

Quantitative and qualitative aspects of L1 (Swedish) and L2 (English) idiom comprehension

Monica Karlsson

Halmstad University, Sweden

mica.karlsson@glocalnet.net

Abstract

In the present investigation, 15 first term university students were faced with 80 context-based idioms in English (L2) and Swedish (L1) respectively, 30 of which were in the source domain of animals, commonly used in both languages, and asked to explain their meaning. The idioms were of varying frequency and transparency. Three main research questions were thus addressed:

1. How well do students master idioms in their L2 as compared to their L1?
2. How do (a) degrees of transparency, (b) idiom frequency and (c) the choice of source domain affect students' L1 and L2 comprehension?
3. To what extent is context used when interpreting L1 and L2 idioms?

Results show that while the frequency of an idiom does not appear to play a part in whether it is comprehended or not in either language, the degree of transparency is of great importance in students' L2. Also, students make extensive use of context in their L2.

Keywords: L1/L2, idiom comprehension, transparency, source domain, frequency, context

Many teachers consider idioms to be comparatively infrequent items of vocabulary and because of this believe that they do not warrant much time in the L2 classroom. Admittedly, idioms may not be as frequently used as other vocabulary items. In Moon (1997), for example, studying the frequency of

6,700 fixed phrases in the Oxford Hector Pilot Corpus, a corpus of British English consisting of 18 million words, it is shown that the number of occurrences of idioms is indeed quite low. In fact, only slightly more than 11% of the idioms included in the study (1,657 items considered) occurred 1-5 times per one million words (8% 1-2 times; 3% 2-5 times; ≈1% 5-50 times). These findings are also substantiated by Biber, Johansson, Leech, Conrad, and Finegan (1999) in their analysis of the Longman Spoken and Written English Corpus consisting of 40 million words. In their study, idioms occurred on average fewer than five times per one million words.

In order to get a more hands-on perspective on the matter, the present author decided to write down all the idiomatic expressions heard when watching TV for a few weeks. The lasting impression after these weeks was not that idiomatic expressions are highly infrequent vocabulary items, but rather that they are comparatively omnipresent elements. The main reason for these diametrically different perceptions of idiom frequency is that idiom use is highly register sensitive. Generally speaking, it seems that idioms are more common in informal discourse than in more formal settings, but it even varies according to the type of informal situation (Liu, 2008).

When choosing vocabulary for the teaching syllabus, the question we as teachers therefore need to ask is: How native-like do I want my students to become? As the results of the present study will show, native speakers of Swedish understand a great number of idioms in their first language. Thus, if students want to become equally advanced in their L2, idiomatic expressions form an area of the lexicon that cannot be neglected. The aim of the present study is therefore to explore the extent of advanced students' mastery of L2 idioms in contrast to their L1 knowledge, quantitatively as well as qualitatively.

Theoretical Background

Idioms Defined

The type of idioms in focus in the present investigation, such as *wear one's heart on one's sleeve*, *pass the buck*, *have bats in the belfry* (see also Tables 4 and 5 for more examples), all adhere to the following definition, which suggests that these items of vocabulary are "multi-word items which are not the sum of their parts: they have holistic meanings which cannot be retrieved from the individual meanings of the component words" (Moon, 1997, p. 46). This definition considers idioms along three separate continuums, none of which are absolute but vary in accordance with each and every item. The three continuums deal with (a) compositionality, which has to do with the degree to which a

literal reading of an idiom can help in interpreting its figurative meaning, (b) institutionalization (or lexicalization), which focuses on the degree to which an idiom is conventionalized in a language based on its frequency and (c) fixedness, which describes the degree to which an idiom is frozen in a specific form. Idioms, which are considered to be lexically fossilized items since they most typically cannot be interpreted on a word-by-word basis, are normally seen to be highly noncompositional items having a unitary semantic meaning. Furthermore, even though, as discussed above, idiomatic expressions are comparatively infrequent items in certain registers, there is usually great consensus in a language community about what phrases should be interpreted as whole units of meaning, thus idioms rate highly on the institutionalization continuum, too. Finally, idioms have long been regarded as relatively frozen units of meaning. This means that they are usually also rated highly on the fixedness continuum. More recent research on the fixedness of idioms has, however, shown that these kinds of expressions are perhaps not as frozen as previously suggested (Moon, 1997, 1998). In Liu (2008, p. 36), for instance, quite a few examples are given of different types of idiom variation such as *set/start the ball rolling*, *a skeleton in the closet/cupboard* or *a bad/rotten apple*.

The Processing and Comprehension of L1 and L2 Idioms

Over the last few decades, there have been several approaches to the processing and comprehension of idiomatic expressions. The present subsection aims to describe the development of theoretical thinking behind some of the major approaches and to offer an overview of some of the most important strategies used by L2 learners when encountering unknown idioms. Two of the first processing hypotheses that were proposed, the literal first hypothesis (also referred to as the idiom list hypothesis) (Bobrow & Bell, 1973) and the figurative first hypothesis (also direct access hypothesis) (Gibbs, 1980), both believed that the meaning of an idiom was stored in a separate mental idiom list. Based on a number of experiments, Bobrow and Bell could show that the literal meaning appeared to always be accessed first and it was not until the literal interpretation had been rejected that learners started to think in a figurative way. This in turn meant, according to Bobrow and Bell, that literal meanings are always understood more quickly than idiomatic meanings. Gibbs, although still believing that idiomatic expressions were stored in a separate idiom list, could show in another set of experiments that literal meanings were not retrieved faster than figurative meanings. Gibbs thus claimed that native speakers rarely attempt literal readings of idiomatic expressions for the simple reason that they recognise an idiom when they see it and so they can bypass the literal route and ac-

cess its figurative meaning directly. Other studies at this time also showed that idiomatic expressions were processed faster than literal ones (e.g., Ortony, Schallert, Reynolds, & Antos, 1978).

In contrast to the literal first hypothesis and the figurative first hypothesis discussed above, the simultaneous processing hypothesis (also the lexical representation hypothesis) proposed by Swinney and Cutler in 1979 suggested that literal and figurative expressions are accessed simultaneously and it is not until the context disambiguates their meaning that the learner lets go of one of the interpretations. Based on yet another set of experiments, Swinney and Cutler (1979) claimed that in contrast to idiomatic expressions that are seen as units and therefore do not warrant further analysis, ordinary vocabulary items are, in addition to being analysed lexically, also analysed syntactically and semantically. Thus idiomatic expressions have an advantage in terms of processing speed since the whole phrase is treated as a single unit. Other studies, however, have shown that literal readings of idiomatic expressions appear to be activated and stay activated during the whole interpretation process. This is what is suggested by, for example, the idiom key hypothesis (also the point of idiom uniqueness hypothesis or the point of idiom recognition hypothesis), in which the strict separation between literal and figurative meanings of idioms as seen in the three models described above is absent (Cacciari & Tabossi, 1988; Flores d'Arcais, 1993; Tabossi & Zardon, 1993, 1995). In accordance with this hypothesis, the processing of an idiomatic string of words begins literally until the string, at one specific point, that is, the key point, becomes recognized as an idiomatic expression. The concept is an important one since there are fundamental differences between the key point of an idiom and the corresponding points of recognition of individual words (Tabossi & Zardon, 1993) and whole sentences.

