

Idiom Interpretation Strategies of Second Language Learners

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Abstract:

The present study used error analysis to examine the strategies that foreign language learners with dissimilar L1 use to interpret unfamiliar L2 idioms presented without contextual support. A group of 23 low-intermediate Japanese university students were asked to guess the meaning of 30 English idioms. Twenty-seven of the phrases had semantically equivalent but lexically different idiomatic counterparts in Japanese, and three phrases had multiple idiomatic equivalents in Japanese, some of which were also compositionally identical to the target English expressions. The results showed that learners use of a variety of interpreting strategies, including compositional analysis of the phrases, cross-linguistic transfer, as well as the activation of conceptual and cultural knowledge. Over-focus on one compositional element of the phrase was identified as the main source of error in L2 idiom comprehension. Cross-linguistic influence was observed, but the transfer was not automatic, even when L1 and L2 pairs shared semantic and lexical properties.

Keywords: L2 figurative language, idiom comprehension, learners' strategies; language transfer

1. Background

Due to their lower level of linguistic competence, limited L2 exposure and the possible interference of L1, second language learners are clearly at a disadvantage when it comes to processing L2 figurative expressions. Their vocabulary knowledge, insufficient in terms of both size and depth, prevents them from taking advantage of contextual clues or recognizing how the meanings of individual words motivate the overall figurative interpretation of the phrases. Sometimes they are not even aware that the phrases are used figuratively. The problem is compounded by the fact that figurative language has received little attention in EFL materials. In many English textbooks idiomatic expressions are completely omitted. If included, they tend to be listed at the end of a chapter as '*other expressions*', without any follow-up activities that could potentially help learners remember their meanings or a context of use (Irujo, 1986a). Finally, idiom comprehension strategies are not frequently taught in foreign language classes, and even when learners recognize figurative usage, they are often unsure as to whether or not their L1 comprehension strategies will be effective for interpreting L2 figurative meanings (Pimenova, 2011).

Research on idiom processing and comprehension in L2 has also been relatively scarce. One of the earliest studies of idiom processing in L2 was undertaken by Kellerman (1979), who examined the influence of the learners' mother tongue on their interpretation of figurative meanings in L2. He observed that learners were less likely to rely on L1 knowledge when they perceived the phrases to be used idiomatically. Similar results were obtained by Cooper (1999) who found that in the process of comprehending L2 idioms, learners referred to L1 idioms only 5% of the time. Like Kellerman (1979), Cooper (1999) interpreted this disinclination as evidence of learners' over-cautiousness when it comes to transferring non-core meanings.

However, some experimental evidence suggests that cross-linguistic transfer does play a role in the interpretation of L2 figurative language. In her study of the role of language transfer in the acquisition of L2 idioms, Irujo (1986b) assessed Spanish students' comprehension and production of English idioms. The idioms were divided into three groups: those that were identical to Spanish idioms, those that were similar, and those that were different from Spanish ones. Evidence of positive transfer was found for identical idioms. Similar idioms were understood almost as well as the identical ones, but negative transfer was observed at the production stage. The idioms that were totally different were found to be the most difficult to comprehend and recall, and little evidence of either positive or negative language transfer was observed. Based on these findings, Irujo (1986b) concluded that language transfer also occurs during the acquisition of figurative language. Some possible reasons for the discrepancies between Irujo's (1986b) and Cooper's (1999) findings may be related to the differences in the students' proficiency level and their linguistic backgrounds. In Irujo's study the participants were advanced learners, whose native language was Spanish, which meant that L1 and L2 were closely related. In Cooper's study, the learners came from different linguistic backgrounds and differed significantly in terms of their length of study.

Pimenova (2011) examined the comprehension of idiomatic expressions in jokes using concurrent and retrospective Think-Aloud Protocols. The study involved two groups of learners with dissimilar first languages (English and Russian). Cross-linguistic transfer (labeled *Idiom Analog* strategy) was found to positively correlate with the recognition and comprehension of identical idioms in both groups. For learners of Russian (English native speakers) dissimilar idioms were the most difficult to comprehend. Similar idioms fell between those two poles. However, for English language learners (native speakers of Russian) similar idioms turned to be harder to comprehend than the idioms that had no analogical forms, which Pimenova attributed to text-related variables and learners' over-cautiousness when it comes to the transfer of figurative language.

