

A Cognitive Linguistic Approach to Teaching English Idioms to EFL Students: Experimental Results

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ABSTRACT

This study aims to apply basic concepts in cognitive linguistics to teaching English idioms to EFL students. English idioms expose their inherent difficulties to EFL learners because people of different languages usually have different conceptualizations. Words in idioms do not carry their literal but conceptualized semantics. Cognitive linguistics, grounded in cognitive, social, and communicative theories, hypothesize idioms as examples of conceptual metaphors. Twelve idioms about finance were taught to 50 Vietnamese first-year EFL college students divided into two experimental groups for CL-based treatment and treatment for rote-learning, and one control group with no treatment. The experimental groups received 4-step treatments: warm-up, instruction, drill practice, and productive task. The results showed that the group receiving CL-based treatment outperformed the group applying rote-learning in both immediate posttest and delayed posttests for receptive and productive knowledge of the instructed idioms. The control group did not make any significant gain from the pretest to the posttests. The results suggest that students' awareness of conceptual metaphors help them remember the target items long. Further studies can include measures of both explicit and implicit knowledge of the idioms as a result of CL-based treatment in other contexts.

Keywords: conceptual metaphors; idioms; EFL students; cognitive linguistics; semantic motivation

INTRODUCTION

THE RATIONALE

English language teaching has undergone numerous additions of empirical findings from studies in English language teaching (e.g. Chen & Lin 2018), second language acquisition (e.g. Kobayashi 2018), and applied linguistics (Hung 2017). These studies have made attempts to explore the effects of applications of technology in English language learning, the impacts of metacognitive intervention on listening competence of students learning English as a foreign language (EFL), and the effectiveness of applying cognitive linguistics to teaching the metaphorical meanings of English prepositions.

Contemporary literature in English language teaching (ELT) shows a lack of research interests in how to teach idioms to EFL students effectively. Idioms used to be considered examples of figurative language. They expose some inherent characteristics difficult for EFL students to learn. Firstly, it is accepted by some schools of linguistics that idioms are figurative fixed expressions. For instance, the idiomatic expression *get the wrong end of the stick* does not convey any meaning of the content words *end* and *stick* used in this idiom, but refers to a situation when the reader or listener misunderstands the meaning produced by the writer or speaker. Secondly, idioms used to be considered arbitrary. The meanings of idioms could not be explained. Regarding these so-called characteristics of idioms, EFL students are asked to learn them by heart.

However, Cho (2010) believes that rote-learning or learning by heart cannot help learners form long-term memory, which contemporary literature believes is crucial in second language acquisition (SLA) and learning (Ellis 2015). Gebhard, Gunawan and Chen (2014)

assert from their empirical findings that it is understanding of the target language items that help students remember words long. In addition, cognitive linguistic approach, which has its roots up in cognitive science, is widely accepted by researchers to facilitate the formation of a relevant cognitive structure (Ausubel 2000) and could also help learners form associations of the target language input and learners' knowledge accumulated from earlier experience or formal schooling (Hung 2019).

In EFL contexts, where learners do not have many opportunities to get exposed to the use of English language in daily life, knowledge of language is usually considered crucial as it will probably transfer to language use later (Thornbury 2002). Current literature in English language teaching also gives a claim that usage-based approach cannot help learners use the target language effectively as learners are mainly exposed to semantic input, but language use requires pragmatic competencies (Diessel 2015). In opposition to this claim, Lieven and Tomasello (2008) argue that the appropriate use of the usage-based approach may help learners use language effectively by offering productive tasks in the post-teaching stage. The post-teaching tasks in which learners have opportunities to produce language or do communicative tasks assist the reuse of what learners have accumulated or acquired during the teaching stage.

Cognitive linguistics (CL) is a semantics-motivated usage-based approach to language which explains idioms as examples of conceptual metaphor which humans semantically encode their conceptualization in language. A review of previous studies demonstrates several applications of cognitive linguistics in applied linguistics and ELT, and the experimental results show that the learners receiving CL-based treatment could understand the target items without effort, and these target items could retain longer in the learners' minds (Tyler, Mueller & Ho 2011, Hung, Vien & Vu, 2018).

