey 2013: 119, Lukács 2022: 99). The similarity in spelling and pronunciation may have been a cause of the error. Nacey (2013) gives the contextual meaning of *spectre*

(referring to Nacey 2013: 119, Lukács 2022: 99), which corresponds to ‘the whole range of ideas, qualities, situations, etc., that are possible’ (coincidentally, the first entry for ‘spectrum’ in Macmillan). The literary basic meaning is ‘a ghost’ in Macmillan. If we compare these meanings, we see a contrast, signifying the metaphorical use of *spectre* in this context. In my essay analysis, I employed the label DFMA to denote instances of incorrect word selection or misspelling, leading me to classify *spectre* as non-metaphorical. Similarly, *dear* in my example is not metaphorical either: *Still we somehow managed to have a great, dear I say, friendship with our classmates* (Lukács 2022: 99). Finally, various taxonomies, such as those by Littlemore et al. (2014) and Iaroslavtseva and Skorczynska (2017), help classify errors and identify potential L1 transfer.

## 2.2 Idiom testing

### 2.2.1 Experimental Design

After discussing the essay analysis, I proceed with the two idiom experiments. When conducting tests, researchers establish and use expression categories, which does not take place in essay analysis (Xia 2019: 106), and idiom tests enable the researcher to elicitate the type of data they intend to analyse (Xia 2019: 106).

The primary objective of the studies was to explore how idiom familiarity, the perceived motivation behind the expressions, and their predictability affect learners’ ability to use idioms accurately in English. I formulated four hypotheses:

**Hypothesis 1:** If the motivation for familiar idioms (with average scores over 4) is high (with average scores over 4), these idioms will score higher in all idiom production categories compared to less-motivated idioms (with average scores of 4 or below).

**Hypothesis 2:** If the predictability of familiar idioms (with average scores over 4) is high (with average scores over 4), these idioms will score higher in all idiom production categories compared to less-predictable idioms (with average scores of 4 or below).

**Hypothesis 3:** If the idiom motivation is high (with average scores over 4) in the case of the familiar idioms (with average scores over 4), the average production scores will be high (over 0.5) in all idiom categories and at all proficiency levels.

**Hypothesis 4:** If the idiom predictability is high (with average scores over 4) in the case of the familiar idioms (with average scores over 4), the average production scores will be high (over 0.5) in all idiom categories and at all proficiency levels.

The idiom testing was inspired by partly Charteris-Black (2002) and Carrol et al. (2018). A pilot (n = 30) and a major experiment (n = 50) were conducted to investigate how English language learners produce idioms, with a focus on the impact of familiarity, motivation, and predictability at different proficiency levels. The research sought to examine how learners at intermediate (B) and advanced (C) proficiency levels produce idioms, aiming to understand how familiarity with idiomatic expressions, the motivation (the clarity of the link between literal and figurative meanings), and predictability (how easily the figurative meaning can be inferred) influence idiom production.

I classified the subjects' proficiency into three categories, beginner (A), intermediate (B), and advanced (C) levels, using an online test, English Radar. The studies focused only on B and C level learners, excluding beginners due to their very low number. The first task was an idiom production task in which participants were required to complete sentences by writing the correct idiomatic expression. Production was evaluated by three raters, whose scores I averaged for further analysis. The scoring followed Charteris-Black's (2002: 118) method. If the subject's response was not idiomatic, or if it was a verbatim or paraphrased response, the scorer gave a score of 0. If the response contained grammatical/formal errors but an attempt at idiomatic language use was evident from the response, a score of 0.5 was awarded. If the answer was both idiomatic and grammatically/formally correct, 1 point was awarded. This shows that idiomaticity played a more important role than grammatical correctness in the experiments, and therefore I considered production scores higher than the 0.5-point average to be high, as in Hypotheses 3 and 4.