In contrast to the four processing theories discussed so far, that is, the literal first hypothesis, the figurative first hypothesis, the simultaneous processing hypothesis and the idiom key hypothesis, a more recent theory referred to as the idiom decomposition hypothesis (also the compositional analysis hypothesis), claims that the processing and comprehension of idiomatic expressions do not only involve normal language processing, but that this processing occurs together with a pragmatic interpretation of the use of the idiom in its discourse context. This model was first proposed by Gibbs, Nayak and Cutting (1989) based on an experiment in which subjects were faced with idiomatic strings of words that were either semantically decomposable or totally nondecomposable. The results of the Gibbs et al. study were quite straightforward, showing that the subjects needed significantly less time to process decomposable idiomatic expressions than idiomatic expressions that could not be decomposed. This clearly suggests that learners first try to make

sense of the individual parts and not until they fail doing so, do they consider the expression an unanalysable unit.

The models described so far are all limited to the mental lexicon of native speakers. One theory that does not only deal with the processing and comprehension of L1 idioms, but also with idioms in an L2 is the model of dual idiom representation. Thus this theory is highly relevant to the present investigation. It has its basis in the work of Titone and Connine (1994) and was developed further by Abel (2003). The model of dual idiom representation is based on four assumptions, the first two dealing with lexical representation only. Firstly, the model suggests that it is the degree of decomposability of an idiom that decides how the idiom is represented in a learner's mental lexicon. Whereas an idiom which is nondecomposable requires a special idiom entry, an idiom which can be decomposed is represented via the entries of the constituents of which the idiom is made up. The evidence on which this assumption is based comes from research on compound words. Just like idiomatic expressions, compound words can be divided into those that are decomposable and those that are not. Studies focusing on two-part compounds (e.g., Sandra, 1990) show that for semantically transparent ones both constituents are accessed, while for semantically opaque compounds only the first constituent is accessed, indicating that the latter but not the former type must have a separate lexical representation. The same result was seen in a study by Zwitserlood (1994).

Secondly, the model also suggests that it is the frequency of an idiom that decides whether an idiom entry is developed or not so that the more frequent an idiom is, the more likely it is that an idiom entry will be formed. In addition, the model holds that this does not only occur with nondecomposable idioms but also with decomposable ones. Evidence of the existence of the frequency effect (and transparency) comes from research on morphology. Caramazza, Laudanna, and Romani (1988), for example, detected a major difference between frequent derivatives and inflected words on the one hand and those that were highly infrequent on the other hand. Whereas the frequent forms were approached as unseparated wholes, less frequent items were decomposed into stem and affix. In another study by Frauenfelder and Schreuder (1992), it was noticed that morphologically complex words were represented both via their constituent parts and their full entries, the frequency and transparency of the word in question determining which was made use of first. If an item was comparatively infrequent, the stem and affix entries were quite consistently shown to be accessed first. If, on the other hand, an item was comparatively frequent, the full entry was accessed first, bypassing the stem and affix entries.

The third assumption the model of dual idiom representation is based on is that if there are no lexical entries at the lexical level, which is very often

the case for nonnative speakers in their early stages of L2 learning, the processing and comprehension of idioms instead occur at a conceptual level. This is also suggested in, for example, Kecskes (2000). These conceptual representations are nonlinguistic in character and instead involve pragmatic knowledge, that is, they occur at a more general cognitive level. This means that, if no lexical information is available at the time of processing, learners will resort to conceptual metaphors, such as *ANGER IS FIRE*, which would help learners understand idioms like *smoke was coming out of his ears, she was spitting fire* and *he was fuming* (Lakoff & Johnson, 1980).

The fourth assumption deals with differences between L1/L2 processing and comprehension and it posits that because L2 learners have not been exposed to L2 idioms to the same extent as native speakers, there are not as many idiom entries in their mental lexicon. Second language learners therefore have to rely on literal readings of decomposable as well as nondecomposable idioms to a higher degree than native speakers do (see also Kecskes, 2000), that is, put differently, nonnative speakers have to rely to a greater extent than L1 speakers on constituent entries and, if there are none of these, conceptual representations of idioms have to be relied on. A connection can here be made to the work of Matlock and Heredia (2002), who claim that it is the proficiency-level of learners that decides to what extent they have to rely on literal readings of idiomatic expressions. Second language learner reliance on literal interpretations of idiom constituents is also explored in Cieślicka (2006a) in her literal-salience resonant model of L2 idiom comprehension.

This fourth assumption of the model of dual idiom representation is based on two studies, one dealing with native speakers and the other one dealing with L2 learners. In Titone and Connine's (1994) study mentioned above, native speakers of English were asked to judge whether a number of idioms were decomposable or not. The same subjects were also asked to rate the familiarity of the idioms on a 7-point scale on which 1 was the lowest value. It was found that the native speakers judged 41.9% of the idioms to be decomposable in character and 58.1% to be nondecomposable. It was also found that the mean value for the familiarity of the decomposable idioms was 5.92, while the corresponding mean value for the nondecomposable idioms was 5.76, that is, decomposable idiomatic expressions were rated as being more familiar than nondecomposable ones. Abel's study (2003), also mentioned above, includes two experiments performed in almost exactly the same way, only her subjects were L2 students whose first language was German. In Abel's first experiment, the subjects judged 56.6% of the idioms to be decomposable and 43.5% to be nondecomposable. In her second experiment, the percentages were 55.2% versus 44.8%; thus, the results of the second experi-

ment tally well with the results of the first one. As for familiarity in Abel's study, the mean value for the decomposable idioms was 4.90 and for the non-decomposable idioms 2.99, that is, just as the native speakers, the nonnative speakers rated decomposable idioms as more familiar than nondecomposable idioms. When a comparison is made between Titone and Connine's study (native speakers) and Abel's study (nonnative speakers), it can be seen that the native speakers judged fewer idioms to be decomposable than did the nonnative speakers, that is, it seems that many more idioms had received idiom entries in the mental lexicon of the native speakers than in the mental lexicon of the German students studying English as an L2. This indicates that nonnative speakers have a greater tendency to try to decompose idioms than do native speakers, who simply activate their many idiom entries. In Abel's study, contextual and conceptual factors were noticed to play especially important roles when L2 decomposition occurred. Lastly, when the mean values for familiarity are compared, it can be seen that for native speakers as well as nonnative speakers the more familiar an idiom is, the more likely it is that it is decomposed, that is, familiarity appears to go hand in hand with decomposability whether one is a native speaker or not.

