Learning L2 Idioms: The Role of Verbal Mnemonics

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Abstract

Researchers and teaching practitioners have been trying to find more effective methods of teaching idioms due to the significance of these expressions in language learning contexts. The present study sought to investigate the effects of three verbal mnemonic tools (grouping, stories, and conceptual metaphor) on EFL learners' recognition and recall of English idioms. Ninety EFL learners at intermediate language proficiency level who were preparing themselves to take IELTS participated in this study. They were in three groups of thirty members each. Each group was randomly assigned to one of the experimental conditions and was instructed idioms using one of the verbal mnemonic devices. The collected data were analyzed using the one-way ANOVA procedure. The results showed statistically significant differences among these devices, with 'stories' being the most effective on recognition and 'conceptual metaphor' being the most beneficial in the recall of idioms. The findings of the study can have potential theoretical implications for researchers and pedagogical implications for curriculum developers, language teachers, and learners.

Keywords: idiom, conceptual metaphor, grouping, stories, verbal mnemonics

1. Introduction

Figurative language has become the nexus of many studies in foreign language teaching (Zarei & Rahimi, 2014). Idioms, as a subcategory of figurative language, play an essential role in developing communicative competence (Moreno, 2011). Idiomatic competence can enhance the speaker's fluency (Boers et al., 2006). The time advantage of idiom processing is confirmed by several studies (Canal et al., 2017; Siyanova-Chanturia et al., 2011; Vespignani et al., 2010). Idiomatic competence can also pave the way to native-like proficiency (Wray & Perkins, 2000). Nonetheless, idioms pose challenges to EFL students. The abundance and ubiquity of idioms are perplexing for foreign language teachers/learners (Cieślicka, 2015; Conklin & Schmitt, 2008).

Triggering the potential literal and non-literal interpretations is one of the idiosyncrasies of idioms (Sprenger et al., 2012; Holsinger & Kaiser, 2013). Idioms cannot be understood simply by understanding their composing words due to their figurative nature (Baker, 2011; Vegge & Haumann, 2012). Evidence suggests that the compositional meaning mechanism initiates before the string of words is perceived as an idiom (Cacciari, 2014; Cacciari & Corradini, 2015; Vespignani et al., 2010). Some language learners are even unfamiliar with the meaning of individual components of idioms (Boers et al., 2009). Boers and Webb (2015) point out that misinterpretation of one of the key constituents may undermine the perception of the entire phrase. Moreover, when processing, learners often rely on their native language, even if they are already familiar with their non-literal meanings (Carrol & Conklin, 2017). Due to these complications, teaching/learning of idioms has become a marginalized issue in many EFL contexts (Liontas, 2017). Bearing the above-mentioned issues in mind, considerable attention needs to be paid to systematic and explicit instruction of idioms, especially in EFL contexts.

Traditionally, idioms were considered as frozen phraseological elements (Caillies & Declercq, 2011; Vasiljevic, 2015a) with totally arbitrary meanings. Accordingly, memorization and translation were extensively used when dealing with idioms (Chen & Lai, 2013). In contrast to this perspective, based on more recent studies in cognitive-linguistic paradigm (Croft & Cruse, 2004), the meaning of idioms is believed to be "motivated by their original, literal usage" (Boers et al., 2007, p. 43). Boers and Webb (2015) point out that some links can be drawn between the compositional meaning of a string of words and their joint non-compositional equivalents in spite of the fact that the non-literal (figurative) meanings of many idioms are not entirely predictable based on the meanings of their individual elements. Regarding establishing those connections, mnemonic devices can be used to bridge the perceived semantic and cognitive gaps.

Despite extensive research into the effectiveness of mnemonic strategies on the learning of L2 idioms (Zarei & Ramezankhani, 2018), there seems to be a dearth of empirical research comparing the effects of various verbal mnemonic techniques (grouping, stories, and conceptual metaphor) on idioms learning. This study was an attempt to partially fill the gap; it addressed the following research questions:

1. Are there any significant differences among the effects of verbal mnemonic devices (grouping, stories, and conceptual metaphor) on EFL learners' recognition of English idioms?

2. Are there any significant differences among the effects of verbal mnemonic devices (grouping, stories, and conceptual metaphor) on EFL learners' recall of English idioms?

2. Literature Review

2.1. Idioms

Idioms are commonly believed to be prototypical and formulaic (Siyanova-Chanturia & Martinez, 2014). Formulaic language comprises a wide range of multiword expressions that serve communicative functions (Wray, 2002, 2008). Carrol and Conklin (2020) identify two common features in formulaic sequences: 'recurrency' and 'faster processing of recurrent sequences'. The first criterion has to do with the fact that idioms appear in natural language more frequently than their so-called 'novel' counterparts. The second characteristic is related to the fact that formulaic expressions are processed faster than 'novel' expressions. Idioms are defined as fixed expressions the figurative (non-literal) meaning of which cannot be understood from the literal meaning of their components (Abel, 2003). According to the Holistic Hypothesis, native speakers are able to retrieve idioms as whole chunks from the mental lexicon (Jiang & Nekrasova, 2007; Wray, 2002). However, due to the fact that their figurative meaning is not always perceptible based on their literal constituents (Brenner, 2013), non-native speakers witness manifold pitfalls dealing with idioms (Liontas, 2015a). Kövecses (2010) posits that many idioms are not only linguistically but also conceptually motivated. The meanings of many idioms can be motivated by three mechanisms including metonymy, metaphor, and conventional knowledge (Kövecses, 2010). Regarding metonymic reference, for instance, an idiom such as *pop the question* is used to refer to the entire proposal (Carrol et al., 2018). As far as a conceptual metaphor is concerned, the conceptual metaphor ANGER IS HEAT can motivate the idiom *'I was boiling with anger'*. As a result, cognitive approaches for teaching idioms and idiomatic expressions are constantly being explored (Grant, 2007; Szczepaniak & Lew, 2011).

