

The Comparative Effects of Mnemonic Keyword Method, Storytelling, and Semantic Organization on L2 Idiom Learning

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Abstract

Different techniques and methods have been offered to improve the learning of idioms. The goal of the study was to compare the possible effects of *Mnemonic keyword method*, storytelling, and semantic organization on Second Language (L2) idiom learning. To this end, 90 male students with the age range of 16 to 18 in Shahid Beheshti high school in Avaj, Iran were selected through convenience sampling based on availability. To homogenize the participants, a version of the Oxford Placement Test (OPT) was used. Another pretest was used to minimize the effect of the students' prior knowledge of idioms. Then, the students were divided into three equal groups, and each group was randomly assigned to a different treatment condition. At the end of the treatment, which lasted for 10 one-hour sessions, three posttests were used to compare the effects of the three different methods. Three separate one-way ANOVA procedures were used to analyze the data. The results showed that the group taught through the keyword method outperformed the other two groups in L2 idiom comprehension, production, and retention. Also, the participants of the storytelling group had better performance in L2 idiom comprehension, production and retention than those in the semantic organization group. These findings may have implications for learners, teachers and material designers.

Keywords: Mnemonic Keyword Method, Storytelling, Semantic organization, Idiom

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1. Introduction

Idioms are a challenging, yet stimulating part of language. Idioms do not constitute an optional section of language which you can select either to learn or not to learn. They form a fundamental part of a language (Cooper, 1999). Moreover, proper use of idioms shows that a learner can communicate effectively and naturally in real-life situations (Ellis, 1997; Wray & Perkins, 2000). Likewise, Cooper (1999) puts emphasis on idiom learning by pointing out that an average 60-year-old person applies almost 20 million idioms during his/her life.

The idea of using mnemonics is to codify complicated data in a manner that one can remember without difficulty (Shapiro & Waters, 2005). Among the effective mnemonic techniques which are widely accepted and used are the *keyword method*, storytelling, and semantic organization (Thompson, 1987). The *keyword method* was developed by Atkinson and Raugh (1975), and its efficiency has been tested in many research studies (e.g., Jenpattarakul, 2012; Levin, 1993; Pirbabadi & Rahmany, 2014; Shapiro & Waters, 2005). Semantic organization is another useful mnemonic method which plays a significant role in vocabulary learning because arranging words in some manner can enhance the pace of learning. Likewise, Mirhassani and Eghtesadi (2007) explain that students can remember effectively when they arrange and organize words in a connected and semantic manner. Storytelling is also another mnemonic method which is very useful in vocabulary learning and teaching. In this method, students connect the words they want to learn to a topic; then they relate the words by telling a story (McGrath & Taylor, 2004; Palmer, 2001). Researchers directing investigation on storytelling agree that the method increases the depth and pace of learning (Hines, 1995; Martinez, 2007; Palmer, 2001).

Idioms, as one of the most significant subcategories of lexical knowledge and one of the most difficult areas of language acquisition, deserve a great deal of attention (Zarei & Rahimi, 2014). Previous studies on Second Language (L2) vocabulary learning have indicated the efficiency of the aforementioned mnemonic methods on L2 vocabulary learning. The purpose of the present study is to examine the effect of mnemonic keyword, storytelling, and semantic organization methods on L2 idioms comprehension, production, and retention.

2. Review of Literature

2.1 Idioms

Irujo (1986) defines an idiom as a conventionalized expression whose meaning is different from the meaning of its individual parts. Although there is no single accepted definition of idioms, a number of researchers accept that an idiom can be described based on the following characteristics. First, its meaning is not fully achievable from the sum of its single parts. Second, its structure is predetermined or rigid. Third, the literal meaning of an idiom is feasible but less common (Zyzik, 2009). For instance, the meaning of '*rain cats and dogs*' has nothing to do with the meaning of '*cats*' or '*dogs*'; likewise, the meaning of '*take the bull by the horns*' cannot be achieved by the sum of its single parts. Generally, idioms have a number of characteristics, some of which are described below.

- **Uncompositionality:** For a long time, the standard way of viewing idioms has been to consider them as lexical items. The rationale of this view is based on the idea that an idiom behaves like a syntactic and semantic unit, and its meaning is not achievable from the sum of its individual parts and should be learned as a whole (Grant & Bauer, 2004). For example, the constituents of the idiom like 'kick the bucket' cannot help us to retrieve its meaning '*to die*'. In other words, we are not allowed to break up the meaning

of the idiom (to die) into its constituents. Moreover, very little modification is permitted, so the passive form of the idiom (the bucket was kicked) is wrong.

- **Conventionality:** The meaning of idioms is not predictable based on the connection between the form and meaning, but it is constructed by speech community (Grant & Bauer, 2004). For example, he is *'like a cat on hot bricks'*, but not *'like a dog on hot bricks'*.

- **Institutionalization:** An idiom is institutionalized when it gets into the usual usage of a speech society; that is, it becomes admitted as an element of language, culture, and literature (Grant & Bauer, 2004).

