Can Inspirational Quotes Help the Recall of Abstract Vocabulary?

Mehri Mokhtarzadeh

MA in English Language Teaching, University of Semnan, Semnan, Iran
Email: mehri.mokhtarzadeh@gmail.com

Hadi Farjami * (Corresponding Author)

Associate Professor of ELT, Department of English Language
and Literature, Faculty of Humanities, Semnan University, Semnan, Iran
Email: hfarjami@semnan.ac.ir

Monireh Mokhtarzadeh

MA in English Language Teaching, University of Birjand, Birjand, Iran
Email: mokhtarzadehmonireh59@gmail.com

Abstract

The present study investigates the potential impact of inspirational quotes on improving English abstract vocabulary recall. To achieve this, a multiple-choice Oxford Quick Placement Test (OQPT) of 60 items including vocabulary and grammar component was administered as the proficiency test to a sample of 63 second-semester male and female students aged 18 to 22, studying English Translation in Semnan University, Iran. The 40 upper-level language students were selected and randomly assigned into two groups of 20 as an experimental group and a control group. The experimental group was exposed to inspirational quotes for one month and the control group was instructed abstract vocabularies through plain sentences. At the end of the treatment, a cued recall achievement test was used to measure the participants' immediate recall of the target words. Two weeks after the treatment, the same test was administered to explore the delayed recall of participants and to estimate the effect of inspirational quotes on long term recall of abstract vocabulary by the experimental group compared with that of the control group. Analysis of immediate and delayed cued recall achievement tests confirmed the hypotheses that inspirational quotes had a significant effect on both immediate and delayed recall of abstract vocabulary. Based on these findings it is concluded that inspirational quotes can be utilized not only as a supportive context for teaching and learning of abstract vocabulary but also as motivational, emotional, and meaningful pedagogical sources.

Introduction

Since the 1970s, attention to vocabulary acquisition strategies has moved away from various aspects of the mechanical memorization of a word list to meaningful learning and deeper processing strategies. Rote memorization is a method in memorization of de-contextualized facts rather than the active construction of new schema. It continues to be an overused strategy that is often implemented within the classrooms. But exposing students to words just at the surface level or memorizing through rote learning will not be effective and enough (Beck, McKeown, & Kucan, 2013; Graves, 2016; Stahl & Nagy, 2006), as far as not all vocabulary words require the same level (depth) of instruction, students need to know some words deeply in more supportive texts while others may be learned only at the surface level, through rote learning or within the plain sentences.

Considering the fact that human beings think, feel, and act, Zambrana-Ortiz (2011) believes that emotions are related to the body as well as mind. Gadanho and Hallam (2001) considered positive emotions as ludic. Isen and Baron (1991) summarized that feeling happy gives more flexibility to thinking and provides easy associations and the ability to see potential relations among events than a non-happy mood.

Gray (2001) and Gray and Braver (2002) presented a separate theoretical account that argued the specialized hemispherical basis of interactions between positive affect and cognitive control. Accordingly, an important compatibility is found between earlier affective research on the effect of positive emotions caused by increased activity in the left frontal cortex (Canli et al., 2001), and cognitive research associated the active prolongation of verbal information in working memory with the left frontal cortex (D'Esposito et al., 1998). The role of the affective system may be crucial in helping children to relate what is conceptual to our inner feelings (Kousta et al., 2011; Vigliocco et al., 2014). In a second study with children aged 6-11, Ponari et al. (2017) used a lexical decision-making method to determine the role of emotion in the perception of abstract and concrete terms. Results indicate that emotional word associations play a greater role in the acquiring of abstract, compared to specific words (age of learning standards).

In this way, in developing abstract semantic representations in a meaningful learning context, the acquisition of words signifying emotions, moods or feelings may be crucially instrumental. Vocabulary instruction required teachers to support learners with many rich and robust opportunities to learn new words and their meanings. A combination of linguistic and affective information of abstract concepts is directly established in the corpus-based model of Vigliocco et al. (2009). Therefore, through being embedded in senseful, emotionally rich and motivating contexts, efficient learning of abstract vocabulary will occur successfully. As Snow and Farr (1987) suggest that we miss sound learning theories and in the realm of language learning we require a whole-person view that integrates cognitive and affective aspects. These researchers recommend that educators cannot set these key psychological aspects aside because they interact in significant and complicated ways underlying learning/cognitive processes and performance outcomes.