Pritchett, Vaid & Tosun (2016) compared the recall of idiomatic phrases by late bilinguals whose first language was English or Russian in three conditions: (1) when the target expressions were

idiomatic equivalents in the two languages, (2) when the phrases had idiomatic meaning in only one language, and (3) when the phrases had no idiomatic meaning in either language. They found that nonsense phrases were most difficult to recall. Phrases with figurative meanings in both languages were easier to retrieve than the phrases that had idiomatic meaning in one language only. The authors attributed the better recall rates for the shared idiomatic equivalents to their dual representation in the semantic memory of a bilingual speaker and consequently their heightened salience and accessibility.

In addition to cross-linguistic transfer, the learners also used a number of other idiom comprehension strategies among which the most frequent were guessing from context, compositional analysis, and attention to the literal meanings of idiomatic expressions. According to Cooper (1999), the three strategies above were used 28%, 24% and 19% of the time respectively. Some studies (e.g., Abel, 2003; Cieślicka, 2006; Kecskes, 2006) suggest that learners tend to over-rely on the compositional analysis of idiomatic expressions. Abel (2003) compared the idiom decomposability judgments of native speakers and German learners of English and found that the learners often judged idioms as decomposable even when they were non-decomposable and semantically opaque. However, as their proficiency increased, they were more likely to approximate the native speakers' norm. Cieślicka (2006) found that learners employed compositional analysis even when they were familiar with idiomatic interpretations of the phrases presented in figurative contexts. She attributed the bias towards literal interpretations to a higher salience status of literal meanings in the learners' mental lexicons. This is believed to have resulted from their limited familiarity with figurative usage.

In a 2002 study, Bortfield found that learners were able to infer figurative meanings based on the analysis of surface forms even when there was no additional contextual support. In another experiment conducted in 2003, Bortfield observed that compositional analysis allowed the subjects to infer the meanings of idioms from languages of which they had no prior knowledge. She concluded that the surface forms of idioms are indicative of their underlying figurative meanings, and that figurative language varies along a continuum of analyzability, ranging from general conceptual structures to specific cultural and historical references.

The role that conceptual knowledge and cross-cultural variation play in L2 idiom comprehension was also examined by Boers and Demecheleer (2001) and by Boers, Demecheleer, and Eyckmans (2004). Boers and Demecheleer (2001) asked a group of 78 French learners of English to 'guess' the meaning of 24 unfamiliar English idioms provided without contextual support. They found that almost 35% of the participants' responses were at least partially correct, the results congruous with the hypothesis that the meanings of many idioms are conceptually motivated. However, they also observed that when idioms reflected metaphoric themes that were absent from the learners' culture, the phrases were more difficult to guess. Similar results were

obtained by Boers, Demecheleer and Eyckmans (2004) in a study which examined learners' ability to infer the meaning of unfamiliar idioms and identify their source domains. They found that in more than 30% of the cases the participants were able to select the correct source domains. This was taken as evidence of semantic motivation of figurative language. Furthermore, students' correct interpretations of the idioms often coincided with their ability to identify the source domains. However, idioms whose source-domain were more salient in L2 than in the learners' mother tongue were less susceptible to dual-coding (i.e., visualizing) and more difficult to comprehend and recall.

Skoufaki (2009) examined learners' comprehension of high and low transparency idioms provided with and without contextual support. She found that in both conditions, high-transparency idioms received a larger number of correct interpretations, but that the effect of idiom transparency was stronger in the absence of contextual support. Skoufaki concluded that idiom-inherent features contribute to semantic transparency and comprehensibility, but contextual clues play a crucial role in L2 idiom interpretation.

