

Advanced Russian EFL Learners' Awareness of Idiomatic Synonymy, Antonymy, and Polysemy

Nataliya Lavrova, Elena Nikulina

Moscow State Pedagogical University

Correspondence concerning this article should be addressed to Nataliya Lavrova, Department of Foreign Languages, Phonetics and Lexicology, Moscow State Pedagogical University, 1/1 M. Pirogovskaya Str., Moscow, 119991, Russian Federation. E-mail: na.lavrova@mpgu.su

Foreign language acquisition is notoriously constrained by learners' lack of awareness of the systemic relations that are obtained among stable multiple-unit lexical items. This results in learners' inability to variegate their performance (both written and oral) with idioms that stand in complementary (synonymy) or contrastive (antonymy) distribution to one another. Nor are learners typically able to distinguish between the multiple senses of English idioms. Given these impedimenta, the present research investigates the degree of entrenchment of idiomatic synonymy, antonymy, and polysemy and, on the back of it, sets the agenda for partial revision of the practice of exposing learners to English idioms. Data were collected to investigate the knowledge of idiomatic synonymy, antonymy, and polysemy amongst Russian EFL learners. The results of the ANOVA analysis revealed that the degree of awareness of the major types of idiomatic paradigmatic relations significantly differed between the groups, with learners being more aware of synonymy and polysemy than antonymy. The findings suggest that current EFL materials and dictionaries need to be updated and revisited with a view to exposing foreign learners to an extended network of paradigmatic idiomatic relations.

Keywords: idioms, paradigmatic relations, synonymy, antonymy, polysemy

Introduction

'Speak idiomatically unless there is special reason not to'
J. Searle (1993)

According to the most conservative estimates (Deignan, 2005; Siyanova-Chanturia, 2017; Zykova, 2016), every fifth uttered expression is idiomatic, a finding which suggests that speakers heavily rely on prefabricated items stored in long-term memory.

The investigation of systemic relations among English idioms is an under-researched area; most scholars are interested in separate or more specific aspects of idioms, such as polysemy (Baranov & Dobrovol'skij, 2014¹; Moon, 1998), synonymy (Dobrovol'skij & Piirainen, 2018), speed of comprehension (Gibbs, 1986; Glucksberg, 2001; McGlone et al., 1994), variation (Langlotz, 2006), style (Altenberg, 1998), the role of idioms in second and foreign language acquisition (Conklin & Carrol, 2019; Türker, 2016), specific subclasses of idioms (Mel'čuk, 2015), functional idiomaticity (Pamies-Bertrán, 2017), etc. Previous findings suggest that learners associate one form of a set expression with one meaning (Nikulina, 2015), have difficulty paraphrasing a set expression idiomatically (Macis & Schmitt, 2017), and can rarely come up with an antonymic periphrasis to a set expression (Ivanova, 2017)². To the best of our awareness, there has been no systemic or comprehensive research into a network of ramified systemic relations that exist among idioms and into how well non-native speakers of English are aware of these relations.

¹ Baranov, A. N., & Dobrovol'skij, D.O. (2014). Ocnovui frazeologii [Foundation course in English phraseology]. Flinta.

² Ivanova, E. V. (2017). Leksikologiya i frazeologiya sovremennogo anglijskogo yazuika [English lexicology and phraseology]. Academiya.

Given the existing gap, the main aim of the present research is to establish how well Russian learners of English are aware of idiomatic synonymy, antonymy, and polysemy. The three research questions are thus how well are Russian learners aware of (1) idiomatic synonymy, (2) antonymy, and (3) polysemy?

Idiomatic Polysemy, Synonymy, and Antonymy

Research on idiomatic polysemy either reveals the speakers' lack of awareness or treatment of the semantically connected meanings of an idiom as separate linguistic items (Baranov & Dobrovol'skij, 2014). Alternatively, some speakers rely on an idiom's underlying image as its primary meaning, misinterpreting the secondary idiomatic meaning altogether or deducing it directly from its literal counterpart. This could be explained by the default strategy most speakers utilise when faced with an unfamiliar expression. As most of the secondary meanings of a polysemous idiom seem to be closely connected, speakers tend to collapse two or three meanings together rather than teasing them apart. Compared to other researchers, who never mention idioms' functions as a possible cause of their polysemy, Fedulenkova argues that it is idiomatic pragmatic-functional malleability that seems to be one of the reasons why idioms develop secondary meanings (Fedulenkova, 2019). Contrasted with research on idiomatic polysemy, there are more papers devoted to research on idiomatic synonymy. This is because both FLT writers and language instructors are directly involved in the ways of enhancing the teaching of formulaic language. Research reveals that the dearth of synonyms among idioms is mostly due to the psychological salience of the composite idiomatic image and subsequent associations that arise out of the literal meaning of idiomatic components (Dobrovol'skij & Piirainen, 2018; Teliya, 1998). Since this image never peters out, absolute synonymy is non-existent among English idioms. Structurally and semantically isomorphic synonymic idioms are more readily acquired by learners and are easier to access than idiomatic synonyms whose structure and underlying image are drastically different from each other (Türker, 2016).

There is still inconclusive evidence as to the differences between the so-called idiomatic synonyms and idiomatic variants and whether there is any difference in their processing, with scholars making rather arbitrary distinctions between the two categories (Cserép, 2017; Langlotz, 2016). Finally, there is an appreciable dearth of research on idiomatic antonymy, with most scholars registering learners' lack of awareness or observing that proverbs and sayings are more prone to have antonyms than non-predicative idiomatic expressions (Dronov³, 2015; Ivanova, 2017).