AIMS AND SCOPE OF THE STUDY AND RESEARCH QUESTIONS

This study aimed to explore the effects of CL-based teaching of English idioms to EFL students and compare its effects and the effects of the teaching of idioms based on rote-learning. It did not include all English idioms, but only the idioms with metaphors of MONEY. It attempts to answer the following research questions:

1. How effective is CL-based teaching in terms of EFL students' knowledge of English idioms in comparison with the effects of the traditional pedagogical treatment in the short-term memory?
2. How effective is CL-based teaching in terms of EFL students' knowledge of English idioms in comparison with the effects of the traditional pedagogical treatment in the long-term memory?

LITERATURE REVIEW

THE PLACE OF COGNITIVE LINGUISTICS IN ENGLISH LANGUAGE TEACHING

CONTEMPORARY LITERATURE IN ENGLISH LANGUAGE TEACHING

There are two main approaches in English language teaching and learning: interventionism and non-interventionism. The interventionists postulate the crucial role of teacher's instruction or input as it provides the language input necessary for students' language development. Condon and Kelly (2002) assert that explicit instructions help students remember instructed items longer than implicit instructions. Explicit input of language assists the formation of explicit knowledge through a conscious process, but implicit language

learning and teaching helps form implicit knowledge of the target items. Ellis (2015) also believes that explicit and implicit knowledge of language are located within the spectrum of SLA in that explicit knowledge, as a result of conscious learning of explicit instruction, can facilitate language use. In particular, in EFL contexts, teachers need to offer speaking and listening tasks after explicit instruction to accommodate the transfer of explicit knowledge to implicit knowledge. Unconscious language learning, in contrast, may be best applied for young learners. Conscious learning may be best applied to adults inasmuch as aged adults are widely known for decline in their competencies to absorb language unconsciously (Ellis 2015). Differently, the non-interventionist approach hypothesizes that language learners should be exposed to settings in which language is used on a regular basis. The first grounding theory put forward is that the first language (L1) and second language (L2) acquisition is no difference (Krashen 1985). Secondly, this approach proposes implicit acquisition of language. An emerging problem here is that L2 acquisition is influenced by L1 to a certain extent. While unconscious acquisition of L1 takes place in a naturalistic setting, the learning of L2 can take place through an awareness-raising explicit process. Experiments in language processing in the human mind show that explicit learning may develop implicit knowledge of language which allows for language use (Ellis 2015). Also, implicit language acquisition requires opportunities for learners to get exposed to sources of pragmatic input on a daily basis for language development. Adults' implicit language learning in EFL contexts may enhance learners' fluency, if possible, rather than accuracy, and it does not help learners keep the target language long (Ellis 2015).

It can be seen from the aforementioned discussion that the approaches both have their own significant roles in English language teaching and learning. Researchers and practitioners generally agree on the integration on these approaches in EFL settings. In particular, where there is a lack of exposure to language on a daily basis, teachers' instruction should be applied as a crucial language input for learners. In addition, instruction, if necessary, should be delivered explicitly by the teacher. Last not not least, instruction should be concise so that there is sufficient time for exercises as drills and opportunities for learners to practice language use, and it is essential for the teacher to mediate students' language use (Harmer 2015, Ur 2012).

GROUNDING THEORIES OF COGNITIVE LINGUISTICS

Cognitive linguistics is grounded on cognitive, social and communicative theories. To put it another way, it is based on how humans encode what they experience from their interactions with the physical world in language (Evans & Green 2006, Langacker 2008). Accordingly, from the interactions with the physical world, humans form their embodied senses of what they have experienced, which then form perceptions and in turn conceptions before linguistic meaning and form are established in the human mind (Evans & Green 2006). It is argued by CL that language is a reflection of how humans encode the social events in their experiences. It is inferred from the aforementioned review that CL has implications for the teaching of English as a foreign language. In one sense, it views conscious learning of language as a pivotal process as it helps form learners' knowledge. Also, teachers' instruction, as inspired to facilitate learners' language awareness, should be followed by exercises as to scaffold learners' memory. Finally, the communicative and social theories which CL is rooted on give implications to offer opportunities for language use as interactions with the physical world help humans experience and accumulate language in inventories. The implications from CL are in line with the literature in English language teaching.

Previous studies applying cognitive linguistics in ELT employed instruction explicitly delivered by teachers (Hung et al. 2018, Song 2013, Boers & Lindstromberg 2008), exercise drills (Boers 2000, Verspoor 2008), and speaking and writing tasks (Tyler et al. 2011,

Condon 2008). These studies were considered relevant references for the current study as they involved EFL students as participants.