In traditional approaches, idioms were assumed to be strings of words with an arbitrary figurative meaning, which had nothing to do with their literal surface meaning. As a result, students viewed idioms as chunks of words that could be learned only through memorization. However, recent research in cognitive semantics has dwelt on the teaching of figurative expressions, suggesting that new approaches may be needed for teaching idioms. Researchers as well as teaching practitioners have been trying to find more promising techniques of teaching idioms. Using memory strategies, also known as mnemonic devices, is one of the strategies to aid L2 idiom learning (Schmitt, 2008).

2.2. Verbal Mnemonics

According to Schmitt (2008), memory strategies are traditionally known as mnemonics. Mnemonic strategies anchor and incorporate new pieces of information into prior knowledge by utilizing acoustic or visual prompts (Kuder, 2017). Mnemonics are classified into five main groups (Thompson, 1987); including spatial mnemonics, linguistic mnemonics, visual mnemonics, verbal mnemonic, and physical responses methods. Each group of mnemonic devices is further divided into certain subgroups. The present study specifically explored grouping, stories, and conceptual metaphor from among the wide range of verbal mnemonics.

Grouping or semantic organization (Gairns & Redman, 1986) is one of the subcategories of verbal mnemonics. Idioms can be classified into semantically-related groups. Learning L2 idioms in appropriate and meaningful groups can make their comprehension and production easier. Zarei and Adami (2013) studied the effect of notebook keeping, semantic mapping, and thematic clustering on vocabulary learning. The findings indicated that the experimental groups performed better than the control group. In vocabulary recognition,

notebook keeping and thematic clustering were both better than semantic mapping. Furthermore, thematic clustering was more beneficial than notebook keeping.

Stories can also be classified under verbal mnemonics. Stories provide the appropriate context to motivate students and teach them cultural values. Wang (2010) asserts that stories are useful in all kinds of EFL situations. By providing meaningful contexts, stories play a key role in meaningful and enjoyable learning since language learners can actively engage in cognitive processing, pay attention to essential verbal and visual contents, and eventually integrate the new pieces of information with pre-existing knowledge (Mayer & Moreno, 2003). Besides, according to Dual Coding Theory (DCT), stories facilitate information processing by providing both verbal information (language) and providing learners with mental images of events (imagery). Paivio (1986) identifies two distinct subsystems of DCT: the verbal dimension of language and the nonverbal dimensions or imagery. Based on this framework, there are two self-regulating channels for assigning information to long-term memory, one visual and one verbal (Shen, 2010; Welcome et al., 2011). In addition, according to Vasiljevic (2015b), links between verbal information and images are triggered in two ways: directly (or conceptually) and indirectly (by using mental images). Thus, stories offer a proper platform for verbal as well as visual processing of information.

Previous literature includes a large number of studies that have explored the effects of stories on L2 receptive and productive knowledge development (e.g., Ellis, 2009; Hughes, 2009). In the case of idioms, familiarity (Laval, 2003; Libben & Titone, 2008), semantic transparency (Abrahamsen & Burke-Williams, 2004; Cain et al., 2009), and context (Cain & Towse, 2008) have been shown to determine the quality of interpretation and comprehension of idioms.

Hence, rather than relying on a long list of isolated items, embedding

idioms in texts equips learners with information to go beyond the surface meaning and integrate and extract the figurative meaning by implementing inferencing skills when they encounter unknown idioms in purposeful contexts (Cain et al., 2005). Liontas (2002) underscores the supplementary role of context in the instruction of idiomatic expressions. Boers et al. (2007) believe that using context could boost idioms teaching as presenting idioms in authentic situations, without using other tools such as etymological elaboration, is sufficient on its own (Liontas, 2003, 2007). For further elaboration, in his pragmatic account of idiomatic competence development, Liontas (2015b) highlights the significance of contextualization in the comprehension and production of idioms. On the other hand, Boers et al. (2007) observed that learners could not guess the meaning of idioms even in context. Learners'deficiency of linguistic and extra-linguistic knowledge may justify their failure in this task. A number of studies in this area have confirmed that a biasing context ameliorates the interpretation of idioms (Cieślicka, 2011; Fanari et al., 2010). Khabiri and Masoumpanah (2012) investigated the effect of using idioms in conversation and paragraph writing on EFL learners' idiom learning. They reported that although both of the used methods were significant in enhancing learners' idiomatic knowledge, paragraph writing had a more significant impact. In one such study, Rohani et al. (2012) compared the effects of written (story) and video-graphic contexts on the retention of idioms. The findings showed that there was no significant difference between the groups in their short-term retention. However, the animation group outperformed the text group in long-term retention.

Mohamadi Asl (2013) showed that extended contexts significantly influenced idioms learning. Mohamadi Asl used the schema theory to interpret the results. Stories, as a kind of extended context, can activate a larger number of schemata in comparison to short contexts. Kalantari and Hashemian (2016)

explored the effect of storytelling on vocabulary knowledge and found a significant effect on the experimental group learners'vocabulary knowledge.