Many researchers have proposed the use of quotations in classroom developments. Caroselli (2006) proposes the use of quotations as one of 500 classroom games and activities. According to Recchia and Jones (2009) language contexts richness facilitates abstract concept recognition and recall; it can be assumed that inspirational quotes as a source of inspiration, positive emotion, and positive motivation can be a potential context for learners' emotional and motivational involvement in such a way that positively influence their cognitive ability and also present learners with a rich and supportive context for learning the meaning of abstract concepts. We argue that to foster such re-empowerment, some knowledge of cognitive neuroscience should be included in the educational curriculum.

Motivation and Cognition Interaction

It is complicated to induce ultimate presumption with reference to the precise connection between motivational and neurological systems because of the complicated correlations in the brain. According to Braem et al. (2012), some researchers suppose that many brain sectors and neurotransmitter are required in the psychological augmentation of behavior. Based on Tulving (2016), dopamine is necessitate in learning, memory, and motivation, so a lot of studies have presented its function for the cognitive process in understanding new information that is intently related to the mechanisms of the brain's pleasure. Moreover, Westbrook et al. (2013) asserted that, in humans, dopamine has only been applied in the hippocampus accompanied with long-term memory and in the influence of motivation on cognition.

Regarding this function in working memory, dopamine can be considered as a main factor for regulating consideration and attention. Also, Zwiers (2016) stated that working memory can be aroused via applying information practice. It is found that accessibility of attentional resources can affect comprehension and memory in educational situations. It was found that executive component can distribute attention when more than one cognitive activity needs attention, supporting suitable information, and obstructing inappropriate information (Weinberg, 2017).

Abstract vocabulary

In processing concrete and abstract language, there are noticeable argument about the cognitive operations and neural tracks. Previous studies on verbal learning and memory offered that there are different cognitive operations in processing concrete and abstract words. Zedelius et al. (2015) asserted that healthy participants answered faster and more correctly to concrete words in lexical decision tasks. This pattern is based on Dual-Code Theory (DCT) of language representation (Charles, 2014). Based on this theory, abstract words are classified in memory in a verbal representation but concrete words are regulated in memory verbally and imaginatively. According to this model, the verbal stream is situated in the left hemisphere of the brain and the image-based stream is settled in the right hemisphere.

Abstract notions may be semantically ruined and get their meaning mainly from their connection with other terms (Charles, 2014). Otherwise, they may not be semantically affluent, but be more grounded in meditative simulations (Zedelius et al., 2015) or features of meaning connected to their communicative role. Furthermore, Breton et al. (2013) offered that abstract notions may need brain routes for introspection

(Weinberg, 2017). Choi et al. (2015) expressed that empirical data and emotional content have an important function in the processing of abstract notions.

Though these findings do not prohibit the likelihood that abstract words are simply established in various kinds of characteristics than are concrete words, given the shallowness of processing that is needed for lexical decision such as simulation of emotions, internal conditions, communication-related words, etc., may verify facilitative in activities needing more processing.

Vocabulary Recall

By reviewing the previous studies (Breton et al., 2017) on recall and recognition exams, a lot of studies have presented that recognition and recall are two various memory retrieval processes that need different cognitive skills. Moreover, other researchers (Charles, 2014) indicated that recall is more useful in the process of learning than recognition. According to constructivist assumption, recall is a more intellectual task than recognition because recall makes easier restoring schemata for the learner that is related to the context where learners build their knowledge via the representation of specific knowledge. Also, recall has a main function in conveying knowledge, because as Carver (2016) stated recognition is a process of restoring what the learner has learned or what the learner has memorized. In recall tests researchers wanted to test the learners' production. In recognition tests, researchers want to measure learnersگ meaning of the word after they see it. There are different ways that through applying them learners' recognition of word knowledge can be extracted. For example, learners can be asked to translate the word into their first language, or to express a synonym or definition of the word in the target language, or to check the word when they know it, or to select from a set of pictures.