In addition, participants rated each idiom for familiarity, motivation, and predictability using a 7-point Likert scale. The three factors were rated on separate Likert scales and per English idiom. The score of 1 indicated the lack of, while the value of 7 indicated the complete familiarity, motivation, or predictability of an idiom. In both studies, half of the participants rated motivation, while the other half rated predictability, with familiarity being assessed by all. I analysed the production averages belonging to only idioms rated as familiar to the subjects, and the relationship between idiom production and motivation/predictability was examined separately for B and C levels. I used 50 English-Hungarian expression pairs, categorized into 5 types. *Same-same* means that the expressions have identical literal (form) and figurative meanings, e.g. in *a lone wolf - magányos farkas*. *Similar-same* refers to expressions where the literal meaning of the idiom differs in one word or two, but the figurative meaning remains the same, e.g. in *a bull in a china shop - elefánt a porcelánboltban*. *Different-same* is an idiom if

its literal meaning differs across the L1 and L2 from that of its idiomatic equivalent, but the figurative meaning is the same, e.g. in *from the horse's mouth* - *első kézből*. *L2-only transparent* involves expressions existing in English only as an idiom and I judged them transparent before the subjects' ratings, e.g. in *food for thought* - *elgondolkodtató téma*. *L2-only opaque* consists of expressions being idiomatic only in English and I considered them as opaque before the subjects' ratings, e.g. in *a hot potato* - *kényes téma*. The two L2-only groups have no idiomatic equivalents in Hungarian (Lukács 2023a:37) and I had previously set them up according to my intuitions. But, in the pilot and main tests, however, I calculated on the basis of the subjects' ratings in terms of motivation, predictability and familiarity.

### **3. Results**

#### **3.1 Essay analysis**

##### **3.1.1 Research Question 1: types of metaphorical errors**

The analysis of metaphor errors in essays written by Hungarian students across CEFR levels B1 to C2 reveals several important findings. The predominant category of errors is grammatical, accounting for 33 instances. Misspellings are the second most common, with 7 instances recorded. Additionally, four errors could not be classified into discrete categories, and there were two occurrences of confusion within sense relations. Other less frequent errors include calques, collocational errors, and combined grammar and spelling mistakes, each represented by a single instance.

The prevalence of grammatical errors underscores the importance of understanding structural issues within L2 writing. This aligns with existing research on metaphor usage in second language acquisition, which highlights the challenges learners face in mastering grammatical conventions in a new language (Nacey, 2010, 2013, James, 1998). Misspellings and errors categorized that could not be categorized into any specific type suggest that while less common, these issues still impact the overall quality and clarity of metaphorical expressions in L2 essays. The confusion of sense relations, although rare, points to the complexity of metaphorical language and the critical role of accurately grasping sense relations in metaphor use.

### 3.1.2 Research Question 2: the extent of L1 transfer

The investigation into the influence of L1 transfer on metaphor errors reveals several key insights. Data analysis indicates that errors are most prevalent at the B2 level, where a wide range of error types is observed, excluding calque, which appears solely at the B1 level. This observation is consistent with Littlemore's (2014) findings, which suggest that the B2 level is particularly susceptible to L1 influence.

Regarding the errors potentially attributable to L1 transfer, we may see the following.

	Example, Hungarian and glossed sentences	Type of mistake	CEFR-level
1	<i>I have to work with other people <b>in</b> 90% of the times.</i> Az idő 90%- <b>ában</b> másokkal kell dolgoznom. The time-NOM 90%-POSS-3sg <b>in</b> other-nom-3PL with must work-1SG	Grammar: <i>in</i> is not required here	B2
2	<i>...improvements concerning online education <b>on</b> the long run...</i> ...az online oktatást érintő fejlesztések hosszú táv <b>on</b> ... ...the online education-Acc-3SG concerning improvement-NOM-3PL long distance <b>on</b> ...	Grammar: <i>on</i> instead of 'in'	C2
3	<i>...we <b>left out</b> big parties...</i> ...nagy bulikat <b>hagytunk ki</b> ... ...big party-ACC-3PL <b>omit-PAST-3PL out</b> ...	Calque: transliteration	B1
4	<i>I do not have to waste my time <b>with</b> commuting and waiting...</i> Nem kell ingázás <b>sal</b> és várakozás <b>sal</b> pazarolnom az időmet... <i>No need commuting <b>with</b> and waiting <b>with</b> waste-1SG the time-POSS-1SG-ACC...</i>	Grammar: <i>with</i> is not required here	B2

Students often misuse English prepositions in a manner similar to Hungarian suffixes, as seen in examples 1, 2, and 4. The transliteration of Hungarian verbs into English, calquing, as illustrated in example 3, demonstrates another potential instance of L1 influence.