Conceptual metaphor is another verbal mnemonic device. Metaphor is at the focal point of mind and language (Tendahl & Gibbs, 2008). Cognitive linguists such as Lakoff and Johnson (2003), and Kövecses (2010) hold the view that metaphor is the cornerstone of thought and language. A metaphor has to do with comprehending one conceptual domain in relation to another (Kövecses, 2015, 2017). In other words, a conceptual metaphor includes two conceptual domains and each domain is interpreted in relation to another.

Lakoff and Johnson (2003) identify three types of conceptual metaphors including orientational, ontological, and structural metaphors. Orientational metaphors are primarily related to the spatial organization (up/down, in/out). Ontological metaphors anchor activities, emotions, and ideas with entities and substances. Structural metaphors enable individuals to structure one concept in terms of another (e.g., 'time is a resource'). Conceptual metaphor has a facilitative role in idioms comprehension.

As for teaching idioms, Boers (2000) posits that familiarizing students with conceptual metaphors can enhance students' comprehension, production, and retention of idioms. English learners need to be taught more about the concept of 'metonymy', 'metaphor', and 'simile' using special courses. For instance, 'the use of metaphoric expressions in translation' and 'lexical competence' were used in two studies. Cakir (2011) carried out the former with Turkish learners, and Samani and Hashemian (2012) conducted the latter study with Iranian learners of English. The courses covered areas like 'figure of speech' to facilitate students' idioms comprehension. Samani and Hashemian's (2012) confirmed the beneficial role of using conceptual metaphor L2 learners' idioms learning.

Feng (2007) studied the effect of conceptual metaphor and metonymy on

idiom comprehension and observed improvement in test scores. Vasiljevic (2011) used conceptual metaphors and first language (L1) to teach idioms. The students' idiomatic competence was estimated in terms of both receptive and productive knowledge. As to receptive knowledge, on the test administered after the instruction and after a four-week interval, the experimental group performed better than the control group only when imperfect answers were also considered as correct. Regarding productive knowledge, the experimental group significantly outperformed the control group on both immediate and delayed post-tests.

Chen and Lai (2013) carried out a study on the idiomatic competence of second language learners in an English writing course. They specifically explored the effect of using cognitive-oriented methods like metaphoric mapping on learning English idioms. The participants were required to write an essay describing 'an experience of being absolutely furious'. After submitting the essays, the learners were introduced to conceptual metaphors. In the next step, the participants were required to identify and circle idioms in a given article.

Additionally, students were asked to develop metaphoric mappings for the idioms about anger. Eventually, the learners were encouraged to revise their essays and integrate idiomatic expressions. The results indicated that metaphoric mapping could be used to motivate learners to use common idioms more frequently. They concluded that the conceptual metaphor method of teaching idioms was of pivotal pedagogical value and that it could be used by EFL teachers to teach idiomatic expressions in the classroom.

Previous research is evidently indicative of the positive effect of verbal mnemonic devices on learning L2 idioms. Nonetheless, few studies, if any, have compared the effect of the three verbal mnemonic techniques (grouping, stories, and conceptual metaphor) on the recognition and recall of English idioms,

particularly in an EFL context. The present study is an endeavor to bridge this gap in the literature.

3. Method

3.1. Participants

Ninety Iranian female and male language learners at Afarinesh IELTS House (in Tehran Branch) participated in the study. They were in three groups of thirty members each. According to their educational profiles at the institute, these students were at an intermediate language proficiency level. They were homogenized before the treatment using Oxford Placement Test (OPT).

3.2. Instruments

This study used the following teaching materials and data collection instruments. To ensure participant homogeneity, the OPT was administered at the outset of the study. 50 multiple-choice items were used in this pre-test to measure the participants' grammar and vocabulary. It also had a reading passage with 10 comprehension questions, as well as a writing task. The learners had 75 minutes to answer the questions. The reliability of the test was estimated to be .81, based on the KR-21 formula.

The second pretest (i.e., the idioms test) was given to reduce the effect of the participants'familiarity with the target idioms. The idioms test included 140 items. Each idiom was contextualized in a sentence and bold-faced. The students were expected to write the Persian definitions of the idioms. Idioms with which more than 10 percent of the participants were familiar were not included in the post-tests. 85 minutes were allocated for this test. The reliability index of this pre-test was estimated using the KR-21 formula, and the result was .79.

The teaching materials including 140 idiomatic expressions were selected from various idioms books and presented to all the participants following the administration of the second pre-test. Idioms were selected from different sources including *A Collection of Original Stories and Lessons for Teaching Idiomatic Expressions* (Glister, 1986), *Idioms in Use* (O'Dell & McCarthy, 2010). They were the same idioms included in the pre-test.

To accomplish the goal of the study, two post-tests were also utilized. A multiple-choice test consisting of 30 items was used to investigate the effects of verbal mnemonic devices on the participants' recognition of idioms. The participants were asked to select the correct meaning of the bolded idioms or to choose the correct alternative to fill the blank in each of the statements. The reliability index of this test was estimated using the KR-21 formula to be 0.80. Since the items in this test were chosen from the instructed idioms, the content validity of the test could be taken for granted. Nonetheless, a panel of experts confirmed the validity of the test.

A 30-item test in fill-in-the-blanks format was used to check the effects of verbal mnemonics on the recall of idioms. In each item, there was a sentence that included a blank to be filled with one of the target items. Similar to the recognition test, a panel of experts confirmed the content validity of this test prior to its administration, and its reliability was estimated to be 0.78.