- **Formality:** Formality refers to the extent to which idiomatic expressions are suitable in informal and formal situations (Gibbs, 1994).

- **Semantic Transparency:** According to Cooper (1999), semantic transparency refers to the relationship between word for word and symbolic meaning of an idiomatic expression. Based on the extent to which word for word meaning matches the understanding of idioms' symbolic meaning, idiomatic expressions are classified on a cline from transparent to opaque (Moon, 1996). The first group (transparent idioms) requires little effort to comprehend because of the obvious connection between the lexical meanings of the parts and the whole symbolic meaning of idioms, for example, the *'see the light'* (to understand something). The second group (semitransparent idioms) refers to those idioms which normally have figurative meaning and their components have minor roles in achieving the entire meaning of idioms, for example, *'break the ice'* (to make people feel more relaxed). The third group (semi opaque idioms) refers to those idioms whose metaphorical meaning is not achieved from their constituent parts. In this group, an idiomatic expression is divided into two parts; one with a literal sense and another with a figurative meaning like phraseological units, for example, *'pass the buck'* (pass the responsibility to someone else). Finally, the fourth

group (opaque idioms) refers to those idioms whose meanings are unclear for L2 learners due to the little connection between the literal meanings of their components and the overall interpretation of idioms, for example, '*to burn one's boat*' (to do something that cannot be changed later). This does not mean that there are no relations between the individual parts of idioms and their overall meaning in the case of opaque idioms. Some of them can be explained in terms of their historical occurrences. For instance, the link between '*peace*' and '*hatchet*' originates from the Indian American tradition of burying the hatchet to end the hostilities. Likewise, the connection between '*death*' and '*bucket*' comes from the people who stood on the buckets with the ropes around their necks, and then they kicked the buckets away to hang themselves (Dunkling, 1998; Kirkpatrick, 1996).

• **Syntactic Characteristics:** Idiomatic expressions have the following syntactic characteristics indicating that some transformation of their constituents may remove their noncompositionality and their figurativeness (Baker, 1992).

- 1- Addition: For example, when the adverb '*very*' is added to the adjective '*red*', the meaning of the idiom '*red herring*' (argument which leads attention away from the subject being considered) is changed (very red herring).
- 2- Deletion: When any word is deleted from an idiomatic expression, its figurative meaning is changed. For example, deleting '*dark*' from the expression 'a dark horse' (a person who does not want to talk about his work) would alter its meaning.
- 3- Modification: Changing the pattern, order, or grammatical structure of an idiomatic expression will change its meaning. For example, if we change the order of an expression like '*hook, line, and sinker*' (completely), its figurative meaning is changed.

- 4- Comparative: When the comparative suffix is added to an idiomatic expression, its meaning is altered. For example, adding *'er'* to the expression *'a big cheese'* (the most important person) would change its meaning.
- 5- Substitution: There are usually no substitutes for the constituents of idioms and replacing any words even using synonyms is not permitted. For example, *'wrong'* cannot be substituted by *'false'* in the expression *'back the wrong horse'*, although they are synonyms.
- 6- Passivizing: Changing idioms from active to passive will change their figurative meaning; however, idioms are different in this regard (Culicover, 1976). For example, we are not allowed to passivize idiomatic expressions like *'kick the bucket'*, but we can passivize expressions like *'to spill the beans'*. According to Nunberg, Sag, and Wasow (1993), the syntactic irregularity of an idiomatic expression depends on whether its meaning can be spread over its components, or whether the syntactic structures of idioms map onto the phrase explaining their meaning. For instance, the meaning of the idiom *'to spill the beans'* is to reveal the information. Both of them (the idiom and its meaning) are made of the same parts and the parts have the same thematic functions. However, the constituents of the idiom *'kick the bucket'* do not correspond with the parts of the phrase (to die) describing its meaning. The idiomatic expression (*kick the bucket*) is a verb phrase which contains a verb and an object, but the meaning of the phrase is *to die* which is an intransitive verb. Therefore, certain changes cannot be applied to the idiomatic expressions like *'kick the bucket'*.

2.2 The Mnemonic Keyword

Schmitt (2008) posits that memory strategies are conventionally known as mnemonics. The word mnemonics is taken from the word *'Mnemoynec'*,

which refers to the goddess of memory. *Mnemonic* is a Greek word and can be explained as any strategy that promotes the recall of new knowledge. Levin (1993) also postulates that learners of all age groups can benefit from mnemonic instruction. According to Atkinson and Raugh (1975), keywords do not have any relationship to the foreign words other than their similarity in sound. Based on this method, vocabulary learning is divided into two stages. During the first stage, because of acoustic similarity, a foreign word is associated with a keyword. Then, a mental image is created to make a connection between the keyword and the translation of the foreign word. For example, in Spanish, the word '*cabello*' which means horse, contains sounds like '*cob-eye-yo*'. Employing '*eye*' as the key word, learners might create a mental image of horse kicking an eye.