Pimenova (2011) identified twenty different comprehension strategies of which only two – the earlier discussed *Idiom Analog* strategy and *Idiom Background Knowledge* (using knowledge about idioms acquired through study, experience or instruction) - were found to positively correlate with idiom recognition and comprehension. *Word/Grammar Analysis* strategy (i.e., separating a sentence, or a word into its constituent elements) and *Word Analog* strategy (i.e., finding a translation of a word in another language with a belief that these words are equivalents or cognates) had a weak negative correlation with comprehension. Pimenova concluded that learners should be encouraged to use more top-down global strategies rather than bottom-up strategies such as compositional analysis. However, it is difficult to compare these findings with the results of the aforementioned compositionality studies as Pimenova's strategy classification criteria did not make a distinction between the learners' analysis of the idiomatic phrases and their analysis of the sentences in which these phrases were encountered, that is, contextual support. Furthermore, the study relied on Think Aloud Protocols, whose validity as a research method has been questioned for possible incompleteness of data caused by a disruption of the cognitive process or memory errors, and the subjectivity of records derived from informants' individual interpretations of their own behaviour (cf. Van Someren, Barnard, & Sandberg, 1994).

In short, the available research suggests that L2 learners use a number of different strategies that include compositional analysis, contextual clues, cross-lingual transfer, conceptual and cultural knowledge. The effectiveness of these strategies, however, seems to depend on the semantic transparency of the phrases, idiom familiarity, the richness of contextual clues, the saliency of source domains, linguistic distance, as well as learners' proficiency levels. The complexity of the issue and inconclusive evidence with regard to the frequency with which different strategies are

used and their effectiveness for decoding L2 figurative idiomatic meanings suggest the need for more research. The present study was conducted in order to shed more light on the strategies that learners use to infer the meanings of L2 idioms provided without contextual support. The study is innovative in its approach to exploring idiom comprehension strategies through an analysis of learners' errors during the inferencing process.

2. Present study

2.1 Objectives

The present study was conducted as part of larger research project which examined the effects that idiom familiarity and a knowledge of figurative meanings have on the idiom transparency judgments of second language learners. (For a complete description of this study see Vasiljevic, 2016). While error analysis as a research methodology has been widely used for the assessment of learners' productive vocabulary (see James, 1998), it has rarely been applied in the studies that examined the development of receptive vocabulary knowledge. Research on lexical comprehension in L2 has often been limited to studies of different types of contextual and morphological clues, and to learners' ability to take advantage of them. The present study is novel in its attempt to use errors in idiom definitions as a window into strategies that learners use to interpret L2 figurative language in the absence of contextual support.

2.2 Participants

The experiment involved one group of 23 first-year Japanese university students. Their English ability varied (CASEC scores 395~745), but the majority were at a low-intermediate level (CASEC average 530, SD=98.1), which corresponds approximately to a TOEIC score of 430 or a B1 level on the CEFR scale.

2.3 Materials

The stimuli consisted of thirty English idioms. Twenty-seven phrases had semantic equivalents in Japanese with different lexical make-up (e.g., *apple polishing*=*goma suri* (*sesame grinding*)). Three phrases were English idioms which had two idiomatic counterparts in Japanese, one of which had the same lexical components, and the other which had the same meaning but a different lexical composition. The three idioms in question were: (1) *silence is golden* which matches the Japanese expressions 言わぬが花 (*iwanu ga hana* = not saying is the flower) and 沈黙は金 (*chinmoku wa kin* = silence is golden), (2) *pearls before swine* which corresponds to both 猫に小判 (*neko ni koban* = a gold coin before the cat) and 豚に真珠 (*buta ni shinju*= pearls before swine), and (3) *love is blind* for which the Japanese equivalents are あばたもえくぼ (*abata mo ekubo* = pockmarks (are seen) as dimples) and 恋は盲目 (*koi wa momoku* = love is blind). A complete list of target phrases is provided in the Appendix.

2.4 Procedures

The target idioms were presented in sets of ten over three sessions. The time allocated for the inferencing task was ten minutes. The students were informed that all the phrases were figurative expressions, and asked to try to guess their meanings. They were also instructed to circle the words they did not know and ask the teacher for clarification. It was assumed that without an understanding of the literal meanings of idiom components it would have been impossible for the learners to infer the figurative meanings of the phrases as a whole. The students were also told that they could write their answers in English or Japanese and that they could explain idiom meanings by providing definitions, synonym or corresponding idiomatic expressions.