3.3. Procedure

The following steps were followed to address the questions of the study. Initially, a sample of about 130 Iranian students, preparing for IELTS (Academic and General Modules) at Afarinesh IELTS House in Tehran were selected based on convenience sampling. The participants were at the intermediate level of language proficiency. After homogenization and

participant attrition, there were 90 participants left, 30 for each treatment condition. Oxford Placement Test was used to homogenize the participants. Those participants whose score was more than one standard deviation from the mean score were considered as outliers, and their data were removed from statistical analysis.

After using the idioms pre-test to ensure that the idioms were unfamiliar to the participants, the treatments were given to different groups. OPT and the idioms pre-test were administered one week before the treatment. There were three experimental groups, each of which contained 30 participants, who were taught for eight sessions. Each group of students received their instruction through one of the mnemonic techniques described below. Each session lasted between 50 to 60 minutes.

Group A received instruction through grouping (semantic clustering). The target idioms were grouped based on the semantic organization. For example, idioms related to happiness, idioms related to sadness, and idioms related to anger (*On top of the world; in seventh heaven; down in the dumps; hot under the collar).* The instructor put the pre-selected idioms on the board and encouraged the participants to give their meanings. She mentioned the name of the group and the rationale behind putting those expressions in a specific group. The instructor clarified the meanings of idioms by using them in examples. Then the students were expected to write sentences to exemplify the target idioms. They received feedback from their classmates and the instructor. The instructor put the most appropriate examples on the board.

Group B received instruction through stories. The treatment of the story group had three stages: pre-story, while-story, and post-story stages. The figurative meanings of the idioms were presented to the students in the pre-story stage. During the while-story stage, the stories chosen beforehand were narrated

to the learners using gestures to facilitate the comprehension of the story. In the post-story stage, the students orally responded to the questions based on the stories.

Sample Story:

The other day, I overheard Mrs. Smith and her friend _chewing the fat_. Although I didn't hear who they were talking about, I could _feel it in my bones_ that they were gossiping about Charles and my sister, Louise. They live close by, only five miles _as the crow flies_, although you have to drive ten miles by road to reach their house. Louise is studying to be a T.V. producer and also works at a T.V. station. She often has to _burn the candle at both ends_ to get all her work done and have time to spend with Charles. Charles is a college professor of art history. Although he's very knowledgeable about his subject, at age 30, he's still a little _wet behind the ears_. He's also an excellent chef. One night, he invited me over for dinner. He had prepared a beautiful meal for Louise and me. He's a man _after my own heart_; he made Chicken Marsala, my favorite dish. Louise came home just as Charles finished preparing dinner. She said, "Oh, Charles! I can't stay for dinner! I still have lots of work to do tonight at the station! I'm supposed to be there in fifteen minutes. If I leave right now, I'll only get there _by the skin of my teeth_!" Charles said, "Calm down Louise, after all the hours you put in at the station, one more is just _a drop in the bucket_!" Louise got mad, "Oh Charles, you just don't understand. The owner of the station is there tonight and if I'm late, I'll be _cooking my own goose_!" She grabbed her things and ran out of the house, slamming the door behind her. Well, I thought that Charles was _chicken-hearted_. Sometimes I thought that he might be jealous of Louise and her work. I told Louise, "You're doing so well at the university and at work. I'm sure that the station will offer you a good job. Working at a T.V. station is so much more exciting than working at the university that Charles will _eat his heart out_!" But I

now know that I have to *eat my words* because Louise did graduate from the university with honors and did get a great job with the station. Now she gets to travel all over the state and she's always interviewing very important and interesting people. She loves her work and Charles, too. He is also glad that she is happy with her job and that she does it so well. I'll stop *beating around the bush* and get to the point of this story. After Louise became successful in her field, she and Charles *buried the hatchet* and are now living happily. There are lots of nice couples that live happily together. But couples in which each person has their own work which fulfills them and at which they are successful, are *few are far between.*

Group C received instruction through conceptual metaphor. In the warm-up stage, the instructor raised students'metaphoric awareness by explaining the concepts of metaphor and conceptual metaphor and using some examples. Then, the instructor distributed hand-outs among students containing the target idioms and explained their meanings using conceptual metaphors. The students were then asked to do a completion task after the instructor's explanations to make sure they had grasped the meanings of the newly-learned idioms correctly. The students were then asked to use the target idioms in examples/sentences.

After the treatment period, the posttests with the afore-mentioned characteristics were administered to all the participants. The collected data were then fed into SPSS, and prepared for statistical analysis.

3.4. Data Analysis

After the post-tests, One-way ANOVA was used to compare the effects of the treatments. Assumptions of ANOVA were checked prior to using it.

4. Results

4.1. The First Research Question

The first research question investigated the effects of verbal mnemonic devices on the recognition of idioms. A one-way between-groups ANOVA was used to address this question. Descriptive statistics are shown in Table 1.

Table 1

Descriptive Statistics for the ANOVA on Idiom Recognition

	N	Mean	Std. Deviation	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1 grouping	30	21.33	1.768	20.67	21.99
2 stories	30	24.27	1.552	23.69	24.85
3 conceptual metaphor	30	22.13	2.224	21.30	22.96
Total	90	22.58	2.228	22.11	23.04

Table 1 shows that the highest mean score on the English idiom recognition test belongs to the stories group (24.27), followed by the conceptual metaphor group (22.13). The grouping method had the lowest mean (21.33). To see whether or not the differences among these groups are statistically significant, the ANOVA procedure was used. ANOVA assumptions were checked before running the procedure. The result of Levene's test of homogeneity of variances showed that this assumption was not violated (*Levene Statistic*=1.467, *p*=.236>.05). There was no violation of the other assumptions (normal distribution, independence of observations, interval data, etc.) either. The result of the ANOVA showed that the observed differences were significant ($F_{(2, 87)}$= 19.740, *p*<.0005, ω^2=.31). Therefore, it was concluded that grouping, stories, and conceptual metaphors have differential effects on the recognition of idioms. The effect size (ω^2=.31) showed that 31 percent of the variability among

the groups is due to the use of different verbal mnemonics. The post-hoc Tukey HSD test that was used to locate the significant differences showed the following result.