2.3 Semantic Organization

Semantic organization refers to the way people organize in their mind what they observe, hear, smell, taste, feel, and infer in order to understand the world more effectively and quickly. Semantic organization is a fundamental component of language learning. When we learn a new item, we should store it in an organized manner so that it can be easily accessed (Gairns & Redman, 1986).

According to Seal (1991), the use of semantic organization is justified for two reasons. Firstly, it gives learners a sense of organization and structure. Secondly, it may facilitate guessing the meaning of unknown words within the vocabulary set. Furthermore, Gairns and Redman (1986) posit that semantic organization assists students to know the semantic boundaries, to understand the restrictions involved in using an item, and to understand where meaning overlaps. Therefore, semantic organization helps learners to identify those words which are semantically related, and it gives consistency to the text.

2.4 Storytelling

According to *Oxford Advanced Learners' Dictionary*, stories constitute an important part of every culture. They are used for instilling cultural values, entertaining people, and educating learners. Story telling not only facilitates creative thinking, but also improves cooperative learning. It also provides an unlimited opportunity for students to develop their own understanding of language based on their current level of knowledge base (Palmer, 2001). Also, Wang (2010) believes that story is useful in all kinds of EFL situations. It facilitates contextualizing learning items and offers a context of meaningful, motivating, and interesting learning. Moreover, it gives cohesion to the learning and adds more lively and informal communicative factors to a learning program.

According to Harmer (2001), stories have the potential to arouse students' interest towards language learning, to promote creativity, and to make the classroom atmosphere more enjoyable so that students are not afraid of language learning.

2.5 Previous Studies

Several studies have already highlighted the facilitative role of the *keyword method* in vocabulary learning. An experimental study conducted by Pressley, Levin, and Miller (1981) with primary school learners showed that applying the keyword procedure improved the recall of abstract and concrete Spanish words. Another study by Fang (1985) showed that the students who were taught through the *keyword method* recalled the medical terminologies significantly better than the students taught through a traditional method. In another study, Avila and Sadoski (1996) showed the effectiveness of teaching based on the *keyword method* for students who were at a low level of language proficiency in an ESL setting. In this study, keyword associations and drawings helped students learn more effectively. Meanwhile, Carney and

Levin (1998) found that the immediate effect of the *keyword method* is stronger than its longer term effect.

In a study conducted by Taguchi (2006), the effect of the *keyword method* on vocabulary learning was examined. The results showed the effectiveness of the *keyword method* for older learners. Baleghizadeh and Ashoori (2010) compared the impact of the keyword and word-list methods on EFL learners' immediate retention of vocabulary. The results showed that the keyword group performed significantly better than the word list group. Moreover, Khalafi and Oroji (2016) examined the impact of the *keyword method* on EFL learners' vocabulary learning. The results showed that the students who received treatment through the *keyword method* performed significantly better than the students in the comparison group in vocabulary retention.

Studies on the effect of semantic organization L2 vocabulary learning have produced mixed results. For example, Margosein, Pascarella, and Pflaum (1982) conducted a study to examine the effect of semantic mapping on L2 vocabulary learning. Forty-four high school students were divided into two groups. The first group received content-rich three sentence passages. The second group received treatment through semantic. The results showed the positive effect of semantic organization on vocabulary learning.

Furthermore, according to Gairns and Redman (1986), classifying words by meaning can guide learners towards meaning and helps them to describe boundaries between lexical items. Brown and Perry (1991) compared the effect of keyword, semantic mapping, and combined keyword-semantic mapping, on vocabulary learning. The results indicated that the keyword strategy enhanced vocabulary learning of lower proficient learners better than the other two strategies. It was also found that the combined keyword-semantic mapping strategy improved the vocabulary learning of proficient learners better than the other strategies. In another study, the effect of

teaching vocabulary based on semantic mapping was examined by Zaid (1995). He came to the conclusion that semantic mapping involves some aspects of communicative language teaching, and it is a useful strategy for vocabulary teaching and reading comprehension.

Finkbeiner and Nicol (2003) conducted a study to see whether or not presenting new L2 vocabulary in semantic categories helps students learn effectively. The results showed a semantic interference effect not only during the encoding process, but also during the retrieval of information. Similarly, Hakki Erten and Tekin (2008) came to the conclusion that synonyms, antonyms or other semantic relations among lexical items can create confusion, and thus need much attention on the part of the learners.

Papathanasious (2008) compared the effect of instruction through semantically related and semantically unrelated sets on learning new vocabulary. The results indicated that teaching new words through semantically unrelated sets improved the vocabulary retention of adult beginners. However, regarding intermediate children, no sound conclusion could be reached.

Bolger and Zapata (2011) carried out a study to investigate the effect of semantic categories on L2 vocabulary learning. They presented the highlighted vocabulary items in English stories. Then, the students received oral and written instruction while they were reading stories on their computer. The result showed that the participants in the semantically unrelated group were slightly better than semantically related group in picture matching tests, but the unrelated group was significantly more accurate than semantically related group on True/False tests.