2.5 Scoring and analysis

After the students completed the task, the number of correct, incorrect and no-response instances was calculated. Incorrect responses were then analyzed qualitatively, and an attempt was made to identify some of the strategies that the learners might have used to infer the idiom meanings in the absence of contextual clues. Strategy categories were not set a priori, but emerged from an analysis of the learners' responses.

3. Results

Out of 690 possible responses (23 students X 30 idioms) 427 responses were collected. This means that the students attempted to define idiom meanings 61.9% of the time. Approximately one third of these attempts were successful. Figure 1 shows the proportion of correct and incorrect answers, and blank responses.

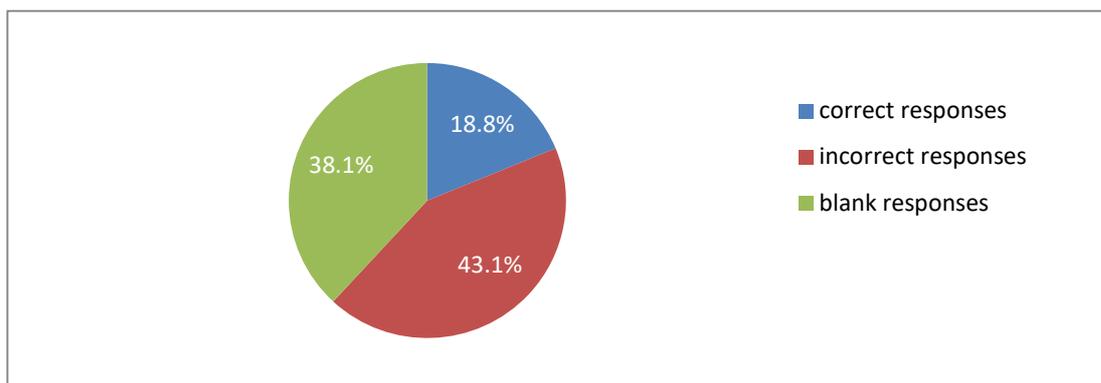


Figure 1. The proportion of correct, incorrect and blank responses

The three idioms that had lexical and semantic equivalents in the learners' L1 had a higher percentage of correct responses, but they were not always interpreted correctly and, in some

cases, the learners did not even attempt to define them. For *silence is golden* there was a 26% correct response rate, while for *pearls before swine* the rate was 30.4%. The idiom *love is blind* was correctly defined by 56.5% of the learners. These figures suggest that transfer from L1 may facilitate interpretation of L2 figurative language, but they also indicate that the recall of L1 figurative expressions is not automatic, even when they have an identical structure with L2 phrases.

This study, however, was primarily interested in the strategies that learners use to comprehend novel, compositionally different L2 idioms. While the proportion of correct responses may be indicative of the learners' lexical proficiency, it tells us little about the strategies they used to decode figurative meanings. For example, it is difficult to tell whether the relatively high correct response rate for the idiom *love is blind* should be attributed to the learners' prior knowledge of the phrase, a positive transfer from L1, the semantic transparency of the phrase, or the underlying conceptual metaphor LOVE IS MADNESS that provides semantic motivation for the expression. Therefore, in order to identify the strategies that learners use to decode the meanings of unfamiliar idioms in the absence of contextual support, the study focused on the errors in the learners' responses. The analysis of their responses reveals the use of a number of different techniques during the interpretation process.

One of the strategies that the learners resorted to was the search for figurative expressions in L1 that contained one or more constituent words from the target phrases. For instance, the idiom *when it rains it pours* was translated by Japanese idiom 雨降って地固まる (*ame futte ji katamaru*=soil becomes harder after rain (lit.), adversity builds character (fig.)) by as many as 12 students. Another frequent example of negative transfer was observed in interpretations of the idiom *under the table*, which six students associated with the Japanese idiom 灯台もと暗し (*today moto kurashi*=darkness under the lighthouse (lit.), can't see the forest for the trees (fig.)). In other words, the presence of single words such as 'rain' or 'under' in both L1 and L2 figurative expressions was sufficient to make some learners believe that they were synonymous.