The analysis indicates that only four instances of potentially transfer-related errors were identified within a corpus of 3,381 words. The very limited data may serve as the basis of no powerful statement about L1 influence. The amount and quality of the data also imply the need for further research and diverse methodologies to enhance the understanding of the metaphorical language use in second language acquisition.

## 3.2 Idiom testing

### 3.2.1 Pilot, Hypothesis 1 and Hypothesis 2

During the pilot experiment, subjects were asked to produce different idioms and then they rated the expressions for familiarity, motivation and predictability. Subjects were divided into two groups, B- and C-level language learners. They also had to pay attention to the context during the idiom production to ensure that their responses were idiomatic.

Hypothesis 1 displays a statistically significant correlation between motivation and production average, indicating that higher motivation is associated with better idiom production. However, the correlation between language level and production average is very weak and not statistically significant. Similarly, the relationship between language level and motivation is weak and not statistically significant. This suggests that language level does not significantly impact either motivation or production average. Hypothesis 1 posited that idioms with higher motivation ratings would achieve superior production scores across all categories compared to idioms with lower motivation ratings. The results robustly support this hypothesis, revealing a substantial correlation between motivation and idiom production.

Idioms categorized as *same-same*, characterized by high motivation ratings, consistently exhibited elevated production averages. For instance, the idiom *a lone wolf* demonstrated a remarkable production average of 0.88, accompanied by high motivation (7.00) and predictability scores (6.92). This suggests that idioms with high motivational appeal are not only easier for subjects to produce but also more familiar and engaging, which facilitates their use. Conversely, idioms with lower motivation, such as those in the *motivation-opaque* category, showed significantly reduced production averages, underscoring the challenges faced when motivation is lacking. For example, *from the horse's mouth* (production: 0.38, motivation: 2.07) illustrates how diminished motivational factors can adversely impact idiom production.

The data supports Hypothesis 2, showing a moderate correlation between predictability and production average. This indicates that higher predictability is associated with better idiom production, and the result is statistically significant. In contrast, the correlation between language level and production average is very weak and not statistically significant. These findings suggest that language level does not significantly influence either predictability or production average in the pilot study. Hypothesis 2 proposed that idioms rated as more predictable would exhibit higher production scores compared to those rated as less predictable. This hypothesis is supported by the data, which shows a moderate correlation between predictability and production proficiency.

Idioms classified as *predictability-transparent* displayed high production averages, reinforcing the notion that predictable idioms are more accessible to users. For instance, *a lone wolf again* exemplifies this with its high production average of 0.88 and predictability score of 6.92. These results highlight that predictability facilitates easier and more accurate production of idioms by providing clearer metaphorical or literal connections. On the other hand, idioms in the *predictability-opaque* category, such as *from the horse's mouth* (predictability: 1.58), exhibited lower production averages, reflecting the difficulties associated with less predictable idioms.

### 3.2.2 Pilot, Hypothesis 3 and Hypothesis 4

Regarding Hypothesis 3, at the B-level, idioms with higher motivation, characterized by transparent meanings, exhibit a correlation with production scores. This suggests that learners at this level benefit significantly from idioms with clear meanings, which improve production. At the C-level, the relationship between motivation and production scores strengthens, indicating that as proficiency increases, idioms with higher motivation more substantially enhance production. This finding highlights the growing importance of clear idiomatic meanings for advanced learners.

Regarding Hypothesis 4, predictability also plays a crucial role at both levels. At the B-level, predictable idioms show a significant correlation with production scores, reflecting that learners benefit from being able to anticipate idiomatic meanings based on context. At the C-level, the correlation becomes even stronger, indicating that advanced learners increasingly rely on both predictable and transparent idioms to achieve higher proficiency.

If we compare the motivation, predictability and the production averages with one another per language level, we see the following. At the B-level, idioms with higher motivation and clearer meanings correlate with production scores. Learners at this level benefit from transparent idioms, leading to improved production. At the C-level, this correlation strengthens, highlighting that higher motivation results in higher production averages as the learners advance.

Predictability also plays a significant role. At the B-level, more predictable idioms correlate with production scores, suggesting that learners benefit from being able to anticipate idiomatic meanings based on context. At the C-level, the correlation is stronger, indicating that advanced learners rely more on idioms that are both transparent and predictable.