Idioms in Second Language Acquisition and Cross-Language Influence

Research on the role of idioms in second language acquisition is burgeoning, as awareness of idiomatic paradigmatic relations is definitely of benefit to second language learners for at least two reasons. First, the ability to use idiomatic synonyms is one of the main foci of international examinations: they put a premium on learners' extended idiomatic vocabulary. Recognition of idiomatic polysemy is also tested in the Reading and Use of English part of CAE (Certificate in Advanced English) and CPE (Certificate of Proficiency in English). Given this, raising learners' awareness of a set of paradigmatic relations among English idioms should be the primary focus of advanced and proficient second language learning and teaching (Choonkyong, 2015). Second, most research demonstrates an impact of the L1 on the interpretation of set expressions in an L2 (Conklin & Carrol, 2019). It seems that second-language congruence is a factor to be reckoned with when processing different structural types of idioms. Apparently, the more congruent idioms from L1 and L2 are, the less time that is spent on interpretation and less cognitive effort required from learners to identify the meaning of an idiom correctly. The degree of accurate interpretation thus correlates with the degree of cross-linguistic congruence of set expressions (see Nguyen & Webb, 2017; Wolter & Gyllstad, 2011; Wolter & Yamashita, 2015, 2018). The findings also suggest that while interpreting the meanings of synonymous idioms, non-native speakers rely more heavily on the underlying image of set expressions, which frequently leads them astray due to the known gap between the literal and figurative meanings of an idiom (Wray, Bell, & Jones, 2016).

The study by Tavakoli and Uchihara (2020) is a step forward in the examination of the relationship between oral fluency and use of multiword sequences across four proficiency levels. The obtained data show that idiomatic frequency correlates with a higher and quicker articulation rate. Lower-proficiency speakers use idioms in contexts that mostly fit idioms' underlying image, while higher-proficiency test-takers use idioms more competently in a variety of contexts, most of which fit the idioms' current figurative meaning. The

³ Dronov, P.S. (2015). *Obschaya leksikologiya* [General lexicology]. Yazuiki slav'anskoj kul'turui.

authors' research is valuable in that it provides conclusive evidence of the correlation between the degree of learners' proficiency and their ability to recognize and efficiently use English idioms.

The data obtained by Katsyuba, Ismailova, & Bondareva (2020) have a direct bearing on our research in that they demonstrate that there is a two-way link between idioms and language proficiency; not only does the learners' degree of proficiency increase with the number of internalized idioms, they are also much better at interpreting idiomatic synonyms and antonyms if their degree of proficiency is relatively high. This means that it makes sense to enlist the help of proficient or nearly proficient learners of English in experimental research, which we do in our research, in order to obtain valid data.

Idioms, Language Change, and Natural Language Processing

The findings by Buerki (2019) are well-nigh groundbreaking in that he demonstrates that changes in idiomatic language proceed apace and that learners need to be aware of idiomatic synonymy and antonymy, since new idioms, which are the synonyms or antonyms of current ones, appear on a regular basis, especially in colloquial language. This testifies to the need for a more optimal way of exposing learners to formulaic language.

Apparently, multiword expressions pose challenges to Natural Language Processing (Inurrieta et al., 2020). Verbal idioms seem to be harder to identify and interpret. They are also less likely to be associated with idiomatic synonyms and antonyms and to be recognized by learners as polysemous. Verbal idioms are thus predicted to be interpreted with a greater margin of error than other types. This implies that when selecting idioms for interpretation, it won't do to have an abundance of verbal idioms at the expense of other types.

Dictionary Practice

Analysis of dictionary practices demonstrates that if and when idiomatic synonyms and antonyms are featured in a dictionary entry, for some reason, they either fall under the radar of learners, who seem surprised when their attention is drawn to their presence (Arsenteva & Ayupova, 2013), or else dictionaries simply do not enter cross-references to idiomatic synonyms and antonyms (Perevezentseva, 2015). Although polysemy is featured slightly more frequently, learners seem to pick up only one meaning from a dictionary entry, the one that is either first or seems to be more familiar to them, probably, by virtue of its higher frequency of occurrence.

Given this paucity of idiomatic relations in most dictionaries, there is a need for specific guidelines on how to register different types of idiomatic relations so that learners are aware of their existence in the first place. Lončar and Valero (2020) believe that online digital tools endowed with various search modalities could expose learners of English to a ramified network of paradigmatic relations among idioms. Without doubt, an online dictionary is a digital tool that can provide access to set expressions with which the target idiom is somehow connected. This, we believe, will result in learners' better awareness of idiomatic synonymy, antonymy, and polysemy.

Dal Maso's proposal (2020) is thus to put forward a possible strategy for the lemmatization of lexical variation and synonymy in dictionaries of idioms. The data can be taken on board by English dictionary compilers, who should develop a means of recording idiomatic variation and synonymy. This is crucial, because learners frequently confuse the two categories and rarely think of them as semantically connected.

The brief analysis of research on various aspects of systemic relations among English idioms has demonstrated an appreciable lack of empirical research into the extent to which learners are aware of these relations. There are several possible reasons for this, such as suboptimal teaching and dictionary practice, the vivid image at the basis of idioms, and the lack of conclusive evidence about which type of idiomatic relation is entrenched the most. Drawing on some of the preliminary results obtained by the above-mentioned authors and using their findings as the point of departure, we intend to present a more integrated picture of systemic paradigmatic relations among English idioms.