In some cases the learners' responses seem to have been motivated by L2 figurative expressions that shared some lexical constituents with the target expressions. In one instance, *apple polishing* was explained as 'to raise my children carefully'. While at first sight the two phrases do not seem connected, it is possible that the word *apple* made the student think of the expression *the apple of my eye*, often used to express sentiments towards children.

Another common error-prone strategy was to focus on one constituent word in the phrase, based on which the whole phrase was interpreted. For example, in the idiom *a piece of cake*, *piece* seems to have been the most salient word for many students in this study. Six students defined the phrase as 一切れ 小さい、ほんの一握り (*ichi kire, chiasai, honno hito nigiri* = a piece,

small, just a handful) and みんなで分ける (minna de wakeru = share with everybody) or paraphrased it in English as ‘a part of something’ and ‘a little bit of something’. Similarly, interpretations of the idiom *country bumpkin* often seemed to be centered around the word *country* resulting in the erroneous responses such as 国境 (kokkyo = a country’s border); 国の圧力 (kuni no atsuryoku = a country’s pressure) and 国の革命 (kuni no kakumei = a country’s revolution). Another example is the idiom *to end the career on a high note* which was explained as ‘to quit something’, suggesting that the student focused on the first part of the phrase only. In the idiom *to charge what the traffic will bear* the most salient word for some students seems to have been *traffic* leading to responses such as ‘When you drive, you have some responsibility’. One student interpreted *apple polishing* as ‘polishing the skill’, and two students defined it as ‘to practice’ and ‘to get better at something’, respectively. The students seemed to have mapped the familiar meaning of *polish* - to improve or to refine something - on a new L2 expression. Mapping of a single-word meaning onto the phrase as a whole was also observed in the case of idioms that had semantic and lexical equivalents in the learners’ L1. For example, the idiom *silence is golden* was sometimes translated as 静か (shizuka = silent) or 閑散 (kansan=quiet, deserted).

Some students failed to interpret idioms figuratively, and simply wrote their literal translations. This type of error was particularly frequent with the idiom *to take one’s hat off to*, for which eight students simply wrote 帽子をぬぐ (booshi wo nugu = take off a hat) or just 脱帽 (datsu boo = removing one’s hat). Similar errors were observed in the interpretations of the idiom *go straight*, which was translated as 進め (susume = advance, move forward) and *under the table* for which one student just provided a possible context of use based on the literal meaning of the phrase: ‘earthquake to keep safety’ (sic.).

In some cases the students seem to have conducted a compositional analysis of the phrases, but they either failed to recognize the constituent words correctly or they activated the wrong sense of one or more lexical components. A clear example of the first type of error is a student defining *country bumpkin* as Halloween, where the *bumpkin* was obviously confused with its synform *pumpkin*. Activation of the wrong sense of the phrase constituent was another cause of error. For example, some students associated the idiom *partners in crime* with ‘love affair, adultery’. While the word *partner* in English can have many meanings such as a business associate or a person involved in the same activity, for the students the most salient sense was that of a personal relationship, resulting in the word *crime* being associated with extramarital relationships. Another example is the idiom *to charge what the traffic will bear*, which some students explained as ‘to snack’, ‘to get energy’ possibly because they associated the word *charge* with energy charge food and drinks.

Sometimes the learners' responses seem to have had an experiential basis. For instance, the idiom *to go straight* was translated as 猪突猛进 (chototsu moushin = rushing recklessly) by three students. The responses seem to suggest that the students thought that somebody *going straight* is not paying sufficient attention to what is happening around them, in front and behind, to their left and to their right, in other words, somebody who is doing something without careful thought. One student explained the phrase as あきらめるな (akirameruna = don't give up), while three students defined the same idiom as 自分を信じる (jibun wo shinjiru = believe in yourself). These interpretations seem to be motivated by an idea that someone who is *going straight* is persistent, confident, decisive, acts according to one's convictions and is not easily influenced by others. Another example is the interpretation of *apple polishing* as 'mechanical work'. It is easy to see how an image of somebody polishing apples could raise associations with boring and repetitive work. The same idiom was translated by two students as 美肌 (bi hada = beautiful skin), probably reflecting their experiential knowledge that polishing and care lead to glossy skin.