A comparison of B-level and C-level learners shows that while both proficiency levels benefit from motivated and predictable idioms, their impact is greater at the C-level. Advanced learners exhibit heightened sensitivity to idiomatic nuances, preferring expressions that are clear and predictable in usage.

Production averages also reveal distinct patterns across idiomatic types and filter conditions. In the *same-same* category, B-level learners score 0.85, while C-level learners achieve 0.86 for both motivation-transparent and predictability-transparent idioms. For *similar-same idioms*, B-level learners score 0.67 (motivation-transparent) and 0.69 (predictability-transparent), while C-level learners reach 0.68 for both. In the *different-same* category, B-level learners score 0.48 (motivation- and predictability-transparent), with C-level learners slightly outperforming them at 0.51 and 0.53, respectively.

In the L2-only transparent condition, B-level participants score 0.54 for motivation- and predictability-transparent idioms, while C-level learners reach 0.62. In the L2-only opaque category, B-level participants achieve 0.51 for motivation- and predictability-transparent idioms, with C-level learners outperforming them with 0.57 and 0.65 for motivation-opaque idioms. Overall, C-level learners consistently demonstrate higher production averages, indicating better idiomatic proficiency compared to B-level learners.

### **3.2.3 Major, Hypothesis 1 and Hypothesis 2**

In the major experiment, as in the pilot, subjects were asked to produce idioms and then to rate them in terms of familiarity, motivation and predictability. In this experiment, I also examined data from B- and C-level subjects. Given the context of the task measuring idiom use, they had to produce idiomatic responses as far as possible.

The calculations carried out on the basis of the data reveal a strong correlation between production average and motivation concerning Hypothesis 1. This indicates that higher motivation is significantly associated with higher production averages. In other words, idioms that are highly motivated tend to result in better performance in production tasks. In contrast, the correlation between production average and language level is very weak. This suggests that language proficiency does not have a meaningful impact on production scores. Similarly, the correlation between language level and motivation is extremely weak, indicating that language level does not significantly affect motivation.

In the case of Hypothesis 2, we can see a substantial correlation between production average and predictability. This indicates that higher predictability is significantly associated

with higher production averages, suggesting that idioms with high predictability tend to result in better performance across idiom categories. The correlation between language level and predictability is relatively weak.

The analysis of idiom production data examines the effects of motivation (transparent vs. opaque) and predictability (transparent vs. opaque) on idiom usage across different idiom categories. Idioms rated as motivation-transparent exhibit the highest production rates, particularly within *same-same* categories, where idioms such as *a lone wolf* show a production average of 0.91. This high production is supported by a familiarity score of 6.42, a motivation score of 6.35, and a predictability score of 6.32, indicating that the idiom is widely recognized, its meaning is transparent, and its components reliably suggest its overall meaning. Similarly, *similar-same* idioms demonstrate robust production, with *the blind leading the blind* yielding a production average of 0.85, a familiarity score of 6.11, and matching motivation and predictability scores of 6.00 and 6.32, respectively. However, *different-same idioms*, like *break your back*, exhibit lower production averages (0.52), with reduced familiarity (4.27), motivation (4.39), and predictability (4.00), illustrating the challenge posed by idioms where form differs but meaning is shared.

Motivation-opaque idioms, by contrast, show significantly lower production rates. For example, *bury the hatchet* from the *similar-same* category has a production average of 0.69, with moderate familiarity (5.00) and lower motivation and predictability scores (4.00 each). This indicates that while the idiom is somewhat recognized, its less transparent meaning makes it harder to produce. The L2-only opaque idioms exhibit a notable production average of 0.76, with *pull someone's leg* serving as an example. Although it has a relatively higher familiarity score of 5.31, its motivation (3.70) and predictability (2.23) scores are significantly lower, suggesting that familiarity through exposure aids production even when the idiom's meaning remains opaque.

Turning to predictability-transparent idioms, production rates mirror those of motivation-transparent idioms. The *same-same* category again leads, with *a lone wolf* showing a high production average of 0.91, supported by familiarity (6.42), motivation (6.35), and predictability (6.32) scores. *Similar-same* idioms, such as *the blind leading the blind*, exhibit a production average of 0.85, with familiarity at 6.11, motivation at 6.00, and predictability at 6.32. In contrast, *different-same* idioms, exemplified by *sell like hot cakes*, demonstrate moderate production at 0.64, with familiarity (4.91), motivation (5.30), and predictability (4.77), suggesting that while the meaning is somewhat clear, variability in form impacts production.