Table 2

Multiple Comparisons of Means for L2 Idiom Recognition

(I) group	(J) group	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
1 grouping	2 stories	-2.933*	.000	-4.08	-1.78
	3 conceptual metaphor	-.800	.227	-1.95	.35
2 Stories	3 conceptual metaphor	2.133*	.000	-3.28	-.98

Table 2 indicates that 'stories' are significantly more effective on idiom recognition than the other two groups. However, other mean differences are not statistically significant.

4.2. The Second Question

The purpose of the second question was to compare the effects of three types of verbal mnemonics on EFL students' recall of English idioms. For this purpose, the posttest scores of the participants on idiom recall were compared; descriptive statistics are summarized in the following table.

Table 3

Descriptive Statistics for the ANOVA on Idiom Recall

	N	Mean	Std. Deviation	95% Confidence Interval	
				Lower Bound	Upper Bound
1 grouping	30	20.43	2.046	19.67	21.20
2 stories	30	21.67	2.279	20.82	22.52
3 conceptual metaphor	30	22.53	2.360	21.65	23.41
Total	90	21.54	2.371	21.05	22.04

Table 3 indicates that the mean score of the conceptual metaphor group on idiom recall is higher than that of the other groups. The lowest mean belongs to the grouping method. To find out if these differences are statistically significant, their scores on the posttest were compared using ANOVA after checking the assumption of the equality of variances (*Levene Statistic*=.336, *p*=.716>.05) and other assumptions. The result showed significant group differences ($F_{(2, 87)}$= 6.705, *p* <.0005, ω^2=.13). Moreover, the effect size (ω^2= .13) suggested that using different verbal mnemonic techniques can account for 13 percent of the variance among the groups. The post-hoc test results (Table 4) showed that conceptual metaphor contributes more to idiom recall than grouping. However, other mean differences were not statistically significant.

Table 6

Multiple Comparisons of Means for Idiom Recall

(I) group	(J) group	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
1 grouping	2 stories	-1.233	.088	-2.61	.14
	3 conceptual metaphor	-2.100*	.001	-3.47	-.73
2 stories	3 conceptual metaphor	0.867	.294	-.51	2.24

5. Discussion

The findings of this study revealed significant differences among the grouping, stories, and conceptual metaphor groups on both recognition and recall of L2 idioms. As to idiom recognition, embedding idioms in the context of 'stories' was more effective than both grouping and conceptual metaphor. The better performance of the 'stories' group may be explained from different perspectives. From a theoretical perspective, the better performance of the

stories group is compatible with Wang's (2010) observation that stories can be very effective in different EFL contexts. Context plays an irrefutable role in idioms comprehension. Stories provide learners with contextualized exposure to idioms and give them helpful clues to prioritize the figurative meaning rather than the literal one during the input processing stage. In other words, context determines the correct interpretation. This finding lends support to Liontas' (2002) claim that context plays a central role in idioms comprehension. Furthermore, stories engage learners in the process of meaningful learning by providing useful contextual clues and activating learners' cognitive processing by drawing their attention to verbal content and helping them anchor new pieces of information to their prior knowledge (Mayer & Moreno, 2003). This finding is also partially compatible with Dual Coding Theory as stories can help learners form mental pictures of the relevant scenes. In a sense, stories are sources of verbal and non-verbal input, thereby reducing the cognitive load and promoting cognitive processing (Shen, 2010; Welcome et al., 2011).

From the empirical perspective, these findings are in accordance with those of Cain and Towse (2008), who have confirmed the effectiveness of using stories and purposeful exposure to idioms in 'context'. The main difference is that the participants of their experiment were children, whereas we conducted the study with adults. The present findings are also consistent with that of Mohamadi Asl (2013). In that study, extended contexts, such as stories, had a positive effect on learning idioms. On the other hand, the findings are in contrast with that of Boers et al. (2007), who observed that learners could not guess the meaning of idioms even in context. It is worth mentioning that in the present study, the figurative meanings of idioms were instructed to the students in the pre-story step.

Regarding idioms recall, the positive effect of enhancing metaphoric

awareness through conceptual metaphor in facilitating student's production of idioms is in line with the findings of Boers (2000). According to the Conceptual Metaphor Theory (CMT), idioms are not dead and frozen metaphors, and the metaphorical meaning of idioms can be semantically motivated by conceptual metaphor. The results also confirm those of Chen and Lai (2013). They confirmed the promising pedagogical value of conceptual metaphor in teaching idioms. The beneficial role of using conceptual metaphor is also in agreement with the finding of Vasiljevic (2011), who reported similar results.

On the other hand, despite the positive literature on grouping (semantic clustering), in the present study, grouping turned out to be the least effective way of teaching idioms. This finding is in sharp contrast with those of Zarei and Adami (2013), who reported that semantic clustering had a significantly positive effect on L2 vocabulary learning. This incompatibility may be attributed to the nature of idioms, allowing a weaker possibility of visual associations between form and meaning compared with isolated words. In other words, the observation that both stories and conceptual metaphors turned out to be more effective on idioms learning than grouping may be due to the fact that both metaphors and stories allow for a higher degree of visualization, which in turn, facilitates idiom processing.