In Liu (2008), an attempt is made to sum up the differences between L1 and L2 idiom processing and comprehension. He writes that

L2 idiom comprehension appears to be a slower and much more complex process than that for L1. It involves the use of more strategies in terms of both type and quantity. The process does not seem to conform to any of the major L1 idiom comprehension models. Instead, it takes the form of a *heuristic* approach, a process in which L2 learners approach an unknown idiom as a problem and try to solve it on a trial and error basis by using a variety of strategies. (p. 74)

Several strategies are discussed in great detail in Liu. The most frequent one used by L2 learners when accessing an idiom appears to be making use of the context in which the idiom is placed. This does not only seem to be the most frequently used strategy, but also the most effective one. In Cooper (1999), for example, making use of contextual information made up 28% of all the strategies considered, accounting for 57% of all the correctly guessed idioms, which was followed by discussing and analysing (24%) and using literal meaning (19%).

A second strategy employed by L2 learners when processing an idiom is to make use of their native language. This is naturally especially beneficial if the learner's L1 has a counterpart that is highly similar to the L2 idiom. Several studies report such results. In Irujo (1986), for example, it was found that the performance (comprehension, recall and production) of Venezuelan learners of English was considerably better with L2 idioms that had direct counterparts in

their L1 than those that did not (see also Cieślicka, 2006b and Piasecka, 2006 for similar results with Polish learners of English). The same was also seen in Abdullah and Jackson (1998), investigating Syrian college students' comprehension and translation of English idioms. In addition, they could also show that the students achieved very low scores with the so-called false cognate idioms, that is, idioms that are identical in form but differ as to their meaning. Finally, Abdullah and Jackson also noticed that whereas the students were comparatively good at translating cognate L2 idioms into their native language, they were hesitant about translating these same idioms, when offered in their L1, into English. This led the researchers to draw the conclusion that learners appear to believe that idioms are culture-specific and therefore often avoid translating identical idioms into the L2, even in those cases where it is fully possible. This means that making use of one's first language when processing idioms does not only achieve positive results, but may also induce interference. Moreover, making use of L1 knowledge does not only mean making use of linguistic knowledge, but could also mean making use of more general L1 cultural knowledge. Research has shown that if a learner's native language tends to make use of idioms in a certain area of life, say food or animals, and the same area is prolific in the language the student is trying to learn, this helps in the comprehension and production of such idioms (Boers, Demecheleer, & Eyckmans, 2004). This is especially interesting in the present study since quite a few idioms in use in Swedish today have been borrowed from the English language. Examples of such English idioms are *the ball is in your court*, *back to square one*, *put somebody/something on the map*, *be caught with the trousers/pants down* and *get/have cold feet* (Moberg, 1996, p. 216). This borrowing, according to Moberg (1996, p. 216), has been made possible primarily due to the shared outlook on life in general. The reverse is of course also true, that is, idioms that are culture-specific, such as *carry coals to Newcastle* and *kiss the Blarney stone*, are generally difficult for L2 learners to understand and remember.

Still another strategy often employed by L2 learners is to make use of even more general knowledge, that is, pragmatic knowledge or knowledge of the world (compare with the third assumption of the model of dual idiom representation discussed above). In the Abdullah and Jackson (1998) study already mentioned above, for instance, it was shown that their subjects could draw conclusions about the meaning of the idiom *to give someone the cold shoulder* as they interpreted *cold* to mean *unwelcome* since *cold* is the opposite of *warm* (*a warm welcome*). Similarly, the same informants used their knowledge of the world when they interpreted the idiom *to skate on thin ice* to mean that the person doing this was doing something very risky. Research in this area has also shown that world knowledge is a more useful tool when

interpreting decomposable idioms than when dealing with idioms that cannot be analysed on a word-by-word basis (Abdullah & Jackson, 1998). As can be seen from the discussion above, L2 learners have a well of different strategies at their disposal when encountering unknown L2 idiomatic expressions. Yet, when encountering *known* L2 idioms

this *heuristic* approach does not seem to apply . . ., for when a person, be it a native speaker or L2 speaker, encounters a known idiom, a normal linguistic analysis may not be activated or may soon lead to a direct memory retrieval. Thus, a complete L2 idiom comprehension model needs to be a dual-process one, with the *heuristic* approach in charge of unknown idioms and direct memory retrieval being used for known idioms in most cases (Liu 2008, p. 74)

making L2 idiom processing and comprehension, as realised by the model of dual idiom representation, a much more complex phenomenon than the processing and interpretation of idioms in a native language.

The Present Study

In the present investigation, 15 first term university students were faced with 80 context-based idioms in English (L2) and the same number in Swedish (L1) (30 of which focused on the source domain of animals, which is commonly used in both languages) and asked to explain their meaning. There were 12 female and 3 male students, 10 of whom were in their late teens or early 20s, 4 in their late 20s and one 49-year-old. The idioms were of varying frequency and transparency. Three main research questions were thus addressed.

1. How well do students master idioms of approximately the same total frequency in their L2 as compared to their L1?
2. How do (a) degrees of transparency (full transparency, semitransparency, opaqueness), (b) idiom frequency and (c) the choice of source domain affect students' L1 and L2 comprehension?
3. To what extent is context used when interpreting L1 and L2 idioms?

One native speaker of English, a 33-year-old male studying within the Swedish educational system to become an upper secondary school teacher of English, was used as a point of reference for the L2 test.

The Tests

The English and Swedish tests were both divided into two parts, Part A testing the students' knowledge of general idiomatic expressions (50 items) and Part B focusing on idioms which include animals as part of their metaphor (30 test items). The source domain of animals was chosen since idioms in this area appear to be incredibly prolific in both English (British and American) and Swedish.

Furthermore, so as to achieve a situation which would correspond to what students experience in real life, all of the English idioms were randomly chosen from a list put together by the present author based on idioms heard while watching TV, reading fiction and listening to audio books. The Swedish idioms were picked randomly from various books which all include extensive lists of Swedish idiomatic expressions and their usage. Also, all the test items were offered to the subjects in context, in which the idioms themselves were written in bold and the students were asked to translate the English idioms into Swedish, either by giving a direct Swedish counterpart or by explaining its meaning in their own words, the latter of which was the case for the corresponding Swedish test, which was constructed in exactly the same way as the English one. Each correct answer received one point. Example 1 is from Part A and Example 2 is from Part B.

Example 1

to pass the buck

= _____

You are responsible for the child at school and not the parents so don't be tempted to pass the buck.

Example 2

there are no flies on her

= _____

I know there are no flies on her but I wonder how she found that out.

On both tests the students were also requested to give information about the degree to which they thought they knew the idioms according to the following continuum:

- I don't know this idiom.
- I'm guessing the meaning of the idiom from the context of the sentence.
- I recognize this idiom, but I don't know what it means.

- I recognize this idiom and I'm guessing its meaning from the context of the sentence.
- I recognize this idiom and I think I know what it means.
- I am sure I know what the idiom means.

Furthermore, all the idioms were presented in order of frequency in their respective parts, starting with the most frequent item in each case. The frequencies for the English items were based on the British National Corpus (BNC) and *Collins Cobuild Idioms Dictionary* (2002); the Swedish items on Språkbanken (2013). The total frequency of the test items was also considered. Here the Swedish idioms were seen to be slightly more frequent than those included in the English test. Thus, in this respect, the Swedish test may be regarded as somewhat easier than the English test.