DIFFERENT VIEWS OF ENGLISH IDIOMS

Idioms have long been considered examples of figurative expressions in which the meanings of integral words do not directly make up the meaning of the whole expression. Polio, Barlow, Fine, and Polio (1977) concluded from their study that an English-native speaker uses an average of four idioms per minute of language production. EFL learners' limited knowledge of idioms cannot help interpret unfamiliar ones according to the current pedagogical techniques which treat idioms as arbitrary matter. This pedagogical application, commonly known as rote-learning, does not help form a cognitive structure as there are no associations of the new input with the previously learned items or existing knowledge (Cho 2010).

Recent studies on linguistic accounts show that most idioms are examples of semantic motivation as most idioms in English are so-called “dead metaphors”. In particular, idioms are classified as “dead metaphors”, which are metaphorically conceptualized with commonly known meanings, and figurative idioms, which are productive with meanings intentionally encoded by different individuals.

It is widely accepted by cognitive linguists that conceptual metaphors are encoded into idioms. An explanation is that language can transfer from the spatial domain, in which language is formed to refer to the physical world, to the abstract domain, where idioms are generated as a result of metaphorical conceptualization. Lakoff and Johnson (1980) argue that metaphor is not merely a literary device but it is also grounded in everyday experience. For example, the relationship between the two lovers could be conceptualized in English as a JOURNEY like in the following examples (Lakoff & Johnson 1980):

- (1) We are at a crossroads.
- (2) The marriage is on the rocks.
- (3) Love is a journey.

“Be at a crossroads” in example (1) is a very common experience for everybody. When at crossroads, a person needs to make decision as to turn right, left or go straight. This experience is projected into human cognition and transferred to the domain of RELATIONSHIP. The expression “be at a crossroads” may refer to a context in which the two lovers are at a point of making a decision. Similarly, example (2) stems from human experience of a difficult journey on a bumpy, rocky road. This everyday expression means that the two marriage partners are having a difficult time. Cognitive linguists have pointed out that those rules are integrated in the cognitive system underlying language. These rules help us understand the meaning of example (3) in that LOVE is conceptualized as JOURNEY. In other words, information elements from the JOURNEY domain are projects to corresponding elements in the LOVE domain to form mappings that help us understand the meanings of those expressions. Accordingly, there are some mappings: life goals mapped to destinations of a journey and relationship mapped to a vehicle. The two lovers may decide to cease or continue when they identify hinderance (Lakoff 1993). In summary, idioms are examples of conceptual metaphor (CM) in which humans encode their experiences.

APPLYING COGNITIVE LINGUISTICS TO TEACHING ENGLISH IDIOMS TO EFL LEARNERS

Theories in SLA provide evidence that it is crucial for language teachers to help learners associate the new input and the previously learned items by providing meaningful input.

More specifically, language learning, which does not rest on meaningful learning, does not retain or form a long-term memory. Learners should systematically classify and organize the target items for cognitive processing of the input (Ausubel 2000). Sohrabi and Pirnajmuddin (2017) did a discourse analysis and confirmed the transfer of language from the concrete domain to the conceptual metaphor domain. Accordingly, people first acquire language in the concrete domain as a result of daily interactions with the physical world, and then they are able to use metaphors by conceptualizing language in cognitive processes. Sridhanyarat (2018) also concluded from a study that the items considered “language chunks” or arbitrary matter were usually difficult for students, even at the advanced level of proficiency, to learn. On the other hand, semantic resources or understanding of the formation of these so-called language chunks helped students remember them long.

A number of CL-motivated experiments show awareness-raising learning of idioms could help learners form long-term memory. Boers (2000) makes a conclusion from an experiment that classifying idioms into CM-based themes could help Dutch-native EFL students keep in mind the target items long. The idioms employed described emotions of ANGER. Csábi (2004) also tested a hypothesis that semantic explanation of idioms in both L1 and L2 could help learners understand and remember the explicitly instructed idioms. The cloze-test results after the study showed that the students who received semantic explanation outperformed the ones the students who learned the idioms without paying attention to the conceptualization behind the idioms. Ahmad and Samad (2018) concluded from a study that teachers should let learners identify the conceptualization associated with idioms by describing the semantics and formation of the idioms.