Predictability-opaque idioms, which pose greater challenges, show lower production across categories. For example, *bury the hatchet* from the *similar-same* category has a production average of 0.69, with moderate familiarity (5.00) and lower motivation and predictability scores (4.00 each), indicating that the idiom's meaning requires additional contextual understanding. Idioms in the *different-same* category, such as *break your back*, have a production rate of 0.52, with lower familiarity (4.27), motivation (4.39), and predictability (4.00), further emphasizing the difficulty of producing idioms with less predictable meanings. In L2 contexts, predictability-opaque idioms like *mean business* show a production average of 0.50, with lower familiarity (4.02), motivation (4.43), and predictability (3.86), suggesting that these idioms are particularly challenging in second-language learning due to their opacity.

### **3.2.4 Major, Hypothesis 3 and Hypothesis 4**

The results demonstrate significant differences in how these two factors influence idiomatic competence at different levels of language proficiency. By analyzing the correlation between motivation, predictability, and idiomatic production, this research offers valuable insights into the cognitive and linguistic processes underpinning idiom acquisition, shedding light on how these variables shape learners' ability to produce idiomatic expressions across proficiency levels.

At the B-level, the correlation between motivation and idiom production is significant, demonstrating that idioms with higher motivation are more successful to produce. This finding suggests that for learners at intermediate stages, idioms with clear and transparent motivational structures are more easily produced, leading to higher proficiency.

Regarding C-level participants, the correlation between motivation and idiom production remains robust, indicating that even at advanced proficiency levels, motivation continues to play a critical role. However, the slightly lower correlation compared to B-level participants suggests that, while motivation remains important, advanced learners might rely on more nuanced or varied strategies for idiom production, perhaps due to increased linguistic flexibility and cognitive capacity at this stage. Despite this, the impact of motivation at the C-level reinforces its pedagogical importance in idiom instruction, highlighting that even learners with advanced proficiency benefit from idiomatic expressions that are grounded in clear motivational contexts.

While answering Hypothesis 4, it becomes clear that predictability also plays a pivotal role in facilitating idiomatic production, although its influence differs between proficiency

levels. At the B-level, predictability shows a strong correlation with idiom production, indicating that learners at this stage benefit from idiomatic expressions that are easier to predict based on contextual or linguistic cues.

In contrast, the influence of predictability appears to diminish somewhat at the C-level. This reduction suggests that, as learners become more proficient, they may shift from relying heavily on predictable idiomatic patterns to employing more diverse strategies for idiom production. C-level learners might develop the ability to handle idioms with more opaque or less predictable meanings, thus reflecting a maturation in their linguistic and cognitive strategies. While predictability remains relevant, its declining impact at higher proficiency levels implies that idiomatic instruction for advanced learners should focus less on predictability and more on the varied and nuanced use of idiomatic expressions in different contexts.

In terms of production averages, B-level participants consistently showed strong performance in idioms that were both motivation-transparent and predictability-transparent, achieving production averages of 0.87 for these types. However, in more complex categories such as predictability-opaque idioms, their performance declined, with averages of 0.70. This suggests that at lower proficiency levels, learners struggle with idioms that lack clear contextual or linguistic cues, reaffirming the importance of predictability in their idiomatic competence.

In contrast, C-level participants demonstrated slightly higher production averages across most idiom types, particularly in the *same-same* category, where their average reached 0.88. They also performed well in the *similar-same* category, achieving averages of 0.78 for both motivation-transparent and predictability-transparent idioms. Interestingly, C-level participants' performance in predictability-opaque idioms (0.67) was lower than that of B-level participants (0.70), suggesting that advanced learners might approach these types of idioms differently, possibly engaging in more flexible interpretative strategies that do not always align with predictable patterns of usage.