The distinction between recognition and recall is often referred to as receptive versus productive knowledge and it is generally supposed that words are known receptively first and later become available for productive use (Reed, 2012). Consequently, this paper is intended to stimulate interest in the pedagogical use of inspirational quotes, in the hope that researchers and trainers would appreciate the plenteous of advantages and benefits ingrained in inspirational quotes. Accordingly, the present study is an investigation for answering these two questions:

1. Does learning abstract vocabulary contextualized in inspirational quotes lead to their better immediate recall than learning them in simple and plain sentences?

2. Does learning abstract vocabulary contextualized in inspirational quotes lead to their better delayed recall than learning them in simple and plain sentences?

Methodology

Participants

The sample participants were 63 second-semester male and female students aged 18 to 22 and they were studying English translation at Semnan University, Iran. A 60 items OQPT was administered to determine participantsگ language proficiency level.

Based on their scores in OQPT, 40 upper-level language students were selected and randomly assigned to two groups of 20 as an experimental group and a control group.

Instruments

A 60 items paper and pen Oxford Quick Placement Test (OQPT) was administered to select two homogeneous groups in terms of the participants' language proficiency. The test was developed by Oxford University Press and the University of Cambridge Local Examinations Syndicate. It has been validated in 20 countries, and its reliability has reached 0.90 (Geranpayeh, 2003). It concludes 60 multiple-choice items, and according to the results, the learners are categorized as beginners if their scores range 0 to 10; breakthrough learners with the score range between 11 to 17; elementary learners whose scores are 18 to 29; those learners whose scores are 30 to 39 are pre-intermediate; intermediate students with scores from 40 to 47; the learners whose scores are 48 to 54 are advanced learners and those with score ranges of 55 to 60 are very advanced learners. Accordingly, 40 upper-level participants were selected for this study.

The assigned time for answering the questions was 45 minutes. The test comprised 60 multiple-choice items, and for every item one point dedicated. According to the Council of Europe (2003), the Standard Error of Measurement (SEM) of the test is around 4 and the reported reliability is close to 0.9 for the 60 items test.

Target Word List Booklet

The list of target vocabulary was made up of abstract words selected from Oxford Learners' Pocket Dictionary which is recommended for intermediate and upper-intermediate learners. The selection of the target lexical English words was based on the following criteria; they had to be abstract vocabulary, appropriate to the participants' proficiency level, and unfamiliar to participants. To ascertain that the target words were unknown to the subjects, a pre-test was given to the students while they were required to give their Persian translation.

Inspirational Quotes and Plain Sentences Booklet

Twenty four inspirational quotes were selected from two main sources in which the target words had been contextualized. To ascertain the desirable degree of inspirationality for every quote, ten copies of the booklet were handed over to ten English language teachers. To compare their effects with that of the plain sentences, after the preparation of inspirational quotes booklet, the researcher prepared another booklet containing the same target words as the experimental group's, but this time they were contextualized in plain sentences. The plain sentences were mostly extracted from expository and scientific texts. It is worthy to note that both inspirational quotes and plain sentences were equal in terms of the level of difficulty being attested with a moderate Item difficulty and Item Discrimination at .50 and 0.6 respectively.

Achievement Tests

To test learners' achievements with respect to immediate and delayed recall of abstract vocabulary and a comparison between learnersﮎ performance of the control and the experimental groups, four separate cued recall tests were conducted in the context of the two texts through which participants in both groups had been instructed.

Both immediate and delayed achievement tests for two groups were designed in a fill in the blank format. Answers were scored using the acceptable scoring method, meaning misspelled but recognizable (e.g., "cantent" instead of "content") were accepted.

For both cued recall tests of inspirational and plain sentences, after preparing the items and before starting the experiment to ensure the reliability of the achievement tests, they went under a piloting procedure with a sample of 20 students in an English institute, their proficiency level was upper-intermediate. In order to obtain the reliability of the tests, the split-half reliability coefficient was estimated using the Spearman-Brown formula with the SPSS program. The reliability coefficient for the inspirational cued recall test was about 0.948 and for cued recall test of plain sentences 0.985 (see Table 1 and Table 2).