Before analysing the students' results, the idioms were also divided into three categories: transparent items, semitransparent items and opaque items. In addition to taking the students' knowledge of the world into account, the degree of transparency of the English items was considered from a Swedish L2 learner perspective and based on two main criteria. Firstly, the idioms for which exact literal and semantic translations could be given, that is, items for which cultural sameness was detected, were generally categorized as transparent items. Just a few idioms were of this type. However, more items could be seen for which *either* an exact literal translation *or* an exact semantic translation could be given. These were categorized as transparent or semitransparent items. This criterion was for obvious reasons not considered when the degree of transparency of the Swedish test items was analysed. Secondly, the idioms for which literal readings helped to understand their figurative meaning to various degrees were generally classified as either transparent or semitransparent items. This criterion was of course also considered for the categorization of the Swedish test items. However, here another factor comes into play for the English idioms: Certain key words may make the meaning of an expression more diffuse or totally opaque for an L2 learner than for a native speaker, that is, due to certain key words being either highly infrequent or obsolete or both, the idioms containing these types of items become more difficult to comprehend for an L2 learner than for an L1 learner. Items containing such key words were thus categorized as either semitransparent or opaque. Although considered, this key word effect, for obvious reasons, did not have an equally great impact when categorizing the Swedish test items.

For example then, *wear one's heart on one's sleeve* and *all his geese are swans* were both categorized as fully transparent items since, in addition to not containing any infrequent and/or obsolete key words, and the Swedish counterparts for *geese* and *swan* being quite similar-looking/sounding (*gäss*

and *svan*), literal readings of these idioms offer great help in explaining their figurative meaning. *He mints gold (money)* and *a fly in the ointment* were both categorized as semitransparent items. In both there are key words, namely *mits* and *ointment*, which are either infrequent and/or obsolete, thus preventing the expressions from becoming fully transparent. *Tongue in cheek* and *a red herring* are both examples of test items that were judged to be opaque to the L2 learners since neither exact translations are possible nor do literal readings help the students to any great extent. Tables 1 and 2 show the distribution of transparent, semitransparent and opaque items in the two tests used in the present study.

Table 1 The number of transparent, semitransparent and opaque idioms in the English test

	Transparent	Semitransparent	Opaque
General idioms (50 items)	3	20	27
Idioms with animals (30 items)	7	6	17
Total	10	26	44

Table 2 The number of transparent, semitransparent and opaque idioms in the Swedish test

	Transparent	Semitransparent	Opaque
General idioms (50 items)	8	24	18
Idioms with animals (30 items)	3	13	14
Total	11	37	32

Finally, the context offered in connection with the items tested was not considered when the idioms were categorized, since context is not part of the idiom itself. This does not mean, however, that context will not be considered at all. As will be shown, context played indeed a significant role in the comprehension of the L2 idioms tested and its impact will be discussed in the result section.

Results and Discussion

Table 3 offers the students' results for both tests for the two test parts separately and the tests as a whole. It also includes the native speaker's results. As can be seen, the native speaker surpassed the Swedish students on both parts of the English test and thus on the test as a whole (native speaker 67.0; Swedish learners 37.5). This agrees well with the model of dual idiom representation, which claims that fewer idiom entries will have had time to develop for the L2 learners due to less exposure to the L2. Furthermore, unsurprisingly, the Swedish students performed significantly better on the Swed-

ish test as a whole (69.7) than on the English test (37.5), again agreeing with the model of dual idiom representation. Also, if the separate test parts are considered, the Swedish students did better on both parts on the Swedish test (Part A, 43.2; Part B, 26.4) than on the corresponding parts on the English test, 22.2 and 15.4 respectively. This is also substantiated by the difference between the *SDs* for the two tests/test parts. In Trulsson (2007), a study focusing on Swedish learners' mastery of idioms of varying transparency in their mother tongue, results show that the informants tested chose the right definition (out of four) in 70% of the cases, and that when age was considered, older speakers, mostly between 50 and 65 years of age, achieved 87% correct answers and younger speakers, between the ages of 13 and 16, only 54% correct answers. Considering the ages of the learners in the present study, Trulsson's results seem to tally well with the results seen here.

Table 3 The students' results on the idiom tests

Test takers	Part A, general idioms (50 items)			Part B, idioms with animals (30 items)			Parts A and B (80 items)		
	<i>M</i>	<i>SD</i>	Standardized scores	<i>M</i>	<i>SD</i>	Standardized scores	<i>M</i>	<i>SD</i>	Standardized scores
Native speaker of English	44.0			23.0			67.0		
Swedish students, English test	22.2	7.6644	Highest: 1.2786 Lowest: -2.2441	15.4	6.2541	Highest: 1.5350 Lowest: -1.8228	37.5	13.6375	Highest: 1.3590 Lowest: -2.0874
Swedish students, Swedish test	43.2	5.0455	Highest: 0.9513 Lowest: -2.0216	26.4	3.0190	Highest: 1.1924 Lowest: -2.4511	69.7	7.7956	Highest: 1.0599 Lowest: -2.2748

The Swedish students also appear to have done slightly better on the idioms containing animals, 15.4 out of 30 possible (51.3%), than on the idioms containing a mix of different source domains, 22.2 out of 50 possible (44.4%), even though the percentage of opaque idioms is slightly higher in the former category, 17 out of 30 (56.7%), than in the latter, 27 out of 50 (54%). The difference between the standardized scores points in this direction too. This may be due to the fact that animals form a domain which the Swedish learners are used to dealing with since, as pointed out before, it is not only a prolific domain in the English language but in Swedish, too. This result may, however, be also simply due to the fact that there is a difference between the number of items tested in these two test parts.

It is also worth noticing that the score achieved by the native speaker on the English test on the one hand and the Swedish speakers' result on the Swedish test on the other hand are remarkably similar on the two test parts separately and thus on the test as a whole. It may be that comprehension of

idioms in English and that of idioms in Swedish develop in a very similar fashion due to the cognate nature of the two languages.

Tables 4 and 5 present the students' results on Parts A (general idioms) and B (idioms with animals) for each idiomatic expression on the English and Swedish tests respectively, that is, Parts A and B have been merged into one table for each language. In both tables the idioms are presented according to the number of correct answers, with the highest-scoring item placed first. When two or more items received the exact same score, the item for which the students showed the greatest accuracy in their evaluation of their knowledge is placed first. In Table 4, representing the English test items, the numbers of the idioms indicating how frequent an item is in relation to the others according to the BNC (the first column) are coded so that idioms deemed to be frequent by *Collins Cobuild Idioms Dictionary* (2002) are in bold, idioms included in the dictionary but not judged to be frequent are in italics, and those not included in the dictionary at all, deemed to be infrequent items by the present author, remain in standard text. The idioms themselves (the second column) are also coded. Those that were judged to be of a transparent nature according to the criteria discussed earlier are in bold, those that were categorised as semitransparent are in italics and those that were considered to be opaque in character remain in standard text.