Research Hypothesis

The working hypothesis for this research was that synonymic relations would be easiest for learners to come up with; partly due to the current practice of teaching idioms (synonyms are mentioned more often than antonyms), and partly because learners themselves typically aim to variegate their speech through the use of synonyms, rather than antonyms, which are not associated with learners who have a better command of English. As far as polysemy is concerned, we hypothesized that learners would be more aware of polysemy than antonymy, since a close, pre-research analysis of various dictionaries of idioms revealed that the lexico-semantic idiomatic variants are typically closely connected to each other, and the second or, possibly, the third meaning can be figured out provided that the first meaning is understood correctly.

Methodology

Participants

The participants that took part in the present research are 50 Russian speakers of English of comparable age, socio-economic status, and educational level: students from Moscow State Pedagogical University, aged 20-22, whose level of English is no lower than C1 in accordance with the CEFR.

Materials

The final sample used in the experimental research comprises 104 idioms (one idiom was used in two different tasks) selected through the method of random sampling from the following dictionaries of idioms: The American Heritage Dictionary of Idioms (2003), The Oxford Dictionary of Idioms (2004), McGraw-Hill Dictionary of American Idioms and Phrasal Verbs (2006), Longman Dictionary of Contemporary English (2009), The Farlex Idioms and Slang Dictionary (2017), and Idioms and Phrasal verbs (2011).

Given the numerous classifications and subdivisions of idioms in relevant outlets, only the most prototypical idioms were selected; collocations, formulae, proverbs and sayings, and grammatical idioms were excluded from the sample. Collocations are semi-set word combinations in which one of the words is used in its direct meaning: cf. *overwhelming majority*, *mental acuity*, *academic prowess*, etc. Formulae are set expressions used as speech acts in their own right: *That figures! You don't say so*. Finally, grammatical idioms are those that either consist of only functional parts of speech or contain only one non-functional word: *in accordance with*, *in comparison with*, *on balance*, etc. None of these are easily associated in modern scholarship with idioms or else they have qualifications like *grammatical*, *discursive*, etc. The same goes for proverbs and sayings, which are structurally different from lexical idioms in that they are predicative units. Hence, these were also excluded from the final sample. Some of the idioms selected for Task 1 also have idiomatic antonyms, which is a predictable result of random sampling. However, we were not interested in whether the selected synonyms had antonyms and therefore did not control for this factor. The selected idioms also vary in frequency of usage, which is again something that random sampling can account for. The idiom *at the eleventh hour*, for example, occurred 105 times in COCA compared to the idiom *the icing on the cake*, which occurred 289 times. However, most of the dictionaries from which idioms were selected relied on frequency bands and adhered to the practice of including idioms that are relatively frequent in modern English. Most of the idioms selected for Task 3 have two or three meanings. This is because most polysemous idioms tend to have two meanings, with 4 or 5 occurring extremely rarely. Given all of the above, the idioms selected for all the tasks were *relatively* homogeneous, with the exception of some outliers such as *at the end of one's tether*, which is infrequent in the corpora. Finally, we believe that learners are likely to come across a range of idioms that differ on several parameters, including register (something we did not control for). Since an educated learner of English may regularly see or hear idioms from a spectrum of registers, frequencies, lengths, etc., it is our genuine belief that it is necessary for them to be aware of their meanings and of the systemic relations in which they enter with other idioms. In a nutshell, it was not part of the research objective to control for a multiplicity of parameters on which idioms may vary, but to demonstrate learners' relatively low awareness of idiomatic synonymy, antonymy, and polysemy, and to spell out the reasons why it is necessary to enhance this knowledge.

Procedure and Data Analysis

Regarding the steps of dividing the treatment into three groups, those idioms were selected that contain cross references, i.e. references to possible synonyms or antonyms, indicated by one of the strategies by dictionary compilers, which were outlined in the literature review section. As for polysemous idioms, those whose number of meanings exceeded one were selected. Idioms with technical meanings (cf. *on an even keel*) or idioms with very closely related meanings were excluded from the final sample. The former group was excluded on the grounds that terms and idioms are different entities; the second group was sidelined because, as was also mentioned in the literature review section, the split of meanings does not seem to be justified from the point of view of the storage of linguistic items in the mental lexicon, which means that students are unlikely to tease two almost identical meanings apart (cf. *between the devil and the deep blue sea* 1) 'caught in a dilemma'. 2) 'trapped between two equally dangerous situations'). Finally, idioms whose first meaning seemed to be non-metaphorical were also excluded (cf. *from the dead* 1) 'from the state of death'. 2) 'from a period of obscurity or inactivity').