Table 1. Reliability Statistics of the Cued Recall Achievement Test for Inspirational Quotes

Cronbach's Alpha	Value	N of Items	Total Number
Part 1	1.000	1a	
Part 2	1.000	1b	2
Correlation between Forms	.901		
Spearman-Brown Coefficient Equal Length	.948		
Unequal Length	.948		
Guttman Split-Half Coefficient	.984		

Table 2. Reliability Statistics of the Cued Recall Achievement Test for Plain Quotes

Cronbach's Alpha	Value	N of Items	Total Number
Part 1	1.000	1a	2
Part 2	1.000	1b	
Correlation between Forms	.971		
Spearman-Brown Coefficient Equal Length	.985		
Unequal Length	.985		
Guttman Split-Half Coefficient	.985		

Procedures

All activities took place during three separate sessions at the normally scheduled class periods: the expository session, the experiment session, and the final session that was dedicated to the administration of delayed achievement tests after a two-week interval.

The experiment Sessions

For one month, the experimental sessions were conducted at Semnan University, 8 a.m. while the allocated time for every session was estimated at 120 minutes. In order to compare the performance of participants in respect to learning and recalling of abstract vocabulary, the experimental group was instructed through inspirational quotes by the researcher herself and the control group was instructed through plain sentences by their teacher, so that, the study was conducted in two separate classes simultaneously and in the same procedure.

The second phase of the study was administered in the same session. The researcher distributed the inspirational quotes booklet among the participants in the experimental group while the plain sentences booklet was also distributed in the control group class at the same time. But before instructing the contents of the booklets the participants in the control and experimental groups were told to write off those quotes in the experimental group and plain sentences in the control group that their related words had been eliminated from the target word list at the previous stage.

The texts were read aloud once in 15 minutes. Target words were boldfaced in order to be identifiable by participants over the texts. After reading the texts for the first time, the researcher read the text again and asked them to guess the probable meaning of every boldfaced word and every quote separately. Participants were supposed to write the meaning of target words and the whole quotes at their booklets. The total time of the experiment took about 50 minutes for the experimental group and 45 minutes for the control group. The control group was instructed by the same procedure. The plain sentences were translated into Persian and for every boldfaced word some synonyms were presented. The presented synonyms for the two groups were the same.

Immediate Recall Achievement Test

After reviewing and translating the quotes, participants were allowed to read their booklets silently for about 8 minutes and then all the booklets were gathered and the immediate cued recall achievement test was administered right after the treatment for both groups. The first achievement test administration assessed the participants' immediate recall of the target words. They were designed to measure the short-term memory of the participants regarding the words taught by the two types of contents. The test administration took about 20 minutes. This whole procedure was simultaneously done in the same manner for the control group class. To avoid the memorization effect, the order of the items in the test was different from the order in which the target words and items in two booklets were instructed.

Delayed Recall Achievement Test

Two weeks after the treatment, to evaluate delayed recall of target words, the researcher met with the participants. At this session, no reading material was provided to the participants. The delayed recall achievement test had the same contents as the immediate achievement tests for the two groups but with different item arrangement. It was administered to measure the subjects' long-term memory regarding the instructed words in the two types of contents. The test comprised all the 22 words which were taught during the treatment. The allocated time for this test was 20 minutes.

Data Analysis

The collected data from both immediate and delayed cued recall achievement tests were analyzed quantitatively and were analyzed using Statistical Package for Social Sciences (SPSS) Version 19. In analyzing the data to answer two research questions, both descriptive and inferential statistical techniques were used. Descriptive statistics were calculated for all variables. Numerical variables were summarized as the mean, standard deviation, and variance. Inferential statistics were also calculated through paired sample T-test to see whether there was any significant difference in immediate and delayed cued recall achievement test scores between experimental and control groups or not.

Results

In order to investigate the research questions posed in this study, a number of analyses were run and the following results including descriptive and inferential statistics were obtained.

Descriptive statistics

Proficiency Test

After the 60 items QPT proficiency test was administered, the 40 top higher scores – their scores being between 33 to 44 – were recruited for the study.

Table 3. The Descriptive Statistics of Participantsگ Scores in QPT

	N	Minimum	Maximum	Mean	Std. Deviation
Proficiency Test	40	33.00	44.00	38.9250	3.18158
Valid	40				
N (List-wise)					

As Table 3 shows the estimated mean for the first 40 top participants is 38.92. The deviation is 3.1815, so, according to the QPT manual, they are qualified as intermediate to upper-intermediate. As is shown in Tables 4, the subjects of both groups are homogenous.