The students' evaluation of their knowledge of the idioms is also included in the two tables. For example, Idiom B30 (*they are birds of a feather*), the B indicating that it belongs to Part B (idioms with animals) and the number 30 indicating that it was found to be the least frequent of the idioms with animals (there was a total of 30 such idioms), is the idiom which received the second highest score (14 out of 15 students offered the correct meaning of this idiom). It is included in *Collins Cobuild Idioms Dictionary*, but not judged to be frequent, thus B30 is given in italics. The idiom was also categorized as a transparent idiom by the present author and so the idiom itself is therefore in bold. Furthermore, 2 students indicated that they knew the idiom (the column headed KN), 1 that the idiom was recognized and thought to be known (TKR), 3 that the item was recognized and that they had used the context to guess its meaning (RC) and, finally, 8 students wrote that they did not know the idiom but that they had used the context to guess its meaning, 7 of whom were successful (NKC). Also, since the majority of the students indicated that they did not know the item tested but tried to guess its meaning from the context given, this figure is in bold. The NKR and NK columns indicate items that were either recognized but not known (NKR) or simply not known (NK).

Table 4 The students' results on and evaluation of Part A (general idioms) and Part B (idioms with animals) of the English test

No.	English idiom given in context	KN	TKR	RC	NKR	NKC	NK
B13	look like something the cat dragged in (15)	7	3	2		2	
B30	they are birds of a feather (14)	2	1	3		8 (1)	
A25	paint the town red (13)	4	2	2	1	5	1
A33	he'll get an earful from me (13)	1	3	4		7 (2)	
B6	let the cat out of the bag (13)	1	3	3	1	5	1
A13	get a word in edgeways (13)	1	3	2		6	2
B12	he wouldn't say boo to a goose (13)	1	3			8 (1)	1
B4	let sleeping dogs lie (13)	1	1	5 (1)		8 (1)	
A19	as mad as a hatter (12)	4	3 (1)	3		3 (1)	1
A9	turn the tables on a person (12)	2	8 (1)	2		2 (1)	1
A50	wear one's heart on one's sleeve (12)	4 (2)	4	2		4 (1)	
A37	he is a square peg in a round hole (12)	1	4 (1)	2		5	2
B7	count one's chickens before they are hatched (12)	1	3	2 (1)		6	2
A39	a busman's holiday (12)		1	2		9	2
A38	hurt a person to the quick (12)		1	2		9 (1)	2
B10	put a bee in a person's bonnet (12)	1 (1)	1	3 (1)		8	1
B28	sell a person a pup (12)		1			11 (1)	2
A45	he mints gold (money) (11)	2		1		10 (3)	1
A5	pass the buck (11)	2 (1)	2	2	1	6	2
A18	bring down the house (the house down) (10)	2	4 (1)	6 (2)	1	1	1
B14	a fat cat (10)	1	1	3 (1)		4 (1)	4 (1)
A16	through the grapevine (10)		6	3		3 (2)	2
B15	it's raining cats and dogs (9)	4	4	2 (1)	1	2 (2)	2
A20	every cloud has a silver lining (9)	3	4 (1)	2	1	3 (2)	2
A30	be a turncoat (9)	1	4 (1)	3 (1)		5 (2)	2
B9	gone to the dogs (9)	1	2	3 (1)		6 (2)	3
B16	birds of a feather flock together (9)	1	2	1	1	6 (2)	2
A23	as safe as houses (9)	1	1 (1)	3 (1)		7 (2)	2
B24	he thinks he's the bee's knees (9)	1		1		7 (1)	4
A10	when the chips are down (9)	2 (1)		2 (1)		7 (1)	3
B17	fine feathers make fine birds (9)		3	2		8 (5)	1
B29	that cat won't jump (9)		2	2 (2)		6	3
A12	run (make) rings round a person (9)		1	3	1	5 (2)	3
A22	not on your Nelly! (9)		1	4 (1)		6 (2)	3
A42	get in Dutch with (9)		1	2 (1)	1	6	4 (1)
B26	play the giddy goat (9)		1			10 (3)	3
A26	put a person's nose out of joint (9)		1 (1)	1		7 (1)	4
A32	get one's comeuppance (8)	1	1	2 (1)		5	6
B22	get a person's goat (8)		1	1		5 (1)	6 (1)
A24	cross one's t's and dot one's i's (8)		1	1 (1)	1	6 (1)	3
A44	has it at his fingers' ends (7)	1		3		8 (5)	2
A43	give it a double take (7)		3 (1)			7 (2)	5
B20	all his geese are swans (7)	1 (1)	2 (1)	1		6 (3)	3
A8	be the worse for wear (6)	1	1	2		2 (1)	8
A14	take the mickey out of a person (6)	2 (1)	1 (1)	1		8 (4)	2
B18	have bats in the belfry (6)		1	4 (3)		7 (4)	2
A29	the pot is calling the kettle black (6)		1	1 (1)		7 (2)	6

A4	<i>it sets my teeth on edge</i> (6)			2 (2)	2 (1)			8 (3)	2
A1	put paid to a thing (6)	1 (1)						11 (6)	2
A7	a flash in the pan (5)	1 (1)	4 (2)					5 (2)	5
B23	get one's monkey up (5)		1	1	2			6 (4)	4
A11	<i>he is a chip off (of) the old block</i> (5)		2 (1)	2 (1)	2 (1)			3 (1)	5
B27	<i>raise snakes</i> (5)		1 (1)					9 (5)	4
A15	<i>sit (be) on the fence</i> (4)	2	4 (3)					7 (6)	2
B1	a red herring (4)	1	2 (2)	2 (1)	2			4 (3)	4 (1)
B5	send a person away with a flea in his ear (4)			1	2			4 (3)	7 (1)
A41	<i>don't teach your grandmother to suck eggs</i> (4)			1				9 (7)	4
B21	dressed up like a dog's dinner (4)		2 (2)	2 (1)				6 (4)	3
B2	<i>a fly in the ointment</i> (4)		1 (1)	1 (1)				8 (5)	4
A34	pushing up (the) daisies (3)	3		1 (1)	2			1 (1)	8
A48	look as if butter would not melt in one's mouth (3)		1	2 (2)	1			9 (8)	1
A28	he blows hot and cold (3)		1 (1)	2 (1)				9 (7)	2
A46	he's seventy (years of age) if he's a day (3)		2 (2)	1 (1)	1			3	8
A6	pay (give) lip service to (3)		1 (1)		1			6 (4)	5 (1)
A37	be quids in (3)	1 (1)		1 (1)				1	10 (1)
A40	...and Bob's your uncle! (2)	1	1	2 (2)				4 (4)	7
A3	tongue in cheek (2)	2 (2)	2	1 (1)				6	3
A49	play gooseberry (2)		2 (1)		2			4 (4)	5
A36	he has kissed the Blamey stone (2)	2 (2)		2				4 (4)	5
B11	go to see a man about a dog (2)		1 (1)	1	2			4 (3)	6
B19	the bulldog breed (2)			2 (1)				2 (2)	11 (1)
A27	as keen as mustard (2)		4 (4)	2 (1)				7 (7)	1
B8	there are no flies on her (1)				1			6 (6)	7 (1)
A47	<i>it's all in a day's work</i> (1)		4 (4)	3 (3)	1			2 (2)	5 (1)
B25	it's a dog's breakfast (dinner) (1)			2 (2)				6 (5)	6
B3	have a bee in one's bonnet (1)		1 (1)	2 (2)				7 (6)	3
A2	<i>give tit for tat</i> (1)			2 (2)	1 (1)			7 (7)	4
A17	<i>give a thing (person) a wide berth</i> (0)		1 (1)		1			1 (1)	11
A35	do a double take (0)			1 (1)	1			6 (6)	6
A21	go Dutch (0)			2 (2)	1			6 (6)	5

Note. Test items are listed in order of the number of correct answers starting with the item that received the highest score.