All of the participants were presented with three lists of 35 idioms each. This relatively small number of idioms for each task was justified by the cognitive load placed on participants: a greater number would result in much greater mental exertion being required and would prohibitively prolong the experiment, whose results might thus have been compromised. This number also seems to be the mean number of linguistic items typically suggested for interpretation in an experimental format. Learners were given 130 minutes to complete all three tasks. Each idiomatic expression was thus given slightly more than a minute, which is enough time to come up with the target item if the learner is aware of its existence. In Task 1, learners were asked to paraphrase given idioms with at least one synonymic set expression. To facilitate the completion of the task, one word from the synonymic idiom was mentioned with the rider that in some cases only one component of the idiom may be changed, in others a synonymic idiom had a completely different structure. At this stage, we deliberately did not differentiate between idiomatic synonyms and variants, since this is a theoretical question with which most students are unlikely to be familiar. Eight idioms contained only one word that needed to be paraphrased and were thus regarded as variants, while the rest were idiomatic synonyms. In Task 2 learners were required to come up with at least one antonym to each idiom. To facilitate the completion of the task, one word from the antonymic idiom was mentioned. It was also explained to the participants that in some cases only one component of the idiom may be changed, in others antonymic idioms are lexically completely different. In Task 3, potentially polysemous idioms were presented for interpretation, and learners had to come up with at least one more meaning of each idiom. In two tasks (Task 1 and Task 2), one prompt word was given after each idiom in order to facilitate the completion of the task and to 'nudge' students in the right direction. This 'nudging', however, should not be regarded as an invalidation of the whole procedure: similar or comparable tasks in proficiency courses are always provided with examples and some prompting word(s) from the target expression.

Apart from an explanation of the task, an example of its possible completion was provided. This detailed presentation of the task is in accordance with the standards required by the CAE and CPE examinations. An unstructured, post-hoc interview was conducted with participants to find out what difficulties they had when completing the tasks.

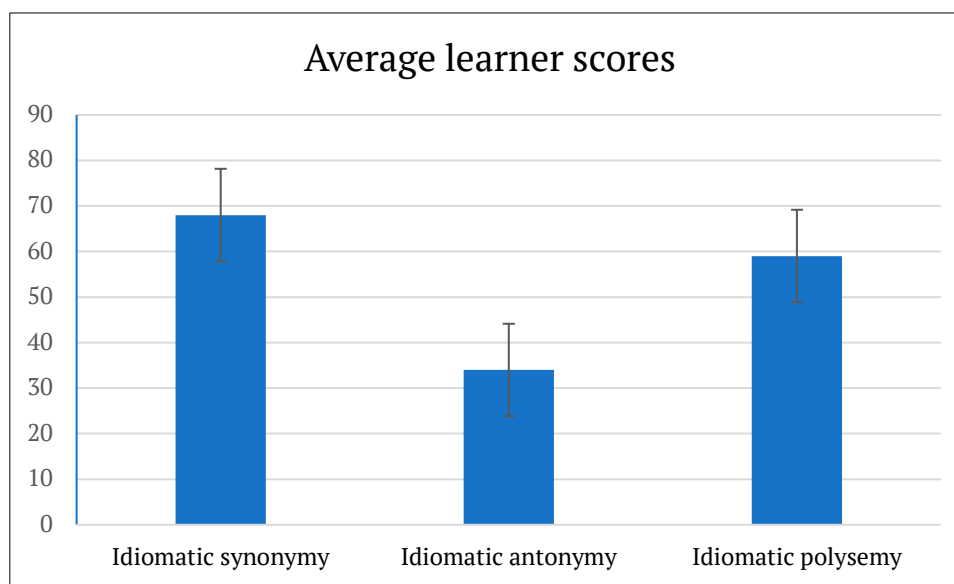
The ANOVA analysis was used to figure out the within-group variance, the between-group variance and to compare all three groups, which comprise synonymic idioms (analysed in Task 1), antonymic idioms (analysed in Task 2), and polysemous idioms (offered for analysis in Task 3). To establish the different degrees of awareness of the three types of paradigmatic idiomatic relations, the averages scores on each task were also calculated.

Results

As we anticipated, learners demonstrated the least awareness of idiomatic antonymy; polysemy came second, while awareness of idiomatic synonymy was the highest. Figure 1 illustrates the average learner scores on all the three types of learner awareness and the standard deviations.

Figure 1

Average learner scores on all the three tasks (in percentage) and standard deviations



As shown in Table 1, the difference between groups was significant ($F = 3.772$; $p = .035$). Given the degrees of freedom (2 and 30) and the probability level of 0.05, the critical F-value was 3.31582950. The null hypothesis can thus be rejected, since $F > F$ critical, i.e. the means of the populations are not all equal.

Table 1

Results of One-way Statistical Analysis of the Respondents' Answers by Groups of Idioms

Source	SS	df	MS	
Between-treatments	39.8182	2	19.9091	$F = 3.77153$
Within-treatments	158.3636	30	5.2788	
Total	198.1818	32		

Note. The p-value is 0.034584. The result is significant at $*p < .05$

The ANOVA analysis was followed up with post-hoc comparisons to see where the critical differences were, i.e. each task was compared to establish which ones were significantly different from each other. We conducted Tukey's Honestly Significant Difference Post-Hoc Test and came up with the value of HSD being 1.44. Having compared the means in each treatment, we established that the honestly significant difference was meaningful ($2.46 > 1.44$) between the groups of synonyms (mean = 4.09, SD = 2.8) and antonyms (mean = 1.63, SD = 2.1) as well as the groups of synonyms and polysemous idioms (mean = 1.9, SD = 1.86), their difference being $2.19 > 1.44$. However, the difference between students' awareness of antonyms and polysemous idioms turned out to be statistically insignificant ($1.9 - 1.63 = 0.27$), with HSD = 1.44.