Table 4. The Descriptive Statistics of Experimental and Control Group�گs Proficiency Test Results

N	Mean	Std. Deviation	Minimum	Maximum	Variance
20	38.9000	3.29114	33.00	44.00	10.832
N	Mean	Std. Deviation	Minimum	Maximum	Variance
20	38.9500	3.15353	34.00	44.00	9.945

The Result of Immediate Cued Recall Achievement Tests for Inspirational Quotes and Plain Sentences

Table 5. Descriptive Statistics of the Immediate Vocabulary Cued Recall Achievement Test Based on Inspirational Quotes

N	Minimum Score	Maximum Score	Mean of Scores	Std. Deviation of Scores	Variance of scores
20	9.00	20.00	15.3000	3.34192	11.168

As it is shown in Table 5, the standard deviation of the scores and the mean are 3.34192 and 15.3000, respectively. It also shows the minimum and the maximum of the scores alongside.

Table 6. Descriptive Statistics of the Immediate Vocabulary Cued Recall Achievement Test Based on the Plain Sentence

N	Minimum of Scores	Maximum of scores	Mean of scores	Std. Deviation of scores	Variance of scores
20	6.00	12.00	8.9500	1.76143	3.103

As is shown in table 6, the standard deviation of the scores and the mean are estimated at 1.76143 and 8.9500 for the control group. It also shows the minimum and maximum of the scores.

The Result of Delayed Cued Recall Achievement Test

Table 7 shows the frequency of the participants�گ scores in the delayed cued recall achievement test administered for the control group. Table 8 shows the standard deviation of the scores and the mean are 1.00525 and 5.2000. It also shows the minimum and the maximum of the scores are 4.00 and 7.00.

Table 7. Descriptive Statistics of the Delayed Vocabulary Cued Recall Achievement Test Based on the Inspirational Quotes

N	Minimum of scores	Maximum of scores	Mean of scores	Std. Deviation of scores	Variance of scores
20	7.00	18.00	12.1500	3.74552	14.029

Table 8. Descriptive Statistics of the Delayed Vocabulary Cued Recall Achievement Test Based on the Plain Sentences

N	Minimum of scores	Maximum of scores	Mean of scores	Std. Deviation of scores	Variance of scores
20	4.00	7.00	5.2000	1.00525	1.011

Inferential Statistics

Proficiency Test

According to table 9, there was no significant difference between the mean scores of both experimental and control groups on the QPT. So the two groups were homogeneous in terms of their proficiency level.

Table 9. Paired Sample Statistics for Proficiency Test

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Experimental G	38.9000	20	3.29114	.73592
Control G	38.9500	20	3.15353	.70515

But to ensure true homogeneity of the subjects (40) in control (20) and in experimental (20) groups, a paired sample T-test was conducted; see table 10.

Table 10. The Result of T-test for Proficiency Test

Pair 1 Experimental G Control G	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	T	Df	Sig. (2-Tailed)
	.05000	.39403	.08811	.23441	.13441	.567	19	.577

The Result of Paired Sample T-test for Immediate Cued Recall Achievement Tests

To evaluate the immediate and delayed recall of abstract vocabulary in both groups, two achievement tests of abstract vocabulary were administered after the instruction for both groups. To compare the performance of experimental and control groups in both immediate and delayed achievement tests, two paired sample t-test was applied. The first paired-samples t-test (Table 11) revealed that the experimental group recalled more vocabulary items (Mean = 15.3000, Standard deviation = 3.34192) than the control group (Mean = 8.9500, Standard deviation = 1.76163) in immediate cued recall achievement tests. As is evident from the reported means, the experimental group outperformed the control group's performance. The observed t-value (Table 12) is 17.076 at 19 degrees of freedom and significance level of 0.05. This amount of t-value is significantly greater than the critical t-value, i.e. 2.093.

Accordingly, the first null hypothesis can be rejected strongly, and what can be inferred from the result is that inspirational quotes have a significant impact on immediate recall of abstract words when it is compared with abstract words recall learned through the plain sentences.