KN = the item is known, TKR = the item is recognized and thought to be known, RC = the item is recognized and its meaning guessed based on the context given, NKR = the item is recognized but its meaning is not known, NKC = the item is not known but its meaning is guessed based on the context given, NK = the item is not known

Table 5 The students' results on and evaluation of Part A (general idioms) and Part B (idioms with animals) of the Swedish test

No.	Swedish idiom given in context	English translation	KN	TKR	RC	NKR	NKC	NK
B3	<i>ha fjärilar i magen</i> (15)	<i>have butterflies in one's stomach</i>	14	1				
B12	en hund begraven (15)	something fishy	12	2	1			
A35	<i>bli tagen på sängen</i> (15)	<i>become very surprised</i>	11	4				
A48	vara bakom flötet (15)	be daft	11	4				
A10	<i>ta sig i kragen</i> (15)	<i>get a grip on oneself</i>	11	3	1			
A13	ingen dans på rosor (15)	not be all beer and skittles	11	3	1			
A21	<i>lägga på ett kol</i> (15)	<i>get a move on</i>	11	3	1			

Quantitative and qualitative aspects of L1 (Swedish) and L2 (English) idiom comprehension

A24	gå åt som smör i solsken (15)	sell like hot cakes	11	3	1		
A1	kronan på verket (15)	the icing on the cake	10	4	1		
A19	sopa under mattan (15)	sweep under the carpet	10	3	2		
B11	vara spindeln i nätet (15)	be the one in charge, behind something	10	3	1		1
B27	göra en groda (15)	make a blunder/howler	9	5			1
A22	lägga på is (15)	put on ice	9	5			
A32	så (att) det visslar om det (15)	very energetically	9	4	2		
B2	en ulv i fårakläder (15)	a wolf in sheep's clothing	8	6	1		
A29	inte för allt smör i Småland (15)	not for anything in the world	8	6		1	(1)
B24	sitta och uggle (15)	sit up late and do nothing	8	5	2		
A45	inte vara född i farstun (15)	not be born yesterday	8	5	2		
A50	veta hur landet ligger (15)	understand the situation	7	2	2		3
A17	gå på knäna (15)	be totally exhausted	6	5	3		1
A11	ligga någon i fatet (15)	be handicapped by the fact that . . .	6	4	2		3
B23	hälla vatten på en gås (15)	like water off a duck's back	5	5	2		2
B14	få bära hundhuvudet (15)	be made the scapegoat	5	4	3		3
B25	stå som en åsna mellan hötappar (15)	stand like a donkey between two bundles of hay	4	4	1		5
A3	kasta in handduken (14)	throw in the towel	14				1
B7	ana ugglor i mossen (14)	there is something brewing	12	(1)	3		
A30	lägga benen på ryggen (14)	run as fast as one can	12	(1)	3		
A33	ta något med en klackspark (14)	not take a thing too seriously	11	2	2	(1)	
A28	ha tummen mitt i handen (14)	be all fingers and thumbs	10	4	(1)	1	
A9	rinna ut i sanden (14)	come to nothing	10	2	2	(1)	
B21	ge sig katten på (14)	be absolutely certain about	9	5			1
A16	slå näven i bordet (14)	bring one's fist down on the table	9	6	(1)		
A47	sitta med skägget i brevlådan (14)	be in trouble	9	4	1		1
A5	bära frukt (14)	bear fruit	10	(1)	4	1	
A34	barka åt skogen (14)	go to rack and ruin	8	3	2	(1)	1
B17	gå som katten kring het gröt (14)	beat about the bush	7	6	1	1	
B10	köpa grisen i säcken (14)	buy a pig in a poke	8	(1)	6		1
A15	göra slag i saken (14)	go right ahead	8	(1)	5	2	
B30	sätta sig på sina höga hästar (14)	get on one's high horse	8	(1)	4	3	
B20	få sina fiskar varma (14)	get a reprimand	6	4	2		2
B18	ha en räv bakom örat (14)	be a sly fox	5	5	3		1
B15	sätta myror i huvudet på någon (14)	to give a person something to think about	5	6	(1)	2	1
A49	vara i gasen (14)	be in high spirits; be tipsy	5	4	2		2
B28	kasta ett getöga på (14)	take a quick look at	3	6	2	1	(1)
B9	ta tjuren vid hornen (13)	take the bull by the horns	12	(2)	3		
A40	stå på näsan (13)	fall on one's face	11	(1)	3	(1)	1
A6	ha is i magen (13)	keep one's cool	10	(1)	4	(1)	1
A8	sitta med armarna i kors (13)	not do anything	9	3	1	(1)	2
A37	få blodad tand (13)	one's appetite has been whetted	7	6	(1)	1	1
A7	krypa till korset (13)	eat humble pie	7	(1)	6	(1)	2
A31	spotta i nävarna (13)	roll up one's sleeves	7	6	(1)		1
A42	bli eld och lågor (13)	become very enthusiastic	8	(1)	5	1	(1)
A46	salta räkningen (13)	salt the bill	6	2	1		4
B1	något i hästvåg (13)	something quite extraordinary	6	(1)	8	1	(1)
B22	ha en gås oplockad med någon (13)	to have a bone to pick	5	6	3	(1)	1
B26	det osar katt (13)	you smell a rat	5	7	(1)	2	1
A36	fika efter (13)	hanker after	6	(1)	6	(1)	2