6. Conclusion and Implications

Idioms constitute a prominent element of all languages and are, therefore, important in ESL/EFL teaching/learning contexts. Misinterpretation of idioms may cause a communication failure. Therefore, language learners have long been struggling with idioms to comprehend their figurative meanings and to use them correctly in appropriate contexts without violating the unwritten sociocultural conventions as the usage of idioms stretches beyond the surface

level of linguistic processing and encompass many other cultural and social factors. The findings of this study can cast more light on some of the possible ways of helping learners achieve this objective. The findings indicate the vital role of stories and conceptual metaphors in learning L2 idioms. Stories as effective pedagogical instruments serve a number of functions: they are educational, motivating, and thought-provoking. Stories provide learners with authentic and purposeful contexts to go beyond the literal meaning and reduce the cognitive overload on working memory. Even though, frequency of exposure is a crucial element in language learning, the quality of language input is also important. Stories, as a rich context, make L2 idioms more comprehensible. As a consequence, they promote cognitive processing, which lies at the heart of learning L2 idioms. Stories can also engage learners in critical thinking and increase students' positive attitudes towards the learning process. All these lead to the conclusion that the facilitative role of stories with their rich context should not be overlooked in idioms teaching; whenever time and other situational constraints allow, stories should be incorporated into L2 idioms classes to remove part of the natural difficulty of idioms learning by making learning a little more fun and meaningful. Learners can also be encouraged to use their own short stories on different topics using idioms and idiomatic expressions.

From the findings of this study, it may also be concluded that conceptual metaphor has the potential to allow teachers to present idioms in more meaningful and organized categories and, thus, facilitate students' cognitive processing. Due to the natural difficulties involved in idioms processing, not least because of their opaque nature and the lack of clear correspondence between their form and meaning, students need assistance in assigning them to memory.

It can also be concluded that when verbal mnemonic devices are coupled with a degree of visualization, idioms learning can be positively influenced. This

conclusion is drawn from the observation that both conceptual metaphors and stories (which allow for more visualization) were more effective than simply grouping idioms together based on semantic or thematic similarity.

Moreover, since stories and metaphors were differentially effective on idioms recognition and recall (stories being more effective on the recognition and conceptual metaphors being more effective on the recall of idioms), one may cogently conclude that the choice of these verbal mnemonic devices should be based on the objective of instruction. Ideally, it may be concluded that these two mnemonic devices should be used together to complement each other and to facilitate both idiom recognition and recall simultaneously.

On the theoretical side, the findings may arouse researchers' interest to carry out further research on these as well as other types of mnemonic devices. On the practical side, learners, teachers, and materials developers may benefit from these findings and make informed decisions about verbal mnemonic devices to facilitate idioms learning and teaching. Nevertheless, this study was done under a number of limitations, which must be considered to avoid overgeneralization of the findings. The scope of this study was confined to an EFL context, the duration of treatment was limited, and participants were intermediate level learners. Bearing these caveats in mind, the findings should only be interpreted in the light of these inevitable limitations, and no form of overgeneralization is advisable.

References

Abel, B. (2003). English idioms in the first language and second language lexicon: A dual representation approach. *Second Language Research*, *19*(4), 329–358.

Abrahamsen, E. P., & Burke-Williams, D. (2004). Comprehension of idioms by children with learning disabilities: Metaphoric transparency and syntactic frozenness. *Journal of Psycholinguistic Research*, *33*(3), 203–215.

Asl, F. M. (2013). The impact of context on learning idioms in EFL classes. *TESOL Journal*, *37*(1), 1–12.

Baker, S. (2011). *The effect of visual images and imagery on immediate and delayed recall of idioms by English language learners* [Unpublished master's thesis]. Hamline University.

Boulenger, V., Shtyrov, Y., & Pulvermüller, F. (2012). When do you grasp the idea?. MEG evidence for instantaneous idiom understanding. *Neuroimage*, *59*(4), 35023–513.

Boers, F. (2000). Metaphor awareness and vocabulary retention. *Applied Linguistics*, *21*(4), 553–571.

Boers, F., Eyckmans, J., Kappel, J., Stengers, H., & Demecheleer, M. (2006). Formulaic sequences and perceived oral proficiency: Putting a lexical approach to the test. *Language Teaching Research*, *10*(3), 245–261.

Boers, F., Eyckmans, J., & Stengers, H. (2007). Presenting figurative idioms with a touch of etymology: More than mere mnemonics?. *Language Teaching Research*, *11*(1), 43–62.

Boers, F., Piquer Píriz, A. M., Stengers, H., & Eyckmans, J. (2009). Does pictorial elucidation foster recollection of idioms?. *Language Teaching Research*, *13*(4), 367–382.

Boers, F., & Webb, S. (2015). Gauging the semantic transparency of idioms: Do natives and learners see eye to eye?. In R. R. Heredia, & A. B. Cieślicka (Eds.), *Bilingual Figurative Language Processing* (pp. 368–392). Cambridge University Press.

Brenner, G. (2013). *Webster's new world American idioms handbook*. NY: Webster's New World.

Cacciari, C. (2014). Processing multiword idiomatic strings: Many words in one?. *The Mental Lexicon*, *9*(2), 267–293.

Cacciari, C., & Corradini, P. (2015). Literal analysis and idiom retrieval in ambiguous idioms processing: A reading-time study. *Journal of Cognitive Psychology*, *27*(7), 797–811.