Table 11. Paired Samples Statistics for Cued Recall Immediate Achievement Test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1				
Control Group	8.9500	20	.76143	.393871
Experimental Group	15.3000	20	3.34192	.74728

Table 12. The Results of T-test for Cued Recall Immediate Achievement Test

	Paired Differences			95% Confidence Interval of the Difference		T	df	Sig. (2-Tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1 Control Group Experimental Group	6.35000	1.66307	.37187	7.12834	5.57166	17.076	19	.00

The Result of Paired Sample T-test for delayed Cued Recall Achievement Tests

Table 13 shows that the experimental group did much better than the control group on the delayed cued recall test, so it can be inferred that the experimental group again outperformed the control group in the delayed cued recall immediate achievement test. As Table 13 shows the experimental groupﻙs mean is 12.1500 and the control

group's mean is 5.2000, based on the paired t-test results reported in Table 14, and the amount of t-value (11.027); the second null hypothesis of the study also is rejected confidently.

Table 13. Paired Samples Statistics for Delayed Recall Achievement Test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1				
Control Group	5.2000	20	1.00525	.22478
Experimental Group	12.1500	20	3.74552	.83752

Table 14. The Results of T-Test for Delayed Recall Achievement Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	Df	Sig. (2-Tailed)
				Lower	Upper			
Pair 1								
Control Group Experimental Group	6.950	2.818	.630	8.269	5.630	11.02	19	.000

Discussion

Having an inspective eye on the obtained scores by the two groups and a comparison of the means while the experimental group‌s mean is 15.3000 and the control group's mean is 8.9500, it can be realized how strongly the experimental group outpointed the control group despite the perceived equality of conditions for both groups.

In the second cued recall achievement tests administered with a two-week interval for both groups again the same episode happened, the experimental group's mean was 12.1500 while for the control group it was 5.2000. It can be concluded that the technique had a significant impact on promoting and enhancing students‌ abilities to recall abstract vocabulary in the long term also.

Through two paired sample t-tests both null hypotheses, which had been established at the outset of the study were rejected confidently. That was because of the two t-values of 17.076 for immediate cued recall achievement test and 11.027 for delayed cued recall achievement test which was reported in the previous section. Considering these amounts of t values which are significantly higher than the critical

t-value of 2.093, (p < 0.05), the potential capability of inspirational quotes on both immediate and delayed recall of abstract vocabulary was confirmed.

There can be many reasons behind this potentiality. The first factor may be that the participantsگ cognitive abilities in experimental group might be boosted as a result of being affected through inspirational quotes as far as these type of contents are associated with positive effects, motivation, meditation, and transmission of creative ideas (Thrash & Elliott, 2003; Thrash, Elliot, Maruskin, & Cassidy, 2010; Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010). One of these consequential effects is memory improvement resulting from the higher quality of executive functions.

Accordingly, the positive effects of inspirational quotes can be assessed as a motivational tool. They can benefit students in feeling positive and more willing to engage and even to use high-level strategies such as those required for cognitive regulation.

In the case of the experimental groupگs significant performance in delayed cued recall achievement tests, in the same way, there is currently a great deal of empirical evidence available on the influence of emotion in the long-term memory performance. Deeper processing leads to reinforced recall and the long term retention of learned materials, as verified by researches on depth-of-processing effects (Craik & Lockhart, 1972). Thus, free recall and cued recall of words, utterances, and photographs are usually better recalled when they contain positive emotional content.

The second reason for better performance of experimental group in learning and recalling of the abstract vocabulary is the existence of emotional factors among the intertwined network of associations between the target words and the contexts that played a crucial role in better remembering of abstract vocabulary as in the corpus-based model of Vigliocco et al. (2009), they directly ground abstract concepts in a combination of linguistic and affective associations, supporting the view that engagement of emotional processing is generally required for processing abstract words.

The last but probably the most important reason that could be mediated by the experimental group's positive reactions toward the inspiring contents is the vital role of meaningfulness in the process of learning. Meaningfulness of contents is the key ingredient in the long-term storage of vocabulary. This idea refers to the inherent value of information as well as the integrated information stored in our long-term memory.

As far as inspirational quotes can be easily shared with our emotional experiences and personal values, it can stimulate lots of emotional networks and associations in our minds, emotional life experiences that all of us may experience and the shared values that we were trained and yet we are trained through, all are connected concepts and well-established episodes in our minds that can be triggered once being exposed to such type of contents.

As teachers, we need to inspect new ways of designing and delivering instruction in order to enable our students to attain their learning potential, starting them from where they are and moving them forward on a learning continuum.