Some errors seem to have resulted from the activation of an inappropriate background schema. For example, two students defined the idiom *apple polishing* as 'poison' and 'deception'. It is possible that these interpretations were triggered by the story of *Snow White* and the poisoned apple.

Finally, some errors seem to have been caused by the projection of an inappropriate cultural schema. For instance, the idiom *be up to one's eyeballs in work* was defined as 'respect / respect for one's superior' by as many as eight students. These responses seem to reflect the Japanese value system in which being busy and having a lot of work is seen as something desirable, and is associated with honour and respect.

In summary, the data collected suggest that learners use a variety of top-down and bottom-up strategies to interpret the meanings of L2 idioms. These include cross-linguistic transfer, a compositional analysis as well as experiential knowledge and cultural schema.

4. Discussion

The present study investigated the comprehension strategies that Japanese learners of English use to decode the meaning of figurative idioms provided without contextual support. What differentiates this study from earlier research is that it sees errors as a window into the learners' minds and a key to understanding the thinking processes that motivated their responses. The results of the analysis suggest that learners use a number of different strategies during the interpretation process.

One of the most common strategies was transfer from L1. The responses showed that the learners tried to recall the familiar literal and figurative meanings of L1 phrases, and to map those meanings onto the L2 figurative expressions. In line with the findings of Irujo (1986b) and Pritchett et al. (2016) the transfer facilitated comprehension most when L1 and L2 idioms were semantically and compositionally equivalent, as reflected in the larger number of correct responses for the three idioms with identical counterparts in L1. However, it should be noted that the L1 idiom activation was not automatic. There were a number of instances where the learners did not provide correct responses or even make an attempt to define the idioms. It is possible that, in addition to L2 idiom knowledge, the activation of L1 idiomatic phrases may depend on other factors such as idiom transparency and the learners' familiarity with the target phrases in L1, as well as learners' level of confidence in transferability of figurative language.

Errors in the responses provide some insight into the criteria that learners may be applying in the process of the selection of the matching L1 idioms. In the absence of contextual clues and background information about the idiom origins, the learners seem to have searched for L1 figurative idioms that contained a word that, for one reason or another, they perceived as being most salient. This over-focus on one lexical component of L2 phrases was observed not only when the responses were L1 idioms, but also in the definitions of the target expressions that the learners provided in L1 or L2. These findings seem to contradict the data that Abel (2003) obtained from the biographical questionnaires of second language learners in which the respondents reported considering the literal meanings of the constituents first, and then trying to putting them together to derive the figurative meaning of the phrase as a whole. The data in this study suggest that rather than performing a full compositional analysis, learners tend to focus on one word in a phrase and then activate associated words or concepts based on which the whole phrase would be interpreted. These findings are important as they may indicate that native and non-native speakers employ qualitatively different patterns when it comes to the processing of idiomatic strings. Experimental studies with native speakers have shown that they can never ignore the literal meanings of the words that they encounter in discourse regardless of whether they are used literally or figuratively (Miller & Johnson-Laird, 1976; Cacciari & Glucksberg, 1991). During idiom comprehension in L1, literal meanings of idiom components are activated and remain activated until idiomatic configurations are recognized (Cacciari & Tabossi, 1988). However, it is possible that non-native speakers activate the literal meanings of the string components until they encounter the word that they perceive as the most salient, and then interpret the whole phrase based on the lexical or conceptual associates of that word. The literal meanings of other words in the string may be ignored, even if they are incompatible with the projected meaning of the phrase as a whole. The saliency of the word may not depend on the level of its contribution to the figurative meaning of the idiomatic phrase, but rather on the level of representation of that word in the learners' mental lexicon. Conceptual associations of the words that are more *active* in learners' minds may suppress the activation of the meanings of the words with less developed representations in the mental lexicon.

Errors in the responses are also indicative of the problems that learners' limited general lexical proficiency imposes on the figurative language processing. Confusion of synforms (e.g., *pumpkin* vs. *bumpkin*) and a limited knowledge of different word senses (e.g., *charge energy* vs. *charge money*) combined with the tendency to extend the meaning of one constituent word onto the phrase as a whole, sometimes result in the activation of inappropriate conceptual schema and consequently miscomprehension of the idiomatic meaning.