Moreover, Zarei and Adami (2013) examined the effect of semantic mapping, notebook keeping, and thematic clustering on vocabulary recognition and production. The results of the ANOVA procedure showed

that all three experimental groups were better than the control group. Concerning vocabulary recognition, thematic clustering and notebook keeping were found to be more efficient than semantic mapping. Besides, it was revealed that thematic clustering was more effective than notebook keeping, and notebook keeping was more effective than semantic mapping on L2 vocabulary production.

Many studies have been conducted to investigate storytelling as a pedagogical method. Cliatt and Shaw (1988) carried out a study to examine the effect of storytelling on children's literacy development. They found that storytelling, as an effective technique, improved learners' language skills and positive attitude towards language instruction.

Also, Hines (1995) found that her students' affective filter was lowered when they performed a piece of text and told a story. She suggested that teachers first choose a story, and then persuade learners to develop their own personal interpretation by acting out in small groups. In addition, Vivas (1996) investigated whether storytelling has any effect on language comprehension and production of children. The results showed that storytelling helped children improve the habit of listening and provided them with valuable training in both comprehension and production through giving them exposure to the natural and stimulating content of stories.

In a study conducted by Speaker (2000), college students used the storytelling technique to teach elementary students. The students' ability in reading improved as a result of using the technique. This study also showed that the students who were repeatedly exposed to interesting and relevant stories improved their oral skills in language learning better than those who were not.

Mello (2001) carried out a meta-analysis to investigate the effects of storytelling as a pedagogical strategy. The results showed that through

storytelling, vocabulary acquisition and recall of the learners were improved. Besides, the study showed that storytelling had positive effects on learners' interpersonal relationship, self-awareness, and visual imagery. Therefore, Mello (2001) concluded that storytelling can benefit both the teller and the listener.

Wood and Salvetti (2001) planned a project, named the story boost project, to help children who had difficulty in reading because of problems like poverty. They provided them with storytelling sessions for a period of time. Storytelling improved their vocabulary and participation in reading and writing activities. Also, storytelling improved their scores in reading fluency and comprehension, and helped them to retell stories by sequencing events.

In addition, Isbell, Sobol, Lindauer, and Lowrance (2004) conducted a study to investigate the effect of reading stories and storytelling on the comprehension of children. Twenty-four stories were told to the first group, but the second group read the same stories from a book. Both groups enjoyed the benefits of the stories; however, the first group was more successful than the second group in discovering the purpose, moral value, and theme of the stories. The researchers drew the conclusion that learners would gain maximum benefit if teachers told them the stories because in this way, storytellers use more repetition, gestures, and sounds, which really may learners to comprehend and produce language. Similarly, in Groce's (2004) study, storytelling was found to be motivating and positive for learners, and they engaged in classroom activities, listening, and reading more actively and enthusiastically.

Safdarian (2013) examined the effect of storytelling on learners' motivation and proficiency. It was revealed that the two groups were not significantly different from each other in motivational level. Recently, Kalantari and Hashemian (2016) carried out a study to find out the effect of

storytelling method on improving vocabulary knowledge. The result showed a significant increase in learners' vocabulary knowledge for the experimental group.

As it can be seen in the above review, different aspects of the variables under investigation here have already been investigated. However, there seems to be a paucity of research on the comparative effects of semantic organization, the *keyword method*, and storytelling on L2 idioms learning, especially in an EFL context. This study is aimed to partially bridge the gap. More specifically, it addresses the following research questions:

1. Are there any significant differences among the effects of storytelling, semantic organization, and the *keyword method* on EFL students' comprehension of L2 idioms?
2. Are there any significant differences among the effects of storytelling, semantic organization, and the *keyword method* on EFL students' production of L2 idioms?
3. Are there any significant differences among the effects of storytelling, semantic organization, and the *keyword method* on EFL students' retention of L2 idioms?

3. Method

3.1 Participants

The participants of the study were 90 male students with the age range of 16 to 18 in *Shahid Beheshti high school* in Avaj, Iran. The students were native speakers of Turkish and were roughly at intermediate level of language proficiency. They were selected through convenience sampling based on availability from among 110 students according to the result of the *Oxford Placement Test*.

3.2 Instruments

The following materials and instruments were used in this study. To homogenize the participants, the *Oxford Placement Test* (OPT) was used. This pretest consisted of 50 multiple-choice items which assessed the participants' grammar and vocabulary knowledge. Also, it consisted of a reading passage with 10 comprehension questions and a writing task to assess

the writing ability of the students. The students were given 50 minutes to respond to the items. The OPT is believed to be a widely used test that enjoys an acceptable reliability index. Still, to check the reliability of the test in the context of this study, the KR-21 formula was used, and the reliability index of the test turned out to be .87.

Another pretest (the idioms test) was administered in order to minimize the effect of the students' prior knowledge of the target idioms. The test was constructed by the researchers and consisted of 100 items. Each item included one of the target idioms, which was presented in bold face in a sentence. The students were asked to write the Persian equivalents of the idioms. The purpose was to make sure that the target idioms were unfamiliar to the participants, and those that were familiar were excluded from the posttests. The time for this test was 70 minutes.