B4	<i>det fina i kråksången</i> (13)	<i>the beauty of it</i>	4	7	2		2
A20	<i>väcka ont blod</i> (13)	<i>stir up bad blood</i>	4	7(1)	2(1)		2
B19	<i>kasta pärlor för svin</i> (12)	<i>cast pearls before swine</i>	8	4(1)	1		1
A12	<i>plocka russinen ur kakan</i> (12)	<i>take the best plums</i>	7	4(2)	1(1)		3
A38	<i>hamna på glasberget</i> (12)	<i>be left on the shelf</i>	4	6	1	1	1 2
B29	<i>lägga lök på laxen</i> (12)	<i>make matters worse</i>	2	4	3	1	2 2
A26	<i>det är hugget som stucket</i> (11)	<i>it comes to the same thing</i>	10	3(2)	1(1)	1	
A14	<i>måla fan på väggen</i> (11)	<i>make things worse than they are</i>	7	4(1)	2(1)	1	1
A44	<i>göra en tavla</i> (11)	<i>put one's foot in it</i>	6	4	1		2(2) 2
A27	<i>få kalla handen</i> (11)	<i>be turned down flat</i>	8(2)	5(1)	2(1)		
B6	<i>ingen ko på isen</i> (11)	<i>there's no great hurry</i>	5	4(1)	1	1	2 1
A43	<i>bli lång i ansiktet</i> (10)	<i>pull a long face</i>	8(1)	3	3(3)		1(1)
A41	<i>bita ihop tänderna</i> (10)	<i>keep a stiff upper lip</i>	8(1)	5(3)	2(1)		
A2	<i>bekänna färg</i> (10)	<i>confess</i>	8(3)	2(1)	3(1)		1
A18	<i>lägga rabarber på</i> (10)	<i>take, walk away with</i>	3	6(1)	1		1 4
B8	<i>sila mygg och svälja kameler</i> (10)	<i>strain a gnat and swallow a camel</i>	1(1)	4	5(2)		4(1) 1
A23	<i>sista skriket</i> (9)	<i>the latest fashion</i>	7	2(1)	2(1)		3(3) 1
B16	<i>gå kräftgång</i> (9)	<i>move backwards</i>	1	4(1)	3		4(2) 3
B13	<i>en gökunge i boet</i> (9)	<i>a cuckoo in the nest</i>	1	1	3		4(1) 4
A25	<i>suga på karamellen</i> (8)	<i>enjoy as long as possible</i>	8(5)	4	2(1)		1(1)
B5	<i>göra någon en björntjänst</i> (7)	<i>do a person a disservice</i>	10(4)	4(3)	1(1)		
A4	<i>en het potatis</i> (7)	<i>a hot potato</i>	7(3)	5(2)			3(3)
A39	<i>i bara mässingen</i> (7)	<i>in one's birthday suit, naked</i>	6(2)	4(2)	2(1)		2(2) 1

Note. Test items are listed in order of the number of correct answers starting with the item that received the highest score.

KN = the item is known, TKR = the item is recognized and thought to be known, RC = the item is recognized and its meaning guessed based on the context given, NKR = the item is recognized but its meaning is not known, NKC = the item is not known but its meaning is guessed based on the context given, NK = the item is not known

Firstly, no frequency effect can be discerned in the students' results, that is, frequency on its own appears to be a poor predictor of whether a student will know the meaning of an idiom or not. This holds true for both languages. The result thus contradicts the hypothesis put forth by the model of dual idiom representation implying that the frequency of an idiom plays an important role in whether an idiom is known or not. Also, as indicated clearly by the results presented in Table 3, the students, as expected, did considerably better on the idioms in their native language than in their L2. This result is of course also mirrored in the scores for the individual idioms. Whereas in the English material only 8 expressions out of 80 received the top three scores (15-13; see Table 4), 59 of the Swedish expressions, also 80 in total, received the same top three scores (see Table 5). Similarly, whereas 15 idioms received 0, 1 or 2 correct answers on the English test, none of the idioms on the Swedish test received the same low scores, the lowest score here being 7.

Furthermore, and more importantly, while there is no obvious concentration of comparatively frequent items in the upper part of Table 4, that is,

frequency appears to have little or no effect on the students' L2 idiom comprehension, there is a clear concentration of transparent and semitransparent items (items in bold and italics in the second column) in the same part of the table. In fact, whereas none of the 8 English items that received the top three scores (15-13) were opaque in character, 3 items were fully transparent (*look like something the cat dragged in*, *they are birds of a feather* and *let sleeping dogs lie*) and the remaining 5 were semitransparent (*paint the town red*, *he'll get an earful from me*, *let the cat out of the bag*, *get a word in edgeways* and *he wouldn't say boo to a goose*). The reverse is also true, that is, at the bottom of Table 4 there is a clear concentration of idioms that are opaque in nature. Of the 15 idioms that received the three lowest scores (0-3), none are fully transparent and only 3 are semitransparent (*it's all in a day's work*, *give tit for tat* and *give a thing (person) a wide berth*). Also, it is not the case that the transparent/semitransparent items in the upper half, on the one hand, and the opaque items in the bottom half, on the other hand, are of the same type. For example, while *let sleeping dogs lie* was categorized as a fully transparent item due to the fact that there is a direct semantic counterpart in Swedish: *väck inte den björn som sover* (in which bear is the proverbial animal, not dog), the idiom *he is a square peg in a round hole* was classified as an equally fully transparent item because of its decomposability. *Paint the town red* and *get a word in edgeways* were both considered to be semitransparent idioms, but, again, for different reasons. For the former, there is a semantic counterpart in Swedish: *göra stan osäker*, but this is considerably more literal in character than the English one, using the adjective *uncertain* instead of the colour palette to describe the situation. Nevertheless, it was deemed that since the colour red often signals some kind of danger, the students would, with the help of the Swedish counterpart, be able to figure out the meaning of the English idiom. *Get a word in edgeways* on the other hand was, in spite of its decomposable nature, categorized as a semitransparent idiom due to the infrequency of the key word *edgeways*. Along the same lines, *dressed up like a dog's dinner*, *play gooseberry*, *as keen as mustard* and *go Dutch* were all judged to be opaque idioms for different reasons. *Dressed up like a dog's dinner* was considered to be diffuse for several reasons. First, there is neither a literal nor a semantic counterpart to this idiom in Swedish. Secondly, it was thought to be a false friend in that the first meaning that comes to mind is not that you are dressed very smartly, but rather the opposite. This was indeed the most common belief among those students who produced an incorrect answer for this expression. *Play gooseberry* was categorized as an opaque item due to its nondecomposability and because the Swedish counterpart, *vara tredje/femte hjulet under vagnen*, is only semantic in character and has

no literal similarity. *As keen as mustard*, for which there is neither a direct literal nor a direct semantic counterpart, can really only be interpreted in one of three ways. Either you are very keen or not keen at all or somewhere in between, but there is, as a result of decomposing it, really nothing that tells the learner which of these is the correct one. Lastly, *go Dutch*, just like *as keen as mustard*, does not have a counterpart in Swedish (literal or semantic) and its constituent parts, unless its etymology is explained, do not help at all.

Furthermore, the effect of transparency can also be seen with the errors made by the native speaker. Of the 13 incorrect answers given, almost half (6) involved items that were categorized as opaque (*sell a person a pup, when the chips are down, that cat won't jump, get in Dutch with, play the giddy goat and do a double take*), 4 that were considered to be semitransparent (*hurt a person to the quick, give it a double take, raise snakes and a fly in the ointment*) and only 3 involved idioms that were classified as fully transparent (*be a turncoat, fine feathers make fine birds and all his geese are swans*).

When the students' results on the Swedish test are considered, a slightly different picture emerges. Whereas there is some concentration of fully transparent idioms (items in bold, the second column) in the upper half of Table 5, there is no such concentration of semitransparent items (items in italics, also the second column). Instead the semitransparent idioms appear to be almost equally common among those expressions that received high scores as among those that received comparatively low scores. The fact that transparency appears to have less an impact on the students' mother tongue than in their L2 tallies well with Trulsson (2007), discussed earlier in connection with the students' means.