Starting a warm-up with an inspirational quote can also be a good idea as an icebreaker to pave the way for teaching new topics. Just by having a little linguistic taste, we can integrate these additional motivating spices into our curriculums as a means of teaching new grammatical instructions, idiomatic patterns, and vocabulary, or even an introductory topic for practicing writing skills or even using them to create challenging discussions in our classrooms.

Conclusion

This paper attempted to investigate the potential impact of inspirational quotes on the immediate and delayed recall of English abstract vocabulary. Based on the results and findings, inspirational quotes proved to be very effective in learning and recall of abstract words. Those subjects who were exposed to abstract target words contextualized within inspirational quotes showed a significant performance in both immediate and delayed recall of target words compared with those who were instructed through plain sentences. The difference between both performances in delayed tests was significant indicating that inspirational quotes played an efficient role in assisting participants in the experimental group to recall more items in delayed achievement tests. Test results pointed out clearly that learning abstract vocabulary through the use of inspirational quotes empowered participantsﻚ long-term memory. In fact, it was evidenced through this experiment that the perceived hardships of learning and recall of abstract vocabulary are not an unyielding obstacle, but to overcome it we should use it in more effective and supportive contexts in our attempts.

In fact, the current study can be considered a confirmatory piece of evidence in signifying and highlighting the satisfactory consequences of motivational, emotional, and inspirational contents in boosting learnersﻚ cognitive capacities, just as a growing body of evidence also indicates that cognition, motivation, and emotion are intimately tied. We also touched upon the importance of motivational and emotional stimuli in upgrading cognitive capabilities from a neuroscientific point of view.

The findings obtained in this study may lead to several beneficial implications for language practitioners, teachers, and students in an EFL context. All in all, the general recommendation is that teachers should benefit from a variety of methods while teaching vocabulary to their students, one of which is inspirational content with a high priority of the inspirational quotes.

References

Beck, I. L., McKeown, M. G., &Kucan, L. (2013). Bringing words to life: Robust vocabulary instruction. New York: Guilford.

Braem, S., Verguts, T., Roggeman, C., &Notebaert, W. (2012). Reward modulates adaptations to conflict. *Cognition, 125*(2), 324-32.

Breton, Y. A., Mullett, A., Conover, K., &Shizgal, P. (2013). Validation and extension of the reward-mountain model. *Frontiers in Behavioral Neuroscience, 7*(125), 1-17.

Canli, T., Zhao, Z., Desmond, J. E., Kang, E., Gross, J., &Gabrieli, J. D. (2001). An fMRI study of personality influences on brain reactivity to emotional stimuli. *Behavioral neuroscience*, *115*(1), 33-42.

Caroselli, M. (2006). *500 Creative classroom techniques for teacher and trainers*. New Jersey: HRD Press.

Carver, C. S. (2016). Behavioral approach, behavioral avoidance, and behavioral inhibition. In M. Mikulincer, & P. R. Shaver (Eds.), *APA handbook of personality and social psychology: Vol. 4. Personality processes and individual differences* (319-333). Washington, DC: American Psychological Association.

Charles, S. T. (2014). Strength and vulnerability integration: A model of emotional well-being across adulthood. *Psychological Bulletin*, 136, 1068–1091.

Choi, J. M., Padmala, S., Spechler, P., & Pessoa, L. (2015). Pervasive competition between threat and reward in the brain. *Social Cognitive and Affective Neuroscience*,9, 737–750.

Council of Europe (2007). *Relating Language Examinations to the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEF)*. Manual. Preliminary Pilot Version. Language Policy Division, Strasbourg.

Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal behavior,* 11, 671-684.

Dگ Esposito, M., Aguirre, G. K., Zarahn, E., Ballard, D., Shin, R. K., & Lease, J. (1998). Functional MRI studies of spatial and nonspatial working memory. *Cognitive Brain Research*, *7*(1), 1-13.

Gadanho, S. C., & Hallam, J. (2001). Robot learning driven by emotions. *Adaptive Behavior, 9*(1), 42-64.

Geranpayeh, A. (2003). A quick review of the English Quick Placement Test. *Research Notes Quarterly*, *12*, 8–10.