The materials including 100 idiomatic expressions were selected from 105 Exercises (by Matasek, 2007) and English Idioms in Use (by Mccarthy & O'Dell, 2010) and presented to the learners after administering the second pretest.

Three posttests were used in this study. To investigate the effects of storytelling, semantic organization, and the *keyword method* on the participants' comprehension of idioms and to measure their receptive knowledge, a comprehension test (a 30-item multiple choice test) was used. It consisted of two parts. In part one, the students were asked to choose the correct meaning of the bolded expressions. In part two, they were expected to choose the correct answer to complete each of the idioms; the time for the test was 15 minutes. To compare the effects of the above-mentioned techniques on the participants' production of idioms, a 30-item fill in the blanks test was used. The students were asked to complete each of the bolded idioms with one word; the time for the test was 30 minutes. To check the effects of the same techniques on the participants' retention of idioms, a

delayed posttest (a 30-item multiple choice test) was used. It consisted of two sections, and was quite similar in format to the test of idiom comprehension; the time for the test was 15 minutes. Since all the tests were based directly on the idioms that were taught during the treatment, their validity was taken for granted. However, to check their reliability, the KR-21 formula was applied, as a result of which, the reliability index of the comprehension, production and retention tests was estimated to be .81, .79, and .83, respectively.

3.3 Procedure

To achieve the purpose of the study, the following procedures were followed. First, the initial participants of the study were selected through cluster sampling based on availability. The OPT was used to homogenize the participants. Ninety students were selected based on their scores on the placement test, and those students whose scores fell more than one standard deviation below or above the mean were excluded from all subsequent analyses. The idioms were chosen on the basis of criteria like their unfamiliarity to the participants, extensive use in conversation, and appeal for the students.

After using the second pretest (to make sure that the participants are not familiar with the selected idioms), each group of participants (three groups) was randomly assigned to one of the treatment conditions (The *keyword method* group, Semantic organization group, and Storytelling group). There were 30 participants in each group, and the experiment lasted for 10 one-hour sessions in which each group of students was taught the preselected idioms based on one of the above- mentioned methods.

The treatment for the storytelling group contained three stages: prestorytelling, while storytelling, and post storytelling stages. In order to raise the participants' interest and motivation, some pictures related to idioms were shown, and the figurative meaning of the idioms was presented to the learners in the prestorytelling stage. In the while storytelling stage, the stories which were prepared in advance were told to the learners via pictures and

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gesture to help them comprehend the story. In the post storytelling stage, the students read the stories and answered the teacher's questions orally. Also, they were asked to rehearse the stories at home to be well prepared for a classroom performance.

In the second group, the target idioms were taught through using the keywords and their figurative meaning. The keywords were prepared based on some acoustic similarities to one of the words or part of the words of idiomatic expressions. After giving a description of the *keyword method*, the learners were instructed to practice the preselected target idioms through the keyword. Here is an example:

Idioms	Keywords	Meanings
1- Keep one's chin up	چینی-یک پسر چینی شاد در شرایط سخت .	Remain cheerful in different circumstances.
2- Have a change of heart	هاروارد-وقتی در دانشگاه هاروارد استخدام شد نظر همسرش نسبت به او تغییر کرد.	Great change in one's attitude.
3- Grease someone's palm	پولم-اوبه کارمند شرکت پول و رشوه میدهد.	Bribe someone.
4- Set one's face against somebody/something	فیسبوک-پدر علی مخالف بود که او از فیسبوک استفاده کند.	To oppose somebody/something
5- Put somebody's nose out of joint	موز-من به اوموز تعارف نکردم و او را رنجاندم.	To annoy somebody
6-Lies through his/her teeth	توت-توت ها را خودش خورده و بیشرمانه دروغ میگوید .	Lie grossly and shamelessly.
7-Not even turn a hair	هری-هری با دیدن مار، ترس و تعجبی از خود نشان نداد .	Not show fear, surprise, etc.
8-Pay lip service to	لیپ-او وعده داد که از صادرات لیپ حمایت کند اما این کار را نکرد.	Express approval or support for something insincerely.
9-Not have a leg to stand on	لیگ-اودر بازیهای لیگ قهرمانی باخته است و نمیتواند کارش را توجیه کند	Have nothing to justify one's action.
10-Have a bone to pick with somebody	بن-بن کالای منو بده وگرنه باهات دعوا می کنم .	Have something to argue or quarrel about with sb.

The third group was taught through semantic organization. The semantically related idiomatic expressions with their figurative meaning were presented to the learners. The students were asked to practice and memorize the related idioms and their figurative meaning provided, like the following examples.

Idioms describing sadness	Meanings
1- Out of sorts	Slightly unhappy
2- Down in the dumps	Unhappy
3- It's not the end of the world.	What has happened won't cause any serious problem.
4- Just grin and bear it.	Accept a situation you don't like because you can't change it.
5- A misery guy	Someone who complains all the time
6- Sour grapes	Being jealous about something you can't have.
7- Put a damper on something.	Stop an occasion from being enjoyable.