Regarding the pedagogical treatment, several experiments were also motivated from grounding theories in CL applied speaking and writing tasks after instruction. Tyler, et al. (2011) applied CL to teaching English to Italian-native adult learners. The pedagogical application included explicit interactive instruction and productive tasks. Bielak & Pawlak (2013) applied CL to teaching tense and aspect to Polish EFL students. Pedagogically, the study applied productive tasks after explicit CL-based instruction. The findings show that the students receiving CL-based treatment outperformed the rule-based treatment in both immediate posttest and delayed posttest of explicit and implicit knowledge. Hung (2017) applied basic concepts in cognitive linguistics to teaching conceptual metaphors of English prepositions. The CL-based treatment also included opportunities for language production. The experimental results indicated that the learners receiving CL-based treatment outperformed those depending on rote-learning.

Considering the learners’ retention of the target items as a result of CL-based treatment on CM, several experiments illustrated that awareness-raising instruction of CM also helped students form long-term memory of the target items. Condon (2008) conducted a study with an hour in the computer room and another hour for interaction between the teacher and students. The students were required to both paraphrase and translate the target items into their own language in order to help them be aware of the conceptual metaphor embedded in the target items. The findings showed that the students who made sense of the CM encoded in the idioms outperformed those who only learned the idioms without knowing the CM in the idioms. Caballero and Suárez-Toste (2008) also raised learners’ awareness of the target idioms by asking the students to first identify the idioms, then figure out their sense, and finally translate them into the learners’ native language. The findings showed that the students who were aware of the underlying conceptual metaphors in the idioms outperformed those who did not know how the idioms were conceptualized.

Previous experiments applied CL to teaching idioms. Yet, no such experiment involved Vietnamese students as a sample. There was a lack of interest of teaching idioms in business discourse. Previous studies also gave implications that the applications should be

repeated in contexts other than Europe. This study attempts to teach English idioms about finance to 50 Vietnamese EFL first-year college students.

METHODOLOGY

RESEARCH APPROACH AND DESIGN

In order to figure out the effects of the two pedagogical descriptions, a quasi-experimental pretest-posttest between-group design was adopted considering the variables with the learners as participants in an experiment in education (Hung 2017). The quantitative approach was applied to compare the mean score gained by each group from the pretest to the posttest. A short survey was administered to the participants before and after the treatment to investigate other language inputs apart from the treatments applied in this study.

PILOT STUDY

This study was piloted in March of 2018, and the the main study was conducted in September of 2018 in the same research site. Before the pilot study, the two voluntary teachers observed the researcher's performances in his own classes separately as to train them in the pedagogical techniques which they were supposed to employ in the pilot and main study. After the observations, there was a meeting between the researcher and the intended teachers for further instruction on the teachers' performances.

The pilot involved 50 participants divided into two groups of 25 participants: Cognitive Group (CG) and Traditional Group (TG). The students were asked to tick the idioms to be taught which they had previously learned. The teachers in the main study also performed their lessons in the pilot study. The results from the pilot were used to make revisions to the teachers' performances (speed of speech, behavior,...), and testing instruments. The teachers were required to slow down their speaking as a result of the students' feedback, and no further revision was made to the tests. The selection of the participants in the pilot was based on their level of proficiency, eagerness for joining the study, other language input (extra guided learning hours, attendance at English speaking clubs,...), previous experience in learning idioms, and pretest results. The students involved in the pilot did not participate in the main study.

PARTICIPANTS

Of all 200 students voluntarily responding to the researcher' call for participation, 50 students were selected. The selection of the participants in the main study was the same as in the pilot study. They all took English as a required course in the middle and high school, did not demonstrate any knowledge of CMs of idioms, were not intentionally exposed to English outside the classroom, and had comparable pretest results. Attendance checklist showed that there were no dropouts of the participants.

After selection, these 50 participants were divided into three groups: traditional group, cognitive group, and control group. The traditional group (n=17), hereby called TG, received traditional pedagogical treatment for rote-learning. The cognitive group (n=19), hereby called CG, received CL-based treatment, and control group (n=14), hereby called CT, receiving no intended pedagogical intervention. Considering the potential variables in experimental research in education, the control group was applied to measure other interventions in the learning outcomes. In other words, the involvement of the control group was to know if the experimental results reflected the treatments applied in this study. Several

experimental studies in education, such as the one by Bielak and Pawlak (2013), applied the control group as insignificant or no score gain made by the control group could in part show the reliability and validity of the empirical results. Therefore, the score gains made by the experimental groups reflected the treatments which they received in the study.