The analysis was done by items, i.e. we were primarily interested in how many idioms from each group were interpreted correctly. Although potentially possible, partly or 'semi-correct' answers were conspicuous by their absence. Prior to the experiment, we had anticipated this problem. For example, how would we mark an answer which was only partially correct? (cf. *to let the cat out of the sack*). For such answers, we were ready to give students half a point. Only one lexical word and, possibly, one grammatical word, such as an article, were allowed to be produced incorrectly to merit half a point. However, as it turned out, such answers were statistically dismissible: only two were given, in response to item N°6 in Task 1 (**to throw the gasket*) and to item 15 in Task 2 (**to take years of smb.*). Potentially, the production of more than one secondary meaning of a polysemous idiom could earn participants one extra point, i.e. the number of points was directly linked with the number of correctly supplied meanings: if a learner had supplied two more meanings of a polysemous idiom, two points would have been earned. However, not a single participant gave more than one extra meaning of a polysemous idiom. The marking was done by both the authors, and inter-rater reliability was ensured by analysing all the answers first separately, then together, and by additionally consulting each other on potentially problematic cases.

In Task 1, most of the subjects failed to supply a periphrastic synonymic alternative to the following idioms: *to have egg on your face*, *to carry a torch for smn.*, *at the end of your tether*, *at the eleventh hour*, *thick and fast*. Among some of the idioms that were paraphrased correctly by most of the participants were *the icing on the cake*, *a weight off your shoulders*, *a bundle of nerves*, and *to laugh one's head off*. Among antonymic idioms, the following ones caused a great deal of difficulty: *to be going strong*, *to spare one's feelings*, *a load of rubbish*, and *of your own free will*. In contrast, only a small number of learners failed to supply an antonym for the idioms *to put years on smn.*, *to be under an obligation to smn.*, *to keep your options open*, and *to have money to burn*. Finally, most learners failed to supply a second or secondary meaning for the following idioms in Task 3: *On your bike!*, *on the button*, *to put smn. out of their misery*, *to come of age, with your eyes shut*, and *to cut both ways*. In Task 3, few subjects failed to supply a second meaning to the idioms *to blow smn. away*, *to have nothing on smn.*, and *to be on the run* (see Table 2).

Discussion

Possible Causes of Difficulty in Interpreting Some of the Idioms

The idioms that have been paraphrased most adequately and without effort were those that are congruent: cf. *the icing on the cake* (R. *vishenka na torte*), *a weight off your shoulders* (R. *gruz s plech*), *a bundle of nerves* (R. *komok nervov*). The findings that congruent items were processed more quickly and more correctly are in line with the studies reported in Conklin and Carrol (2019).

The participants misinterpreted some of the idioms as they may not have been aware of their meanings in Task 1 and Task 2. Apparently, in order to be able to come up with a synonymous or an antonymic idiom, learners should be aware of the original meanings of the idioms. Although maximal objectivity was ensured due to the bias-free selection of the three subsamples, some of the resultative idioms may have caused learners' greater or lesser interpretative difficulty. The reasons for failing to supply a synonymous alternative to some of the idioms in Task 1 may have been quite diverse, ranging from rarely used words in the idiomatic structure, such as *tether*, through a somewhat obscure metaphor (cf. *to carry a torch for smn.*) to Biblical allusions, such as *at the eleventh hour*, which requires the activation of learners' background knowledge and their general awareness of cultural practice, precedents, and allusions. Although many native speakers may not have the background knowledge and still know the meaning of an intertextual idiom, background knowledge is usually a facilitating factor for *non-native* speakers. Since many idiomatic allusions are traced back to a common source, such as the Bible, knowledge of the original text (the so-called 'prototext') in which a particular idiom was first mentioned helps to decode and interpret the meaning of an unfamiliar idiom in a foreign language. However, the parable about the 'eleventh hour' is unfamiliar to most non-religious Russian speakers, nor is there a comparable expression in Russian, hence, its form may have seemed somewhat obscure.

Failure to come up with an antonymic alternative to some of the idioms in Task 2 may have been caused by the key words suggested for paraphrasing, such as *duress* and *doldrums*, for instance, which are rarely, if ever, used outside their idiomatic expressions. Finally, the subjects' failure to suggest another meaning for idioms in Task 3 may have been due to the fact that some of these idioms are either rarely used in their second meaning or have two or three closely related meanings. Still others contain what are known as 'enantiosemic semantic components', i.e. diametrically opposed or poorly compatible meanings within idioms' semantic structures (cf. *to be downhill all the way* 1. 'be easy in comparison with what came before', 2. 'become worse or less successful').

Research Question 1. How Well are Russian Learners Aware of Idiomatic Synonymy?

Awareness of idiomatic synonymy was as high as 68%. More synonymic idioms seemed to be recognized when they clustered around a specific thematic field and thus expressed a salient concept. This pertains to idioms that deal with *madness/obsession*, *anger*, and *inebriation*. Apart from the idioms tested in Task 1, for illustrative purposes Table 2 also contains idioms that reflect some of the most salient negative concepts in modern English.

Table 2
The Most Frequent Concepts that Engender Idiomatic Synonyms

<i>Frequent concepts expressed by English idioms</i>	
Madness/obsession	nutty as a fruitcake, not play with a full deck, not have both oars in the water, lights are on but nobody's home, (the) elevator doesn't go to the top floor, to be half a bubble of plumb, to have bats in the belfry, to have a bee in one's bonnet, etc.
Anger	to fly off the handle, to flip one's wig, to blow a fuse, to blow one's top, to have a conniption, to have a hissy, to blow a gasket, to throw a fit, to go haywire, go ballistic, to fly into a rage (a rampage, a rant), etc.
Inebriation	drunk as a skunk/as a lord, three sheets to the wind, rolling/screeching/raring drunk, etc.