Caillies, S., & Declercq, C. (2011). Kill the song-steal the show: What does distinguish predicative metaphors from decomposable idioms?. *Journal of Psycholinguistic Research*, *40*(3), 205–223.

Cain, K., Towse, A. S., & Knight, R. S. (2009). The development of idiom comprehension: An investigation of semantic and contextual processing skills. *Journal of Experimental Child Psychology*, *102*(3), 280–298.

Cain, K., Towse, A. S. (2008). To get hold of the wrong end of the stick: Reasons for poor idiom understanding in children with reading comprehension difficulties. *Journal of Speech, Language, and Hearing Research*, *51*(6), 1538-1549.

Cakir, I. (2011). How do learners perceive idioms in EFL classes?. *Ekev Academic Review*, *15*(47), 371–381.

Canal, P., Pesciarelli, F., Vespignani, F., Molinaro, N., & Cacciari, C. (2017). Basic composition and enriched integration in idiom processing: An EEG study. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *43*(6), 928–943

Carrol, G., & Conklin, K. (2020). Is all formulaic language created equal? Unpacking the processing advantage for different types of formulaic sequences. *Language and Speech*, *63*(1), 95–122.

Carrol, G., & Conklin, K. (2017). Cross language priming extends to formulaic units: Evidence from eye-tracking suggests that this idea "has legs". *Bilingualism: Language and Cognition, 20*(2), 299–317.

Carrol, G., Littlemore, J., & Dowens, M. G. (2018). Of false friends and familiar

foes: Comparing native and non-native understanding of figurative phrases. *Lingua, 204*, 21–44.

Chen, Y. C., & Lai, H. L. (2013). Teaching English idioms as metaphors through cognitive-oriented methods: A case in an EFL writing class. *English Language Teaching, 6*(6), 13–20.

Cieślicka, A. (2015). Idiom acquisition and processing by second/foreign language learners. In R. R. Heredia, & A. Cieślicka (Eds.), *Bilingual figurative language processing* (pp. 208–244). Cambridge University Press.

Cieślicka, A. B. (2011). Suppression of literal meanings in L2 idiom processing: Does context help? *Studies in Second Language Learning and Teaching, 1*(1), 13–36.

Conklin, K., & Schmitt, N. (2008). Formulaic sequences: Are they processed more quickly than nonformulaic language by native and nonnative speakers?. *Applied linguistics, 29*(1), 72–89.

Croft, W., & Cruse, D. A. (2004). *Cognitive linguistics*. Cambridge University Press.

Fanari, R., Cacciari, C., & Tabossi, P. (2010). The role of idiom length and context in spoken idiom comprehension. *European Journal of Cognitive Psychology, 22*(30), 321–334.

Feng, Y. Y. (2007). *An experimental investigation to determine the utility of conceptual metaphors and metonymies in enhancing idiom comprehension for EFL undergraduate learners of English* [Unpublished master's thesis]. Tamkang University, Taiwan, R.O.C.

Gairns, R., & Redman, S. (1986). *Working with words: A guide to teaching and learning vocabulary* (pp. 74–80). Cambridge University Press.

Ellis, B. (2009). *Content area reading, writing, and storytelling: A dynamic tool for improving reading and writing across the curriculum through oral language development*. Teacher Ideas Press.

Glister, E. C. (1986). *A collection of original stories and lessons for teaching idiomatic expressions*. MA TESOL Collection. 624. https://digitalcollections.sit.edu/ipp_collection/624.

Grant, L. E. (2007). In a manner of speaking: Assessing frequent spoken figurative idioms to assist ESL/EFL teachers. *System*, *35*(2), 169-181.

Holsinger, E., & Kaiser, E. (2013). Processing (non)compositional expressions: Mistakes and recovery. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *39*(3), 866-878.

Hughes, K. (2009). How social stories support early literacy learning of toddlers. In Meier, D. (Ed.). *Here's the story: Using narrative to promote young children 's language and literacy learning*. Teachers College Press.

Jiang, N., & Nekrasova, T. M. (2007). The processing of formulaic sequences by second language speakers. *Modern Language Journal*, *91*, 433-445.

Kalantari, F., & Hashemian, M. (2016). A story-telling approach to teaching English to young EFL Iranian learners. *English Language Teaching*, *9*(1), 221-234.

Khabiri, M., & Masoumpanah, Z. (2012). The comparative effect of using idioms in conversation and paragraph writing on EFL learners' idiom learning. *Iranian Journal of Applied Language Studies*, *4*(1), 59-80.

Kövecses, Z. (2010). *Metaphor: A practical introduction*. Oxford University Press.

Kövecses, Z. (2015). *Where metaphors come from: Reconsidering context in metaphor*. Oxford University Press.

Kövecses, Z. (2017). Levels of metaphor. *Cognitive Linguistics*, *28*(2), 321-347.

Kuder, S. J. (2017). Vocabulary instruction for secondary students with reading disabilities: An updated research review. *Learning Disability Quarterly*, *40*(3), 155-164.

Lakoff, G. & Johnson, M. (2003). *Metaphors we live by*. The University of Chicago Press.

Laval, V. (2003). Idiom comprehension and metapragmatic knowledge in French children. *Journal of Pragmatics*, *35*(5), 723-739.

Libben, M., & Titone, D. (2008). The multidetermined nature of idiom processing. *Memory and Cognition*, *36*(6), 1103-1121.