TARGET IDIOMS

The target idioms included in this study describe metaphors of MONEY. The choice of the target idioms was based on their frequency in the field and suggestions by Lakoff, Espenson and Schwartz (1991) and Lakoff and Johnson (1980). They were classified into the following conceptual metaphors:

MONEY AS A CREATURE

- (1) Taxes are eating me alive.
- (2) The fund is sinking.
- (3) The foreign currency credits show their fangs.

MONEY AS A SUBSTANCE

- (4) The accountant will spilt the payroll.
- (5) The company will cut off the funds.
- (6) Investments are a soft matter.
- (7) We need to own some solid currency.

MONEY AS A LIQUID

- (8) Our funds are drying up.
- (9) Our profits are just evaporating.
- (10) We need to liquidate our assets.
- (11) The government poured millions of dollars into education last year.
- (12) The company is in a cashflow difficulty.

TREATMENT

The pedagogical treatment consisted of four main steps: warm-up, instruction on idioms, drill, and speaking practice. The main difference between the two treatments was the instruction. The warm-up step was to help learners be aware of the target idioms by identifying them in the context of a text. The drills provided controlled practice, which focused on the instructed idioms, to assure most, if not all, of the participants to keep up with and make sense of the instruction by giving corrective feedback and correct answers. Finally, the speaking task was to facilitate language use by offering students a theme-based practice related to the instructed idioms. The students were required to work in groups of three discussing a topic given. The tasks given to both groups (TG and CG) were the same.

TRADITIONAL TREATMENT

The pedagogical traditional instruction, as already mentioned, was for rote-learning. It was explicit and inductive. The students were asked to find out the meanings of the target idioms in the target language (in pairs), and then translate them into Vietnamese (students' native language). The teacher provided the students with the meanings of the idioms, and suggested translation in front of the class in each of the above mentioned sub-steps to help the laggards.

CL-BASED TREATMENT

The pedagogical CL-based instruction was also explicit and inductive. The students were first given a short instruction on the conceptual metaphor behind the idioms. They were then asked to classify the idioms into themes of metaphor. Finally, they were asked to paraphrase them in English. The corrective feedback was mainly based on students' memory of the idioms rather than their form (spelling, grammar, word order,...).

INSTRUMENTS

There were three main instruments: one pretest and two posttests. They had the same form and were at the same level of difficulty. Each of them consisted of two main sections: (1) multiple choice section, and (2) gap-fill and translation tasks. These types of test, known as controlled and discrete-item tasks, were considered to reflect the participants' explicit knowledge. While the multiple-choice questions were to measure the participants' receptive knowledge, the gap-fill and translation tasks were to measure the participants' productive knowledge (Ellis 2015). Each test section contained 12 items, each correct answer to which was worth two points. Thus, the maximal score for the entire test was 72 points (24 points for receptive knowledge and 48 points for productive knowledge). Each instructed idiom was tested three times in the entire test. A list of the idioms to be used was enclosed to the tests.

DATA COLLECTION AND ANALYSIS

The present study lasted two sessions of 90 minutes. In each session, TG and CG learned six idioms. The data collected from the pretest and posttests was input into SPSS version 22 for statistical analysis. The participants' knowledge of the idioms reflected through the entire pretest and posttests was compared to measure the effects of the treatments. The receptive knowledge (multiple choice section) and productive knowledge (gap-fill and translation section) were measured independently to measure the differences between the pretest and immediate posttest and delayed posttest in these two respective aspects.

The effects of the treatments on the participants' short-term memory were measured by comparing the score difference in result between the pretest, administered two weeks prior to the treatment, and posttest 1, administered two hours after the treatment. The effects of the treatments on the participants' long-term memory were measured by retrieving the difference in result between the pretest and posttest 2, administered two weeks after the treatment. To give additional implications for further studies, some comparisons between results of posttest 1 and posttest 2 were made.

RESEARCH RELIABILITY AND VALIDITY

To increase research reliability and validity, a number of measures were implemented. Firstly, all the tests were proofread by an English-native teacher working at the research site for language accuracy and choice of correct answers. Secondly, the participants were informed of the importance of their answers to the research results. Also, all the idioms taught in this study were piloted with the students who were supposed to be at the same level of proficiency and were considered unfamiliar. In addition, the two teachers involved in this study were trained prior to the treatment, and their performances were video-recorded to assure that the research findings were tailored mainly to the treatments rather than the teachers' personal styles. Finally, ANOVA and *p* values were used to measure if the differences were significant.