Although we did not set out to differentiate between synonymic and variable idioms, the results of the research revealed that synonymic idioms were interpreted more easily than idiomatic variants, i.e. set expressions that differ in one or two components (cf. *the icing/cherry on the cake*). This is probably because most Russian learners are exposed to such practice of English teaching when variability in the structure of stable multi-word units is not welcome or considered to be impeding the process of second language acquisition. In the Russian tradition of education, for instance, learners are typically asked to come up with a no-alternative idiomatic expression, and variants are typically penalized by teachers, who genuinely believe that these may puzzle and mislead students, who have substantial difficulty in mastering the form and usage of one specific idiom.

Despite the relative paucity of idiomatic synonymy *per se*, idiomatic synonyms turned out to be relatively easy to come up with for a number of reasons: first, idiomatic synonyms are more frequently included in current EFL course-books; second, it is common practice among language instructors to variegate their speech using alternative expressions, as this is strongly associated with vocabulary expansion.

Research Question 2. How Well Are Russian Learners Aware of Idiomatic Antonymy?

Idiomatic antonymy turned out to be the least entrenched type of paradigmatic relation among English idioms (34%), a finding which is seemingly in contradiction with the data obtained by Ivanova (2017). However, this may partly be explained by the subject-matter of Ivanova's research, which mostly focused on proverbs and sayings, i.e. predicative idioms that differ on a number of parameters from non-predicative stable multi-word units. The learners' low awareness of idiomatic antonymy may also be explained by the prevalent teaching practice through which speech variability is attained by learning a number of alternative synonymic expressions rather than contrastive words and meanings. Speech variability is also frequently tested via international examinations, such as the CAE and CPE, hence most proficiency textbooks are focused on periphrastic (synonymic) set expressions rather than antonymic ones. That said, it probably makes sense to also activate learners' antonymic links with idioms, not least because, however indirectly, doing so may also contribute to speech variability, since a synonymic meaning may frequently be expressed via negation of its opposite: cf. *to take a turn for the better – not to take a turn for the worse, to call a spade a spade – not to beat around the bush*.

Research Question 3. How Well Are Russian Learners Aware of Idiomatic Polysemy?

The research revealed that polysemy among idiomatic expressions was not as regular or productive as synonymy (59%). This finding is in accordance with the data obtained by Boyarskaya and Zabotkina (2017), Dobrovolskij and Piirainen (2018), and Ivanova (2017). The authors indicated that idioms' inherently evaluative and expressive nature, as well their extended lexical make-up prevented them from developing a ramified network of paradigmatic relations. This finding also supports Nikulina's research (2015), which showed that native speakers failed to recognise a set-expression's dual or polysemous nature. Apparently, advanced and proficient non-native speakers also tend to associate one form of a set expression with only one meaning. Whether this finding can be extrapolated to speakers of languages other than Russian remains to be seen, although we have a strong suspicion that this might be the case.

The lower productivity of idiomatic polysemy may partly be explained by the activation of an idiom's literal meaning in the process of its comprehension and interpretation. Although this activation does not necessarily mislead speakers and learners of English if *they are familiar* with the idiom's figurative meaning, if the meaning seems to be *unfamiliar*, speakers primarily rely on the literal meaning to figure out the idiom's possible figurative meaning, presupposing that it is the only one and tends to be closely connected with the underlying literal image. Apart from potentially taking extra time and thus preventing learners from finishing the task on

time, this reliance on the summative meaning derived directly from an idiom's constituent elements is far from an optimal strategy because of the well-known law in the development of linguistic signs, according to which, over time, meaning and form tend to diverge, i.e. there is no reliable or predictable connection between the exponent of a linguistic sign and its current meaning (in synchrony). This finding aligns with research by Cieślicka (2006), who advanced the proposition that literal meanings of idiom constituents have processing priority over their figurative interpretations. This suggestion forms the core of the literal-salience resonant model of L2 idiom comprehension.

The commitment of modern dictionary compilers to split rather than lump together idiomatic meanings may partly explain learners' relative awareness of idiomatic polysemy, compared to antonymy. That said, the post-hoc interviews with the participants revealed that they guessed rather than knew the second meaning of a polysemous idiom. While guessing is a useful strategy for figuring out polysemous words' and expressions' meanings (Boyarskaya & Zobotkina, 2017), this may still result in a significant margin of error and may lead to appreciable communicative mistakes, which is inadmissible if much is at stake, not least the interpreter's reputation and/or integrity. Given this, we believe that a more rigorous methodical tool for singling out idioms' meanings should be proposed, such as the 'cognitive trace' criterion, discussed in Glucksberg (2001), or the context of usage, which may be definitive in teasing idiomatic meanings apart (Naciscione, 2010). Idioms whose second meaning was far removed from the first, such as *to have a go at*, *to bring smb. out of their misery*, *to be downhill all the way*, etc. were hardly ever interpreted correctly. This is despite the fact that these idioms are relatively common in corpora.

Another reason for learners' being less aware of idiomatic polysemy than synonymy is that the meanings of lexico-semantic variants of a polysemous idiom differ in several aspects. First, one of the meanings is naturally primary, while the other is secondary. This seemingly trivial observation accounts for differences in the frequency, usage, and psychological salience of different meanings of an idiomatic expression. Second, many idioms' first meanings are derived from a technical sense of a set expression, i.e. a term or profession jargon which is registered as such in some idiomatic dictionaries. However, learners seem to store the etymologically linked meanings of a set expression separately, and only one meaning seems to be activated for learners in interpretative contexts, either terminological or metaphorical. This finding is in accordance with the data obtained by Nikulina (2015), whose experiment revealed that most learners are not aware of the second meaning of the English idiom *to bring home the bacon*, being only familiar with the more current meaning 'to earn enough money to provide for the maintenance of a household'. This is because the second meaning – 'to be successful in sports' – is more technical and restricted.