Some transfer errors seem to have been caused by a lack of figurative competence in L1. For example, for the idiom *pearls before swine*, one student provided two Japanese idioms as a response: 豚に真珠 (*buta ni shinju* = pearls before swine) and 手持ちぶさた (*temochi busata* = not knowing what to do with one's hands, feeling awkward). As the two expressions have different meanings in Japanese, including them both in the response may suggest the learner's incomplete understanding of what they mean and how they are used in L1.

Although the students were informed that all target phrases had figurative meanings, there were a number of instances where their responses were direct translations of the expressions. This confirms Cieślicka's (2006) observation about the saliency of literal meanings in L2 idiom processing, irrespective of the richness of contextual clues or of the learners' familiarity with the figurative meanings. However, it should be noted that the majority of direct translations were observed in the responses to the idioms *to go straight*, *to take (one's) hat off to* and *under the table*, which have a high degree of literality (i.e., a potential to have literal interpretations). It is possible that the students' familiarity with the literal use of these expressions biased them towards literal interpretations, irrespective of the task instructions.

Learners' responses also suggest an active use of top-down strategies. As discussed before, during the idiom comprehension process, some learners activated propositions of familiar fairy tales and life background knowledge, which included both personal experiences and the cultural schema of the society in which they live. The results of this study did not support Pimenova's (2011) observation about the superiority of top-down strategies in idiom comprehension. The answers showed that differences in cultural norms sometimes lead to the activation of wrong conceptual schema and to a misinterpretation of figurative language. However, it should be remembered that in Pimenova's study the idioms were provided in context, while in the present study the target phrases were presented in isolation.

The fact that compositional analysis of the phrases sometimes resulted in a number of incorrect but plausible interpretations of the expressions provides support for Keysar's and Bly's (1995) hypothesis that the figurative meanings of idiomatic expressions may be learned rather than motivated by the lexical make-up of the phrases.

5. Conclusion

The results of the study show that learners use a variety of strategies to infer the meaning of L2 idiomatic expressions. These include a transfer of the figurative language from L1, a compositional analysis, and the application of conceptual and cultural knowledge. Compositional analysis seems to be the most common idiom interpretation strategy in the absence of contextual support. The errors in learners' responses, however, seem to suggest that they perform only a partial analysis of the idiomatic expressions and that figurative phrase meanings are mapped only onto the most salient word in the idiomatic string. Some errors also seem to result from the learners' lack of figurative competence in L1. The results also show that when learners encounter novel idioms out of context, they can give very different but equally plausible interpretations of their meanings. These findings suggest that idiom meanings are not necessarily constructed by motivating a link between idiom constituents and conventional figurative phrase meanings, but are rather a result of learning through exposure.

6. Future studies

As Pimenova (2011) points out, the results of a study can only be generalized within the scope of its participants, methodology, and type of task being employed. The present experiment was done as an exploratory study with a small group of learners and a set of 30 idioms. The results call for more research with regard to the effect that different dimensions of idiom variability, availability of contextual clues and learner variables may have on comprehension strategy selection and their success rate.

In order to obtain a better understanding of the strategies that learners use to decode the meanings of novel L2 idioms, the study should be replicated with a larger number of students at different stages of L2 acquisition, so that any possible effect that the learners' proficiency level has on strategy use can be observed. Furthermore, future studies should control for the compositionality of idioms and their literality, as these dimensions may also affect learners' strategy choices. The presence or absence of contextual clues is another factor that should be considered. In normal language processing, idioms are always encountered in context. Context is known to facilitate comprehension and allow the recall of figurative idioms (McGlone, Glucksberg & Cacciari, 1994). Consequently, the presence of contextual clues is expected to affect the learners' choice of comprehension strategies as well as their effectiveness. It is also recommended that future studies include post-task interviews that would allow clarification of the reasoning behind the learners' responses. In the present study, it was not always possible to explain the origin of the errors or the strategies that learners used to infer idiom meanings. For example, one student defined *silence is golden* as 'to talk more often', while another student explained *two peas in a pod* as かばんに食べ物を入れて行けない (kaban ni tabemono wo irete ikenai = you should not put the food in the bag). Another unusual interpretation was the