At the end of the treatment period, three posttests with the aforementioned characteristics were used to compare the effects of storytelling, semantic organization, and the *keyword method* on the participants' comprehension, production, and retention of idioms.

3.4 Data Analysis

After administering the aforementioned posttests, three separate one-way between groups ANOVA procedures were used. One to compare the effects of the *keyword method*, semantic organization, and storytelling on the participants' comprehension of idioms, the second one to check the effects of the mentioned methods on the participants' production of idioms, and the third one to investigate the effects of the above methods on the participants' retention of L2 idioms

4. Results

4.1 The First Research Question

The first research question aimed to investigate if there were any significant differences among the effects of storytelling, semantic organization, and the *keyword method* on EFL students' comprehension of L2 idioms. To this end,

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a one-way between groups ANOVA procedure was used; descriptive statistics are given in Table 1.

Table 1

Descriptive Statistics for the One-way ANOVA on L2 Idiom Comprehension

	N	Mean	Std. Deviation	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1 keyword	30	17.73	1.680	17.11	18.36
2 semantic	30	16.13	1.332	15.64	16.63
3 storytelling	30	17.37	1.564	16.78	17.95
Total	90	17.08	1.664	16.73	17.43

Table 1 shows that the highest mean on L2 idiom comprehension test belongs to the keyword group (17.23), followed closely by the storytelling group (17.37). The lowest mean belongs to the semantic organization group (16.13). To find out if there are statistically significant differences among the means of the three groups, their means were compared using the ANOVA procedure. The result of the ANOVA is presented in Table 2.

Table 2

ANOVA Result on L2 Idiom Comprehension

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42.156	2	21.078	8.9	.000
Within Groups	204.300	87	2.348		
Total	246.456	89			$\omega^2 = .16$

Based on the results presented in Table 2, group differences are statistically significant ($F_{(2, 87)} = 8.97, p < .0005$) suggesting that different methods of teaching idiomatic expressions (the keyword, semantic organization, and storytelling) have significantly different effects on EFL learners' idiom comprehension. Also, the index of the strength of association ($\omega^2 = .16$) shows that 16 percent of the total variability among the three groups can be attributed to the effects of using different methods. According to Cohen's (1988) guidelines, this is a large effect size. In order to locate the

significant differences, the Post Hoc Tukey HSD Test was used, the result of which is presented in the following table (Table 3).

Table 3

Multiple Comparisons of Means for L2 Idiom Comprehension

(I) group	(J) group	Mean Difference (I-J)	Sig.
keyword	semantic	1.600*	.000
keyword	storytelling	.367	.625
semantic	storytelling	-1.233*	.007

In Table 3, the asterisks next to the value show that the two groups are significantly different from each other. Considering the results presented in this table, the keyword and the storytelling groups are both significantly better than the semantic organization group, but the storytelling and the keyword groups do not differ significantly from one another in terms of their comprehension scores. The following figure (Figure 1) shows the mean scores of three groups graphically.

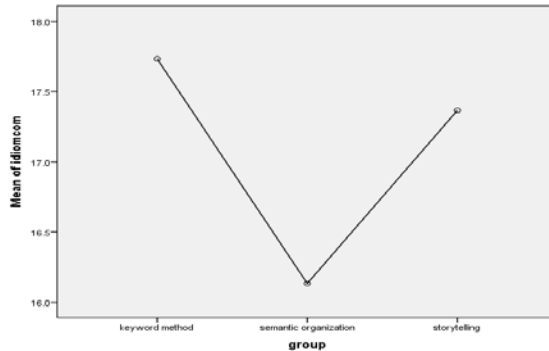


Figure 1. Means plot for idiom comprehension

4.2 The Second Research Question

The second research question aimed to investigate the effects of storytelling, semantic organization, and the *keyword method* on EFL students' production of L2 idioms. For this reason, a one-way between groups ANOVA procedure was used; descriptive statistics are given in Table 4.

Table 4

Descriptive Statistics for the One Way ANOVA on L2 Idiom Production

	N	Mean	Std. Deviation	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1 keyword	30	17.43	1.654	16.82	18.05
2 semantic	30	15.87	1.306	15.38	16.35
3 storytelling	30	17.30	1.622	16.69	17.91
Total	90	16.87	1.677	16.52	17.22

In order to see whether or not the observed differences among the means of the three groups are statistically significant, the ANOVA was used. The results are presented in Table 5.

Table 5

ANOVA Result on L2 Idiom Production

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45.267	2	22.633	9.599	.000
Within Groups	205.133	87	2.358		
Total	250.400	89		$\omega^2 = .17$	

Table 5, indicates that group differences are statistically significant ($F_{(2, 87)} = 9.599$, $p < .0005$). Thus, different methods of teaching idiomatic expressions (the keyword, semantic organization, and storytelling) have differential effects on EFL learners' idiom production. Meanwhile, the index of the strength of association ($\omega^2 = .17$) shows that 17 percent of the total variability among the three groups can be attributed to the effects of using different methods. According to Cohen's (1988) guidelines, this is a large effect size. In order to locate the significant differences, the Post Hoc Tukey HSD Test was used, the result of which is presented in Table 6.