Under the *different-same* and L2-only transparent conditions, C-level learners consistently outperformed their B-level counterparts, with production averages of 0.64 and 0.70, respectively. This indicates that as learners' proficiency increases, they become more adept at handling idiomatic expressions that are either more complex or less familiar. However, in the L2-only opaque category, B-level participants achieved higher production averages (0.75) compared to C-level learners (0.55), suggesting that intermediate learners may still rely heavily on motivational and predictability cues, even in more opaque idiomatic contexts.

#### 4. Conclusion

Summing up the results of the two kinds of experiments, we may state the following. The limited amount of essay-analysis data presents several implications for the overall research. Firstly, the small sample size may constrain the generalizability of the findings, making it difficult to ensure that the observed patterns accurately represent the broader population. This limitation underscores the need for further research with larger samples to enhance the reliability and validity of the results. Secondly, the limited data may reflect challenges in data collection or resource constraints, which could impact the robustness of the findings. Despite these challenges, even small datasets can reveal valuable trends and patterns that contribute to hypothesis development and theoretical refinement. Moreover, the restricted data set necessitates careful consideration in framing research questions and designing studies. The observations derived from a small number of essays may indicate areas where research questions or methodologies require further refinement. Additionally, a focused analysis of a limited dataset allows for a more in-depth examination of specific examples and phenomena, potentially providing a deeper understanding of the subject matter despite the small sample size. Ultimately, the presence of limited data highlights the need for continued research. It serves as a prompt for researchers to explore the topic further with more extensive datasets to validate and expand upon the initial findings.

In the idiom testings, motivation consistently emerged as a crucial determinant of idiom production. The pilot study showed moderate to strong correlations between motivation and production scores among B-level learners, corroborated by the major study with robust correlations. This highlights the role of motivation in enhancing idiom production abilities, aligning with theoretical frameworks that emphasize its importance in language learning. Predictability also played a significant role in idiom production. The pilot study and major study both found correlations between predictability and production scores. These results support cognitive theories suggesting that idioms with clear, anticipated meanings facilitate more accurate and fluent production.

The calculations of correlation in the major study also revealed non-linear relationships, indicating varied impacts of motivation and predictability across proficiency levels. Level C participants generally showed higher production averages across most idiom types and conditions compared to B-level subjects, suggesting that tailored instructional materials emphasizing idioms with higher predictability and motivation can enhance proficiency.

Cieślicka (2015: 216-217) notes that idioms with L2 counterparts rooted in distinct conceptual foundations can be understood through literal meanings or contextual clues. Transparent idioms are easier to interpret, while opaque idioms are more challenging even with context (Cieślicka, 2015: 217). Higher proficiency levels are often associated with lower reliance on L1 in idiom production (Irujo, 1993: 215; Laufer, 2000: 195), but proficiency does not significantly correlate with motivation or predictability. Higher motivation and predictability correlate with better production (Charteris-Black, 2002: 126; Irujo, 1986: 293, 1993: 213), and transparent idioms facilitate production (Cieślicka, 2015: 217).

*Same-same idioms* are consistently the easiest across studies (Abdullah and Jackson, 1998, Cieślicka, 2006b: 232-233; Charteris-Black, 2002; Irujo, 1986, 1993). Despite high mean production scores, negative L1 transfer is more common with idioms sharing meaning and form (Cieślicka, 2015: 229). My experiments confirm that *same-same* idioms have the highest production averages, aligning with literature, particularly in motivation-transparent and predictability-transparent conditions.

*Similar-same* idioms, despite being the second most successful in my experiments, pose challenges due to their similarity to idioms in L1 (Cieślicka, 2006b: 238, Irujo, 1986: 292, 1993: 214). The different-same category showed minimal differences in production averages, aligning with findings from Abdullah and Jackson (1998), Cieślicka (2006b), and Charteris-Black (2002). Motivation-transparent idioms were the most successful, with predictability-transparent idioms also performing well.

When L2 idioms lack L1 equivalents, learners often interpret them literally (Cieślicka, 2015: 216-217). However, if opacity scores are higher, it may be due to previous exposure or familiarity with idioms. My data show that motivation-opaque and predictability-opaque idioms sometimes perform better than their transparent counterparts, especially in the major study.

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### List of publications related to the dissertation

#### Hungarian book chapters (2)

1. **Lukács, B.:** Kognitív mechanizmusokról a számnevet, mennyiséget, és mértéket kifejező angol idiómákban. Utánközlés másodközlés,  
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