translation of idiom *to charge what the traffic will bear* as 地獄で仏に会う (jigoku de hotoke ni au = to meet Buddha in Hell (lit.) = to be a godsend in times of distress (fig.)), while another student defined it as the idiom 心機一転 (shinki itten = change of heart (lit.), turn over a new leaf (fig.)). The inclusion of post-task interviews could help clarify the reasons behind the learners' responses, and possibly help identify additional strategies that learners use to decode L2 figurative expressions. Finally, further studies in experimental conditions using eye-tracking technology could reveal whether learners indeed over-focus on one word and fail to process idiomatic strings in their entirety. It is hoped that the results of this study will prompt further research in comprehension strategies and figurative language processing in L2.

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Appendix: Target idioms

* = idioms with two idiomatic counterparts in Japanese

1. apple polishing = ごますり (goma suri = sesame grinding)
2. *silence is golden = 言わぬが花 (iwanu ga hana = not saying is the flower)
= 沈黙は金 (chinmoku wa kin = silence is golden)
3. two peas in a pod = 瓜二つ (uri futatsu = two halves of a cucumber)
4. let bygones be bygones = 水に流す (mizu ni nagasu = to set things adrift)
5. you can /could hear a pin drop = 水を打ったよう (mizu wo utta yoo = as if scattered water)
6. a drop in the bucket = 焼け石に水 (yake ishi ni mizu = water on a red hot stone)
7. every Tom, Dick and Harry = 猫も杓子も (neko mo shakushi mo = even cats and rice ladles)
8. *pearls before swine = 猫に小判 (neko ni koban = a gold coin before a cat)
= 豚に真珠 (buta ni shinju = pearls before swine)
9. to be up to one's eyeballs in work = 猫の手も借りたい (neko no te mo karitai = willing to accept even the helping hand of a cat)
10. partners in crime = 同じ穴の貉 (onaji ana no mujina = badgers from the same hole)
11. when it rains, it pours = 泣き面に蜂 (naki tsura ni hachi = the bee [stings] when you're already crying)
12. *love is blind = あばたもえくぼ (abata mo ekubo = pockmarks are [seen as] dimples)
= 恋は盲目 (koi wa momoku = love is blind)
13. to rest on one's laurels = あぐらをかく (agura wo kaku = to sit cross-legged)
14. to charge what the traffic will bear = 足もとを見る (ashi moto wo miru = to look at someone's feet)
15. to go straight = 足を洗う (ashi wo arau = to wash one's feet)

16. to take (one's) hat off to = 頭がさがる (atama ga sagaru = one's head is bowed)
17. tacit understanding = 以心伝心 (ishin denshin = reading each other's heart)
18. have a lot of nerve = 心臓が強い (shiznou ga tusyoi = strong-hearted)
19. different strokes for different folks = 十人十色 (juu nin to iro = ten people, ten colours)
20. two heads are better than one = 三人寄れば文珠の知恵 (san nin yoreba monju no chie = three people together have the wisdom of a Buddha)
21. jam-packed = すし詰め (sushizume = packed like sushi)
22. country bumpkin = おのぼりさん (onobori san = one who journeys to the capital)
23. to save the day = わたりに舟 (watari ni fune = a boat to cross on)
24. a piece of cake = 朝飯前 (asameshi mae = before the morning meal)
25. once a fool, always a fool = ばかほしななきや治らない (baka wa shinanakya naoranai = only death can cure a fool)
26. to split hairs = 重箱の隅を「ようじ」でつつく (juubako no sumi wo [yooji de] tsutsuku = to pick at the corners of a food-box [with a toothpick])
27. time flies like an arrow = 光陰矢のごとし (koojin ya no gotoshi = light and darkness fly like an arrow)
28. to be kicked upstairs = 窓際族 (madogiwa zoku = the window tribe)
29. under the table = 袖の下 (sode no shita = under one's sleeve)
30. to end a career on a high note = 有終の美を飾る (yuushuu no bi wo kazaru = to decorate the ending with beauty)