Table 6

Multiple Comparisons of Means for Idiom Production

(I) group	(J) group	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
keyword	semantic	1.567*	.000	.62	2.51
keyword	storytelling	.133	.940	-.81	1.08
semantic	storytelling	-1.433*	.001	-2.38	-.49

Table 6 shows that the keyword and the storytelling groups are both significantly better than the semantic organization group, but the storytelling and the keyword groups do not differ significantly from one another in terms of their production scores. Figure 2 shows the mean scores of three groups graphically.

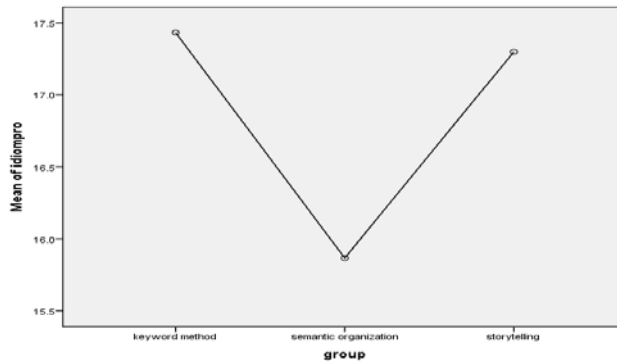


Figure 2. Means for idiom production of production of groups

4.3 The Third Research Question

The third research question sought to investigate the effects of the same techniques on EFL students' retention of L2 idioms. For this reason, a one-way between groups ANOVA procedure was used; descriptive statistics are given in Table 7.

Table 7

Descriptive Statistics for the One-Way ANOVA on L2 Idiom Retention

	N	Mean	SD	95% Confidence Interval for Mean	
				Lower Bound	Upper Bound
1 keyword method	30	16.97	1.629	16.36	17.57
2 semantic organization	30	15.57	1.501	15.01	16.13
3 storytelling	30	16.40	1.133	15.98	16.82
Total	90	16.31	1.533	15.99	16.63

Table 7 shows that the highest mean on L2 idiom retention test belongs to the key word group, followed closely by the storytelling group. The lowest mean belongs to the semantic organization group. In order to see whether or

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not the observed differences among the means are statistically significant, the ANOVA was used. The results are presented in Table 8.

Table 8
ANOVA Result on L2 Idiom Retention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.756	2	14.87	7.21	.001
Within Groups	179.53	87	2.064		
Total	209.28	89		$\omega^2 = .13$	

Based on Table 8, group differences are statistically significant ($F_{(2, 87)} = 7.21, p < .0005$). Also, the index of the strength of association ($\omega^2 = .13$) shows that 13 percent of the total variability among the three groups can be attributed to the effects of using different methods. According to Cohen's (1988) guidelines, this is a relatively large effect size. To locate the differences, the Post Hoc Tukey HSD Test was used, the result of which is presented in Table 9.

Table 9
Multiple Comparisons of Means for Idiom Retention

(I) group	(J) group	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
keyword	semantic	1.400*	.001	.52	2.28
keyword	storytelling	.567	.283	-.32	1.45
semantic	storytelling	-.833	.069	-1.72	.05

Based on Table 9, the keyword group members have significantly outperformed their counterparts in the semantic organization group, while the other mean differences are not statistically significant. The following figure shows the mean scores of three groups graphically.

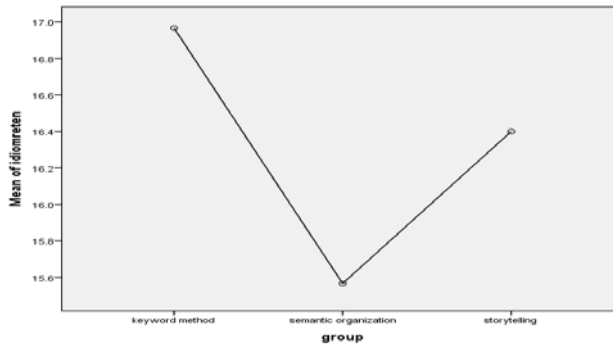


Figure 3. Means plot for idiom retention of groups

5. Discussion

The study attempted to investigate the effects of storytelling, semantic organization, and the *keyword method* on L2 idiom learning. The results of this study showed that the keyword group had the highest mean on L2 idiom comprehension, production, and retention tests. These findings are consistent with a number of studies that have shown the superiority of the *keyword method* in L2 vocabulary learning (Atkinson & Raugh, 1975; Carney & Levin, 1998; Fang, 1985). All these studies have found evidence suggesting the significant role of the *keyword method* in vocabulary learning.

Also, the study carried out by Pressley, Levin, and Miller (1981) supports the usefulness of the *keyword method* in improving the comprehension of Spanish words. In another study, Baleghizadeh and Ashoori (2010) showed that the keyword group performed significantly better than the word list group in vocabulary retention.