RESULTS

The mean scores, standard deviations, and one-way ANOVAs for the involved three groups, namely cognitive group (CG), traditional group (TG) and control group (CT), on the entire tests were computed. Table 1 shows the comparisons of the results of the three tests. It demonstrates the mean scores from the pretest, posttest 1 and posttest 2, and compares the

short-term gain (difference in the mean score from the pretest to posttest 1) and long-term gain (difference in the mean score from the pretest to posttest 2).

As can be seen, TG gained a mean score of 10.21 from the pretest to the posttest 1, but CG made a mean score of 16.06 in this respect. There were declines in the mean scores of both groups from the posttest 1 to posttest 2. The long term gain of TG was 6.69, and the long-term gain of CG was 13.81. However, the mean scores of CT show this group made a short-term gain of .21 (from the pretest to posttest 1), and a long-term gain of .35 (from the pretest to posttest 2). The standard deviations show that the mean scores which individuals gained in the posttest 1 and posttest 2 dispersed more widely than those in the pretest.

A breakdown of the three groups' receptive and productive knowledge before and after the treatments (Table 2) shows the same patterns of score gains made by both TG and CG. The score made by CT demonstrated a marginally slight growth in each of the sections. As mentioned in the presentation of instruments, the receptive knowledge was measured by 12 multiple choice questions (maximally scored 24 points), and the productive knowledge was measured by gap-fill and translation tasks (maximally scored 48 points). Overall, each of the treatments had its own impacts on the students' explicit knowledge of the instructed idioms.

TABLE 1. Comparisons of the three groups' score gains from the pretest to posttests

	TG (n=17)		CG (n=19)		CT (n=14)	
	Mean	SD	Mean	SD	Mean	SD
Pretest	25.80	3.58	26.01	4.02	25.92	3.88
Posttest 1	49.01	14.00	57.07	16.02	26.13	4.03
Posttest 2	43.78	13.25	58.82	16.34	26.27	4.36

As can be seen from Table 2, TG and CG each made a score increase in their receptive and productive knowledge. Regarding the receptive knowledge, the score made by TG increased from 9.25 in the pretest to 18.11 in the immediate posttest and 17.38 in the delayed posttest. However, the score made by the CG soared from 9.82 in the pretest to 22.31 in the immediate posttest and 22.31 in the delayed posttest. In terms of productive knowledge, the mean score made by CG developed more than that of TG. TG made a score gain of slightly more than 14.0 from the pretest to the immediate posttest and approximately 10.0 from the pretest to the delayed posttest, but the mean score made by the CG rocketed from 16.19 in the pretest to 34.76 in the immediate posttest, and then continue to grow to 36.69 in the delayed posttest.

Repeated measures (one-way ANOVA) show that there was no significant difference in the pretest scores for receptive knowledge and productive knowledge between the three groups ($p > .05$). However, the difference in the mean scores of the immediate posttest and delayed posttest for these types of knowledge between the three groups was significant ($p < .01$). The effect size for the receptive knowledge was slightly greater than .5, and the effect size for the productive knowledge was slightly greater than .7. In summary, CG made higher gains than TG in both receptive and productive knowledge after the treatment.

TABLE 2. Mean scores and deviations for three groups' receptive and productive knowledge

	TG (n=17)		CG (n=19)		CT (n=14)	
	Mean	SD	Mean	SD	Mean	SD
	Receptive knowledge					
Pretest	9.25	0.95	9.82	0.98	8.37	0.86
Posttest 1	18.11	3.47	22.31	4.15	8.95	0.24
Posttest 2	17.38	3.09	22.13	4.58	8.04	0.30
	Productive knowledge					
Pretest	16.55	2.07	16.19	1.86	17.55	2.13
Posttest 1	30.90	9.82	34.76	10.84	17.18	2.12
Posttest 2	26.40	8.75	36.69	11.37	17.23	2.36

STUDENTS' SHORT-TERM MEMORY OF THE INSTRUCTED IDIOMS AFTER THE TREATMENT

In this study, the short-term memory was measured by the difference in the mean scores made by the participants from the pretest to posttest 1 (immediate posttest), which was considered to reflect the participants' knowledge of the instructed idioms in a short-run (Table 3). For the purpose of the study, the display of the comparison of mean scores shows only TG's and CG's receptive and productive knowledge of the target items, but the statistical analysis by one-way ANOVA include all the three groups. Specifically, TG made a score gain of 23.21 from the pretest to immediate posttest, but the mean score of CG improved by 31.06. Statistical analysis indicates that CG outperformed TG in the immediate posttest by 8.06, and this difference proved significant ($p < .01$). Repeated measures one-way ANOVA shows that the effect size was marginally greater than .7.