Liontas, J. I. (2002). Context and idiom understanding in second languages. In S. H. FosterCohen, T. Ruthenberg, & M-L. Poschen (Eds.), *EUROSLA*

Yearbook: Annual conference of the European second language association (Vol. 2, pp. 155–185). *Proceedings of the 2002 Annual Conference of the European Second Language Association*. John Benjamins.

Liontas, J. I. (2003). Killing two birds with one stone: Understanding Spanish VP idioms in and out of context. *Hispania, 86*(2), 289-301.

Liontas, J. I. (2007). The eye never sees what the brain understands: Making sense of idioms in second languages. *Lingua et Linguistica, 1*(2), 25-44.

Liontas, J. I. (2015a). Straight from the horse's mouth: Idiomaticity revisited. In R. R. Heredia & A. B. Cieślicka (Eds.), *Bilingual figurative language processing* (pp. 301-340). Cambridge University Press.

Liontas, J. I. (2015b). Developing idiomatic competence in the ESOL classroom: A pragmatic account. *TESOL Journal, 6*(4), 621-658.

Liontas, J. I. (2017). Why Teach Idioms? A Challenge to the Profession. *Iranian Journal of Language Teaching Research, 5*(3), 5-25.

Madros, J. (2010). *Traditional oral storytelling in the classroom* [Unpublished master's thesis]. University of Alaska, Fairbanks.

Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist, 38*(1), 43-52.

Moreno, E. M. G. (2011). The role of etymology in the teaching of idioms related to colors in an L2. *Porta Linguarum, 16*, 19-32.

O'Dell, F., & McCarthy, M. (2010). *English idioms in use* (Advanced). Cambridge University Press.

Paivio, A. (1986). *Mental representations: A dual coding approach*. Oxford University Press.

Rohani, G., Ketabi, S., & Tavakoli, M. (2012). The effect of context on the Iranian EFL learners' idiom retention. *International Journal of Linguistics, 4*(4), 52-66.

Samani, E. R., & Hashemian, M. (2012). The effect of conceptual metaphors on learning idioms by l2 learners. *International Journal of English Linguistics, 2*(1), 249–256.

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, *12*(3), 329-363.

Shen, H. H. (2010). Imagery and verbal coding approaches in Chinese vocabulary instruction. *Language Teaching Research*, *14*(4), 485-99.

Siyanova-Chanturia, A., & Martinez, R. (2014). The idiom principle revisited. *Applied Linguistics*, *35*(5), 549-569.

Siyanova-Chanturia, A., Conklin, K., & Van Heuven, W. J. (2011). Seeing a phrase "time and again" matters: The role of phrasal frequency in the processing of multiword sequences. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *37*(3), 776-784.

Sprenger, S. A., Levelt, W. J., & Kempen, G. (2006). Lexical access during the production of idiomatic phrases. *Journal of Memory and Language*, *54*(2), 161-184.

Szczepaniak, R., & Lew, R. (2011). The role of imagery in dictionaries of idioms. *Applied Linguistics*, *32*(3), 323-347.

Tendahl, M., & Gibbs Jr, R. W. (2008). Complementary perspectives on metaphor: Cognitive linguistics and relevance theory. *Journal of Pragmatics*, *40*(11), 1823-1864.

Thompson, I. (1987). Memory in language learning. In A. Wenden & J. Rubin (Eds.), *Learner strategies in language learning,* (pp. 15-30). Prentic-Hall.

Vasiljevic, Z. (2015). Teaching and learning idioms in L2: From theory to practice. *Mextesol Journal*, *39*(4), 1-24.

Vasiljevic, Z. (2015b). Imagery and idiom teaching (effects of learner-generated illustrations and etymology). *International Journal of Arts & Sciences*, *8*(1), 25-42.

Vasiljevic, Z. (2011). Using conceptual metaphors and L1 definitions in teaching idioms to non-native speakers. *The Journal of Asia TEFL*, *8*(3), 151-176.

Vegge, T., & Haumann, D. (2012). *Idioms categorization, lexical representation and the question of compositionality*. University of Agder: Faculty of Humanities and Education.

Vespignani, F., Canal, P., Molinaro, N., Fonda, S., & Cacciari, C. (2010). Predictive mechanisms in idiom comprehension. *Journal of Cognitive Neuroscience*, *22*(8), 1682-1700.

Wang, S. (2010). Enhancing teaching and learning with digital storytelling. *International Journal of Information and Communication Technology Education*, *6*(2), 76-87.

Welcome, S. E., Paivio, A., McRae, K., & Joanisse, M. F. (2011). An electrophysiological study of task demands on concreteness effects: evidence for dual coding theory. *Experimental Brain Research*, *212*(3), 347-358.

Wray, A., & Perkins, M. R. (2000). The functions of formulaic language: An integrated model. *Language & Communication*, *20*(1), 1-28.

Wray, A. (2002). *Formulaic language and the lexicon*. Cambridge University Press.

Wray, A. (2008). *Formulaic language: Pushing the boundaries*. Oxford University Press.

Zarei, A. A., & Adami, S. (2013). The effects of semantic mapping, thematic clustering, and notebook keeping on l2 vocabulary recognition and production. *Journal on English Language Teaching*, *3*(2), 17-27.

Zarei, A. A., & Rahimi, N. (2014). Idioms: Etymology, contextual pragmatic clues and lexical knowledge in focus. *Iranian Journal of Applied Language Studies*, 6(2), 179-203.

Zarei, A. A., & Ramezankhani, Z. (2018). The comparative effects of mnemonic keyword method, storytelling, and semantic organization on L2 idiom learning. *Teaching English Language*, *12*(1), 31-60.