Given that some of the recurrent idioms, such as *to bring home the bacon*, *to dig deep*, *to put one's foot down*, *fair and square*, etc. are polysemous, we believe that the lack of awareness of idiomatic polysemy may lead to embarrassing communicative breakdowns, especially for those learners who work or intend to work as simultaneous translators or interpreters. An awareness of polysemy and the ability to differentiate between two distinct meanings of an idiom is crucial when these two meanings are antonymic, for example, in the case of the idiom *to be downhill all the way*, whose meanings are mutually exclusive: 1) 'to be easy in comparison with what went before', 2) 'to become worse or less successful'.

Some of the appreciable research limitations are that we did not control for as many parameters as potentially were possible when researching the degree of awareness of idiomatic synonymy, antonymy, and polysemy. This may partly explain why the difference between learners' awareness of idiomatic antonymy and polysemy turned out to be statistically insignificant. Register, frequency, the number of meanings of polysemous idioms, and the potential presence of idiomatic variants as well as idiomatic synonyms are some of the factors that could have an impact on the number of correctly/incorrectly interpreted idioms. However, this was neither the aim nor the objective of the present research, which is only the first step in what we hope could be a set of experiments aimed at analysing not only the degree of learners' awareness, but also possible causes of the suboptimal knowledge of various aspects connected with formulaic language.

Conclusion

The initial hypothesis that Russian learners of English are not equally aware of idiomatic synonymy, antonymy, and polysemy was validated, with idiomatic synonymy being most entrenched, while idiomatic antonymy was the least so. The difference between Russian learners' awareness of the three types of relations between English idioms proved to be statistically significant. Congruent idioms were interpreted more quickly and with a less margin of error in all the three tasks. The activation of an idiom's literal meaning is a factor that prevents Russian learners from interpreting its meaning correctly in the first place and, hence, diminishes the chances of accomplishing the task correctly and on time. The low awareness of idiomatic antonymy could be explained by an idiom's unique underlying image, which never peters out and which impedes learners in finding a diametrically opposed match for a particular set expression. The inequality of the meanings of a polysemous idiom on such parameters as frequency of usage, degree of semantic connection, and distance between an idiom's direct and figurative meaning have a bearing on Russian learners' awareness of idiomatic polysemy. Last but not least, enantiosemic meanings of a polysemous idiom are never produced by learners, because this contradicts learners' expectations that one and the same set expression can have incompatible meanings.

With certain qualifications, the obtained data testify to rather tenuous links between paradigmatically connected idioms in Russian learners' mental lexicon, which is partly explained by the suboptimal methodology of teaching formulaic English to FL learners. Since idiomatic idioms are paid more attention than idiomatic antonyms or polysemous idioms, it is only explicable that Russian learners of English are more aware of idiomatic synonyms than other types of relations. Polysemous idioms either fall under the radar of learners or are experienced as monosemous items. This is because idiomatic meanings are either too closely connected or because one of the meanings is infrequent or terminological.

In light of what has been established in this experimental research, it is our genuine belief that the current practice of presenting idioms in idiomatic dictionaries, reference sources, and textbooks should be revisited in the direction of a more explicit demonstration of the systemic paradigmatic relations that exist between English idioms. Not only will this raise FL learners' awareness of their existence, but will also paint a more veritable picture of formulaic language and of its complexity and interconnectedness.

There are, obviously, further directions in which research on relations between English idioms could develop. First, we believe that there is a need for the development of consistent and systematic criteria for distinguishing between idiomatic synonymy and idiomatic variation and that experimental research that could establish what is better retained by FL learners – idiomatic synonyms or variants – is called forth. Dictionary writers should distinguish more clearly and unambiguously between these two groups of idioms, as this might lead to their better retention by learners as well as to a more seamless and error-free usage of both variants and synonyms. It is also important to analyse the factors that make learners of English perceive and interpret some semantically related idioms as such while others seem to be stored in the mental lexicon as separate, disconnected items. Apparently, psycholinguistic experimentation, involving primed lexical decision tasks, is required to accomplish such a daunting task. Other types of idiomatic relations should also be systematically investigated, such as paronymy and blending, with the aim of clarifying whether these arise as a result of performance errors or errors that are due to an infirm grasp of the English language system. It would also be interesting to see whether similar or comparable results could be obtained with regard to paradigmatic idiomatic relations in other languages and whether the results of the present research are more relevant to typologically or etymologically related languages.

Conflict of interests

The authors declare that they have no conflict of interest.

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Appendix

The Three Tasks Offered to Learners to Establish the Degree of Entrenchment of the Main Types of Paradigmatic Relations among English Idioms

Task 1. Below is a list of 35 English idioms, all of which have synonyms that are also idioms. Look through the list and give at least one synonym to each idiom. In brackets, one word from the synonymic idiom is mentioned. Remember that in some cases only one component of the idiom may be changed, in others a synonymic idiom has a completely different structure.