It needs to be pointed out here that even though many of the students offered correct translations for quite a few of the English idioms, this does not entail that they *knew* the meaning of these expressions before taking the test. As the reader can see, in quite a few cases the students primarily made use of the context in which the idioms were presented in order to be able to offer a correct translation (the NKC column). As many as 358 out of 619 context-based inferences were successful (57.8%) on the English test. This result can be compared to Cooper (1999), discussed in the theoretical background section, in which 57% of all the correctly guessed idioms were due to successful inferencing. In fact, for only two idioms in the present study: *look like something the cat dragged in* and *as mad as a hatter*, the majority of the students indicated that they actually knew them. Thus the students' evaluation of their knowledge of the English idioms, which reflects their results to a high degree, can be divided into two parts. For those items receiving 15-6 correct answers, of which, as discussed above, a majority of the idioms are fully transparent or semitransparent, most of the students indicated in most cases that they used the context when

interpreting the expressions. For those idioms receiving the lowest scores (5-0), on the other hand, of which a majority are totally opaque in nature, the students indicated that they simply did not know the idiom in question (the NK column). This stands in stark contrast to the students' evaluation and result with the Swedish idioms. In Table 5, it can be seen that for two thirds of the expressions, the majority of the students are in most cases absolutely sure that they know the meaning of the idiom in question. It is not until at the very bottom of the table that the students' uncertainty of the meaning of the idioms starts to emerge. Even here, with the idioms that received comparatively low scores, the students' hesitation is not very great, simply indicating that they think they know the meaning (the second column) rather than be sure.

The results described above tally well with the model of dual idiom representation. According to the studies forming the basis of this theory, since L2 learners have to rely heavily on their mother tongue when trying to interpret L2 idioms, not having created as many idiom entries in their L2 as in their L1, they are also more inclined to try to decompose L2 idioms than native speakers are. Unsurprisingly, this technique, as seen in Table 4, works well with expression that are transparent and semitransparent, but not with opaque ones, hence the concentration of the former two types in the upper part of the table and the corresponding concentration of the latter type in the bottom part. The reverse is of course true for the students' results with the Swedish idioms for which they already have a lot of idiom entries and therefore do not have to resort to literal readings of the idiom constituents. These advanced students are thus not as dependent on transparency in their mother tongue as they are in their L2.

Tables 6-11 present the students' individual scores on the two test parts separately and on the test as a whole in English and Swedish respectively. For 10 of the 15 students there is a clear correlation between their knowledge of idioms in their L1 and the number of idioms they understand in the language they are in the process of learning. As many as 6 of these 10 students (indicated in bold), namely Students 2, 5, 8, 9, 11 and 14, have consistently high scores on both test parts in both languages, all displaying results above the mean on both test parts and thus on the tests as a whole. In contrast, the other four students (indicated in italics), namely Students 1, 4, 10 and 13, achieved only low scores on both test parts in both languages, all displaying results below the mean on all parts. It may be that learners who are good at processing idiomatic expressions in their mother tongue, that is, students who have developed successful strategies and thus created a great number of idiom entries in their L1, are subconsciously able to transfer their techniques to an L2. As discussed in connection with Table 4, one of the techniques proven to be used excessively by the students included in the present study was to make use of the context in which the

expressions were offered. This may thus be a technique already acquired in their L1 and now made use of when faced with idioms in an L2.

Table 6 The students' individual scores on Part A (general idioms) of the English test (50 items)

Student no.	Score
14	32
2	31
11	29
5	28
8	28
9	27
15	26
3	23
4	22
13	20
7	18
10	17
12	14
1	13
6	5

Table 7 The students' individual scores on Part A (general idioms) of the Swedish test (50 items)

Student no.	Score
8	48
11	48
14	48
9	47
12	47
2	46
6	46
5	44
7	44
3	43
10	42
13	41
15	38
1	33
4	33

Table 8 The students' individual scores on Part B (idioms with animals) of the English test (30 items)

Student no.	Score
2	25
5	22
3	21
8	21
9	20
14	20
11	18
15	17
12	13
4	12
10	11
13	11
1	9
7	7
6	4

Table 9 The students' individual scores on Part B (idioms with animals) of the Swedish test (30 items)

Student no.	Score
9	30
11	30
14	30
5	29
2	27
7	27
8	27
12	27
15	27
6	26
3	25
10	25
13	25
1	22
4	19

Table 10 The students' individual scores on Parts A and B on the English test (80 items)

Student no.	Total score
2	56
14	52
5	50
8	49
9	47
11	47
3	44
15	43
4	34
13	31
10	28
7	25
12	25
1	22
6	9

Table 11 The students' individual scores on Parts A and B on the Swedish test (80 items)

Student no.	Total score
11	78
14	78
9	77
8	75
12	74
2	73
5	73
7	73
6	72
3	68
10	67
13	66
15	65
1	55
4	52

There are also a few students who did consistently well in their native language only, but poorly in their L2. Student 12, for example, who is the oldest of the subjects included in the investigation (49 years old), did consistently well on the two Swedish test parts, which agrees with Trulsson's study (2007) discussed in connection with Table 3, but achieved only mediocre or low scores on the English test parts. This student had not studied English for quite some time before taking these vocabulary tests and his English (spoken as well as written) was indeed very poor.

Conclusions and Implications

Since idiomatic expressions form a natural part of the lexicon of native speakers and, as the present study has shown, advanced native speakers usually have a good command of the meaning of these types of expressions, idioms should be an integral part of all courses aiming to teach L2 vocabulary. The main goal when teaching idiomatic expressions is to find a strong enough incentive for the L2 learners, since they very often perceive these expressions to be infrequent and thus not very important to learn. As discussed in the introduction, while idioms occur quite infrequently in some registers, they are comparatively common in others. Based on dictionaries like *Collins Cobuild Idioms Dictionary* (2002), which makes a distinction between frequently used items and less frequently used items, teachers could start with the most common idioms illustrating their use with examples from, for instance, the world of sitcoms or other types of programmes that are seen to produce a

range of idiomatic expressions, thus making the idioms even more accessible by contextualising them. Based on the present author's experience, this would make the students aware of the prolific nature of certain idioms and as a result increase their eagerness to learn. This approach should not only be taken with L2 idioms, but also with idioms in a learners' L1 since, as shown in the present investigation, for many learners, L1 idiom knowledge appears to tally with their mastery of idioms in their L2. Put differently, learners who know a large number of idioms in their native language, that is, learners that have created a great many idiom entries in their L1, have most likely developed, during the process of acquiring this knowledge, idiom comprehension techniques that may be transferred and made use of when encountering idioms in an L2. Collaboration between instructors teaching students' mother tongue and instructors teaching L2s therefore seems very important.

Furthermore, since students seem to approach idioms in terms of whether they are transparent or not, teachers should perhaps start with idioms for which literal readings will help the students understand their figurative meaning and then move on to idiomatic expressions that are more opaque in character. Discussing source domains and offering etymological elaboration of idioms seem to be beneficial roads to take when explaining the meaning of idiomatic expressions to students (Boers, Demecheleer, & Eyckmans, 2004).

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