Graves, M. F. (2016). The vocabulary book: Learning and instruction (2nd ed.). New York, NY: Teachers College Press.

Gray, J. R. (2001). Emotional modulation of cognitive control: Approach– withdrawal states double-dissociate spatial from verbal two-back task performance. *Journal of Experimental Psychology: General*, *130*(3), 436-452.

Gray, J. R., & Braver, T. S. (2002). Integration of emotion and cognitive control: A neurocomputational hypothesis of dynamic goal regulation. In S. C. Moore & M. Oaksford (Eds.), *Advances in Consciousness Research. Emotional cognition: From brain to behavior* (289–316). Amsterdam: John Benjamins Publishing Company.

Isen, A. M., & Baron, R. A. (1991). Positive affect as a factor in organizational behavior. *Research in Organizational Behavior,13*, 1-52.

Kousta, S-T., Vinson, D. P., &Vigliocco, G. (2011). Emotion words, regardless of polarity, the processing advantage over neutral words, *Cognition, 112*, 473-481.

Ponari, M., Norbury,C. F., &Vigliocco, G. (2017). How do children process abstract concepts? Evidence from a lexical decision task. *Developmental Science*, 10, 10– 11.

Recchia, G., & Jones, M. N. (2009). More data trumps smarter algorithms: Training computational models of semantics on very large corpora. *Behavior Research Methods, 41*(3), 647-656.

Reed, D. K. (2012). *Why teach spelling?* Portsmouth, NH: RMC Research Corporation, Center on Instruction.

Snow, R., & Farr, M. (1987). Cognitive-conative-affective processes in aptitude, learning, and instruction: An introduction. *Conative and affective process analysis*, *3*, 1-10.

Stahl, S. A., & Nagy, W. E. (2006). *Teaching word meanings*. Mahwah, NJ: Erlbaum.

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of personality and social psychology*, *84*(4), 871-889.

Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of personality and social psychology, 98*(3), 488-506.

Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of personality and social psychology*, *98*(3), 469-487.

Tulving, E. (2016). Does memory encoding exist? In M. Naveh-Benjamin, M. Moscovitch, & H. L. Roediger, (Eds.). *Perspectives on human memory and cognitive aging: Essays in Honor of Fergus Craik* (pp. 6-27). Philadelphia: Psychology Press.

Vigliocco, G., Meteyard, L., Andrews, M., &Kousta, S. (2009). Toward a theory of semantic representation. *Language and Cognition*, *1*(2), 219- 247.

Vigliocco, G., dellaRosa, P., Vinson, D. P., Devlin, J., Kousta, S.-T., & Cappa, S. F. (2014). The neural representation of abstract words: The role of emotion. *Cerebral Cortex*, 24, 1767– 1777.

Weinberg, S. (2017). *The quantum theory of fields: Vol. III Supersymmetry*. Cambridge:Cambridge University Press.

Westbrook, A., Kester, D., Braver, T. S. (2013). What is the subjective cost of cognitive effort? Load, trait, and aging effects revealed by economic preference. *PLOS ONE, 8*(7),e68210.

Zambrana-Ortiz, N. J. (2011). *Pedagogy in (e)motion: Rethinking spaces and relations* (Vol. 16). New York, NY: Springer.

Zedelius, C. M., Veling, H., &Aarts, H. (2015). When unconscious rewards boost cognitive task performance inefficiently: The role of consciousness in integrating value and attainability information. *Frontiers in Human Neuroscience*, 6, 219- 230.

Zwiers, J. (2016). *Building academic language: Essential practices for content classrooms.* Newark, DE: International Reading Association.

Authors' Biographies

Mehri Mokhtarzadeh is MA in English Language Teaching from University of Semnan.

Hadi Farjami is an Associate Professor at the Department of English Language and Literature, Semnan University, Iran. He has taught EFL, EAP, and Teacher Training Courses for over 20 years. He has published articles in international and national journals and authored and co-authored EFL textbooks.

Monireh Mokhtarzadeh is a lecturer of Applied Linguistics at the Department of English Language and Linguistics, the University of Birjand in Iran, where she has been teaching at undergraduate and graduate levels as well as researching for more than 12 years. Her main areas of research include Psycholinguistics, Teacher Education, Bilingualism, Translation in Language Teaching, and Teaching Language Skills.