TABLE 3. Comparison of TG's and CG's mean scores and deviations in the pretest and posttest 1

	TG (n=17)		CG (n=19)		Mean Difference	
	Mean	SD	Mean	SD	CG > TG	<i>p</i>
Pretest	25.80	3.58	26.01	4.02	0.21	> .05
Posttest 1	49.01	14.00	57.07	15.02	8.06	< .01
Gain	23.21		31.03		7.85	

STUDENTS' LONG-TERM MEMORY OF THE INSTRUCTED IDIOMS AFTER THE TREATMENT

TABLE 4. Comparison of TG's and CG's mean scores and deviations in the pretest and posttest 2

	TG (n=17)		CG (n=19)		Mean Difference	
	Mean	SD	Mean	SD	CG > TG	<i>p</i>
Pretest	25.80	3.58	26.01	4.02	0.21	> .05
Posttest 2	43.78	13.25	58.82	16.34	15.04	0.00
Gain	17.98		32.81		14.83	

As in the presentation of the effects of the treatments on students' knowledge of the instructed idioms in a short run, the mean scores of CT were not displayed as they did not reflect an intended treatment. However, repeated measures one-way ANOVA included this group. Table 4 shows a breakdown of TG's and CG's mean scores in the pretest and delayed posttest (posttest 2). In general, TG made a score gain of 17.98 from the pretest to posttest 2, but CG made a higher score gain (32.81). It can be seen that CG outperformed TG in the delayed posttest. This difference in the mean score (15.04) was significant ($p < .01$). Repeated measures one-way ANOVA shows that the effect size was .8.

DISCUSSION

At this point, it is important to address answers to the two research questions. Overall, both TG and CG generally had positive pronounced effects on the students' knowledge of the target idioms. The cognitive group outperformed the traditional group in the posttests. The experimental results mainly reflected the treatments applied in this study.

One innovative contribution of this study might have been the application of the productive tasks in the treatment. While most, if not all, previous endeavors inspired by CL to teaching English idioms applied instruction and translation drills, this study applied a speaking task after instruction. This could make an addition to the literature in applying CL in ELT, particularly in teaching idioms in an EFL context.

The traditional pedagogical techniques applied had better effects on the participants' short-term memory ($M=23.21$) than long-term memory ($M=17.98$). Nonetheless, the students

receiving the CL-based pedagogical treatment demonstrated a sharp increase in their knowledge of the instructed idioms from the pretest (M=26.01) to the immediate posttest (M=57.07). Their memory retained until the delayed posttest (M=58.82). The differences in the mean score between TG's and CG's immediate posttest and delayed posttest were significant. It is explained by current literature that learners' awareness of the target items is responsible "for the acquisition of new knowledge, retention, the organization of knowledge in a hierarchical structure, and the eventual occurrence of forgetting". When associations of language items are not formed in learners' minds as a result of learning language items independently, there is usually little or no chance to process language cognitively (Brown 2014, p. 83). This does not mean that the associations of the new input and prior experiences knowledge exist in the learner's mind forever. However, "forgetting takes place in a much more intentional and systematic manner because it is actually a continuation of the very process of subsumption by which one learns (Brown 2014, p. 85).

There was also a rise in TG's and CG's mean scores for the receptive knowledge and productive knowledge. Regarding the receptive knowledge, there was a rise in TG's mean score from the pretest (M=9.25) to the immediate posttest (M=18.11). However, CG's mean score remained relatively unchanged from the immediate posttest (M=22.31) to the delayed posttest (M=22.13) after it soared by 12.49 from the pretest to the immediate posttest. The pattern of change in both groups' productive knowledge was also similar to that of the receptive knowledge. After a score development of approximately 14.40 from the pretest to the immediate posttest for the productive knowledge, TG's mean score showed an insignificant decrease of 4.5 in the delayed posttest. The mean score of CG increased by 18.57 from the pretest to the immediate posttest, and it continued to insignificantly rise by 1.93 in the delayed posttest.