E	x	a	m	p	l	e	:
not to turn a hair (eyelid)			syn. not to bat an eyelid				
to go down the tubes (drain)			syn. to go down the drain				
the icing on the cake (cherry)							
to spill the beans (cat)							
to get egg on your face (turn)							
to have money to burn (a hole)							
to carry a torch for smb. (heels)							
to blow a fuse (gasket)							
an unknown quantity (horse)							
flesh and blood (kin)							
at the end of your tether (wits)							
on the breadline (mouth)							
miles from anywhere (beyond)							
pull your socks up (act)							
at the eleventh hour (nick)							
to go bust (wall)							
a weight off your shoulders (mind)							
to wear yourself out (tire)							
to be a bundle of nerves (bag)							
to be locked in battle (loggerheads)							
to come to a standstill (grind)							
thick and fast (leaps)							
to get smb.'s back up (hackles)							
to make no odds (difference)							
to hold your cards close to your chest (play)							
to talk at cross purposes (wires)							
at a pinch (push)							
to be streets ahead of smb. (shoulders)							
to pull out all the stops (stone)							
to give the game away (cat)							
I wasn't born yesterday (pull)							
a close shave (call)							
to laugh your head off (stitches)							
to have a bee in one's bonnet (bats)							
under the influence (wind)							
to keep one's distance (berth)							
on edge (tenterhooks)							

Task 2. Below is a list of 35 English idioms, all of which have antonyms that are also idioms. Look through the list and give at least one antonym to each idiom. In brackets, one word from the antonymic idiom is mentioned. Remember that in some cases only one component of the idiom may be changed, in others two idioms are lexically completely different.

Example:

to keep trim (shape)	ant. to be out of shape
to take a turn for the better (worse)	ant. to take a turn for the worse
to put all your eggs in one basket (bets)	_____
to have money to burn (hand)	_____
to toss and turn (log)	_____
to take a turn for the better (worse)	_____
to have time on one's hands (bee)	_____
to call a spade a spade (bush)	_____
in the red (black)	_____
on the surface (down)	_____
on top of the world (dumps)	_____
to pour you heart out (bottle)	_____
keep you options open (eggs)	_____
to be going strong (doldrums)	_____
the high point of smth. (low)	_____
under an obligation to do smth. (no)	_____
to put years on smb. (take)	_____
to shape smth. out (phase)	_____
to nip smth. in the bud (blind)	_____
to stand up for smb. (turn)	_____
slow off the mark (quick)	_____
to bode well for smb. (bode)	_____
to tread carefully (headlong)	_____
to miss the point (hit)	_____
in dribs and drabs (bounds)	_____
to feel at home (fish)	_____
to the detriment of smb./smth. (benefit)	_____
to spare smb.'s feelings (mince)	_____
to be in one's element (depth)	_____
a turn up for the books (home)	_____
to push your luck (err)	_____
what a load of rubbish (figures)	_____
to set the seal on smth. (touch)	_____
of your own free will (duress)	_____
to do smth. by the book (corners)	_____
as bright as a button (brush)	_____
many hands make light work (cooks)	_____

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Task 3. Below is a list of 35 English idioms, all of which have (at least) two meanings. Look through the list and give two meanings of each idiom.

Example:

0	under your belt	1. (of food or drink) consumed safely 2. satisfactorily achieved or acquired
	to put smb. out of his/her misery	1. to kill 2. _____
	to be on the run	1 while running 2 _____
	to cast someone adrift	1 (of a boat or its passengers) floating without being either moored or steered 2 _____
	to come of age	1 (of a person) to reach adult status 2 _____
	under the banner of	1 claiming to support a particular cause or set of ideas 2 _____
	to have nothing on someone	1 to be inferior to smn. in a particular aspect 2 _____
	a bit on the side	1 a person with whom one is unfaithful to one's partner 2 _____
	in black and white	1 in writing or print 2 _____
	to blow someone away	1 to kill someone using a firearm 2 _____
	to bring home the bacon	1 to supply material support 2 _____
	to catch the sun	1 to be in a sunny position 2 _____
	a back-seat driver	1 a passenger in a car who gives the driver unwanted advice 2 _____
	On your bike!	1 (British, informal) to go away (used as an expression of annoyance) 2 _____
	close to the bone	1 (of a remark) penetrating and accurate to the point of causing discomfort 2 _____
	to burn the candle at both ends	1 to go to bed late and get up early 2 _____
	on the button	1 punctually 2 _____
	on the carpet	1 (of a topic or problem) under discussion 2 _____
	in the clear	1 no longer in danger or under suspicion 2 _____
	to knock smth. into a cocked hat	1 to put a definitive end to something 2 _____
	to go crackers	1 insane 2 _____
	to cut loose	1 to distance or free oneself from a person, group, or system 2 _____
	to dig deep	1 to give money or other resources generously 2 _____
	to come a cropper	1 to fall heavily 2 _____
	crowning glory	1 the best and most notable aspect of something 2 _____

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to cut both ways	1 (of a point or statement) to serve both sides of an argument 2 _____
to be downhill all the way	1 be easy in comparison with what came before 2 _____
with your eyes shut	1 with one's eyes shut (or closed) 2 _____
fair and square	1 with absolute accuracy 2 _____
to find one's feet	1 to stand up and become able to walk 2 _____
to follow your nose	1 to trust one's instincts. 2 _____
give and take	1 mutual concessions and compromises 2 _____
to fall from grace	1 a loss of favour or a position of power or honour 2 _____
to give up the ghost	1 to die 2 _____
to have a go	1 to make an attempt 2 _____
in the frame	1 to be (or not to be) eligible 2 _____