In this study, the second highest mean belonged to the storytelling group in L2 idiom comprehension, production, and retention tests. In addition, the keyword group and the storytelling group were not significantly different from each other regarding L2 idiom comprehension, production, and retention. These findings are in line with a number of studies that have shown

that students who were instructed through storytelling were more successful in vocabulary learning (Cliatt & Shaw, 1988; Isbell, et al., 2004; Mello, 2001).

One of the studies supporting the usefulness of the storytelling method is that of Cliatt and Shaw (1988), who found that storytelling, as an effective method, improved learners' language skills. Another study which is consistent with the result of this study is the one carried out by Vivas (1996), who reported that storytelling provided learners with helpful training in both comprehension and production of language. Likewise, the results are consistent with that of Kalantari and Hashemian (2016), who found a significant increase in students' vocabulary knowledge for the storytelling group.

Based on the findings of the study, the lowest mean score in L2 idiom comprehension, production, and retention tests belonged to the semantic organization group. These results are in line with a number of studies that have shown that participants are less successful when they are taught through the semantic organization method (Bolger & Zapata, 2011; Brown & Perry, 1991; Papathanasious, 2008). Finkbeiner and Nicol (2003) showed a semantic interference effect not only during the encoding process of vocabulary comprehension, but also during the retrieval process of information. Similarly, the results are consistent with the study carried out by Hakki Erten and Tekin (2008), who discovered that antonyms, synonyms, or other semantic connections among words can cause confusion and thus require much attention on the part of the students.

On the other hand, the results of this study are in contradiction with that of Margosein, Pascarella, and Pflaum (1982), who concluded that semantic organization may be an effective strategy for learning new vocabulary. The reason why the mentioned study is different from the present study can be

attributable to different L2 learning situations (This study was conducted in an EFL context). Another study the results of which are not consistent with those of the present study was that of Zaid (1995), who came to the conclusion that semantic organization involves some characteristics of communicative language teaching, and is a valuable strategy for vocabulary teaching. The different results could be due to the proficiency level of students. The participants in the present study were at the intermediate level, but Zaid (1995) investigated the effect of semantic organization on the vocabulary learning of students who were at the beginning level. Also, this study compared the effect of the keyword, storytelling, and semantic organization methods, but Zaid (1995) compared semantic organization with other comparison groups.

Among other factors that might account for the differences between the findings of this study and those of other studies, one can refer to age. Due to the nature of the techniques investigated here, they might have differential effects on learners at different age levels.

6. Conclusion

Based on the findings of this study, it may be concluded that teachers need to spend time to teach students how to employ effective techniques in idioms learning. The findings of the present study showed that although the differences between the keyword and the storytelling groups in L2 idioms comprehension, production, and retention were not statistically significant, the *keyword method* was the most effective technique, followed closely by the storytelling method; the semantic organization was the least effective one. Therefore, it can be concluded that the *keyword method* reinforces the connection between the target idioms and their meaning through verbal and visual images. In addition, teaching through the *keyword method* can increase creativity and capture the imagination of EFL learners, and as a result, provide help for learners to relate the mental images of words to their

meaning. In this way, meaningful learning can be achieved and the degree of forgetting may be decreased (Jenpattarakul, 2012).

In addition, based on the findings of the present study, instruction through storytelling, as the second useful technique, may result in better L2 idioms comprehension, production, and retention than semantic organization method. Therefore, it can be concluded that storytelling can alter the classroom atmosphere from a tedious atmosphere to a joyful one for learners to express themselves properly in real situations. Therefore, teachers are recommended to incorporate the storytelling technique into their language teaching program so that students can link the story to learning materials efficiently. Of course, with regard to selecting stories, instructors should take several factors such as learners' ages, level of language proficiency, and interest into consideration.

In this study, the semantic organization technique was the least effective method. It can be concluded that semantic organization is a conceptual technique which is based on students' prior knowledge. In addition, according to Köksal and Çekiç (2014), close similarity between the learning items may cause difficulty in their recall.

However, teachers and educational authorities should take care to avoid the temptation to overuse, or to be biased against, any of these methods because they may not achieve the same results in all conditions. Therefore, instructors need to choose a flexible approach and an eclectic method to cater for the varying requirements of new circumstances in the domain of idioms teaching.

These findings may have theoretical as well as pedagogical implications. On the theoretical front, these findings may help shed light on some of the darker corners of idiom learning and the issues surrounding this area. On the pedagogical front, there may implications for teachers, learners and syllabus

designers. The knowledge of how each technique may influence idioms learning may help students to make more informed decisions about the choice of these techniques in their studies. The findings may also help teachers not only to employ certain techniques in their teaching practice but also to encourage learners to use more effective strategies more frequently than less effective ones. Moreover, the result of this study can help curriculum designers to design idioms books based on the keywords and interesting stories to encourage students to learn idioms through mental images and stories rather than merely memorizing them.

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