As in the design of the present study, several measures were conducted to increase research reliability and validity. A survey conducted after the treatments shows that both groups did not have any intentional major exposure to English outside the class during the treatment according to the concerns in SLA. None of them reported any extra guided learning hours or attendance at English speaking clubs. One member of TG, nevertheless, responded that she incidentally conversed with foreigners who asked for directions, but the conversation took place for only some minutes. Another member of CG saw a pop-up advertisement written in English in his email, but he did not make sense of it after a quick look. In both cases, the input of idioms as to modify the participants' knowledge of idioms was not identified. The chance for the participants to pick up input of English, particularly idioms, was considered low. Considering the participants' review after the class, most of the participants revealed that they spent from 15 to 30 minutes reviewing the idioms within the same week of the treatment. Attendance check shows no dropout rate. The mean scores made by the control group (CT) did not demonstrate any increase from the pretest to the posttest. That means, some variables related to the tests and participants were supposedly eliminated.

Different measures of research reliability and validity provide information to make conclusions on if TG's and CG's learning outcomes reflected the traditional pedagogical techniques and CL-based pedagogical application. First of all, the control group (CT) showed no significant rise in mean score from the pretest to the immediate and delayed posttests. Second, the surveys conducted before and after the treatment showed no considerable language input to the participants outside the classroom considering the major concerns included in the surveys. Attendance record showed no dropout rate of the participants. Third, all of the participants revealed that they had never experienced CL-based pedagogical application from their former teachers. The video clips of class performances show that the teaching was similar in both groups. One variable excluded in participant selection was the participants' dominant intelligences (Gardner 2011). Accordingly, students' different

dominant intelligences may make students prefer to learn in different ways. However, the exclusion of investigating the participants' dominant types intelligence was considered not to have significant effects on the learning outcomes in a short experiment like this one because both cognitive linguistics and the theory of multiple intelligences are grounded on the frames of mind (Gibbs & Colston 2006). The investigation into the variables related to the participants and testing instruments above suggests that the two groups' findings were mainly tailored to the treatments.

The findings presented above illustrate pedagogical support for the application of cognitive linguistic approach in teaching English idioms to EFL adult students. The students' awareness of the conceptual metaphors, derived from the meaning-motivated approach as a basic theory in cognitive linguistics, facilitated their learning of figurative language, particularly idiomatic expressions. According to the dual-coding theory, mental images could form in learners' minds when they pay attention to and make sense of the metaphors embedded in the idioms. The input of both aural and visual information about the same target item allows learners to associate these different types of information and form short-term and long-term memory.

CONCLUSIONS

KEY FINDINGS

A number of key findings were figured out in this experiment. In general, the application of cognitive linguistics in teaching the idioms in this study was at least moderately effective. It accommodated the learning and retention of the idioms in the short-term and long-term memory, which was mirrored by this group's score gains in the immediate and delayed posttests. The breakdown of the posttests also showed this group's significant gains in both receptive and productive knowledge of the target idioms.

It is important to note here that cognitive linguistics is an approach in ELT of which different applications could result in different effects. Although this study was in line with the previous ones in applying cognitive linguistics in ELT, particularly in teaching English idioms, the difference in treatments applied and in contexts could have been responsible for some difference in the findings.

It is also important to note here that the CL-based treatment applied in this study rested on meaningful learning which was considered to accommodate the students' associations of the new input with existing knowledge. The CL-based treatment, which was based on the students' experiences and interactions with the physical world on the daily basis, assisted the students' cognitive structuring and then formed a long-term memory on the instructed items (Evans, 2007). This could explain CG's higher score increase from the pretest to the immediate posttest for its knowledge and retention of the target idioms from the immediate posttest and delayed posttest.

LIMITATIONS

Research limitations were unavoidable. The treatments included only 12 idioms with metaphors of money in a Vietnamese context. Also, the present study only measured the participants' explicit knowledge (receptive and productive). However, Ellis (2015) asserts that explicit instruction can form explicit knowledge, and then explicit knowledge could transfer to implicit knowledge under certain circumstances. A final limitation may come from the effects of the test-taking practice, although this likeliness was considered low.

IMPLICATIONS FOR FURTHER STUDIES

It should be pivotal to first restate the claim by Langacker (2008) that there should be more empirical results to test the hypotheses of cognitive linguistics. Further research applying cognitive linguistics to teaching idioms can extend this application by including other conceptual metaphors in other contexts. Also, involvement of both explicit and implicit knowledge in the experiment can bring about more implications for research and practice in English language teaching.

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