

The Effect of Lexical Cohesion on Synonymy

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Abstract – The purpose of this study is to investigate the effect of lexical cohesion on synonymy in Iranian setting. The researchers sampled two groups of students randomly, and assigned them as a control group and an experimental group. Both groups were taught the same vocabulary. They were required to guess the meaning of the vocabulary and in case they failed to do so, the instructor gave them the Persian equivalents of synonymous words. The difference was that the control group was given only some matching exercises while the experimental group had to guess the meaning of synonymous vocabularies. This process went on for 10 successive sessions with a 4-day interval between each in both groups. At the end of the treatment, the participants sat for a post-test. The researchers came to this conclusion that lexical cohesion does not affect learning synonymous words.

Keywords: lexical cohesion, coherence, cohesion, synonymous terms

I. INTRODUCTION

It has been previously approved that new words should not be presented in isolation and should not be learned simply by rote memorization. In other words, it is important that new vocabularies be presented in context. Likewise, the nature and process by which learners deal with new words is important and have been emphasized in recent studies. It seems that learners use contextual clues to guess the meaning of words in all levels of reading and there are several factors that influence learner's lexical behavior and success in guessing words. Learning vocabulary during reading is a valuable goal and strategies and processes which are effective for such a purpose are highly appreciated by students and teachers. Lexical cohesion is one of them.

Now, the question is whether using lexical cohesion strategies in order to guess the meaning of words would help to better vocabulary learning. This study is designed to investigate one of learners' approaches to deal with unknown word while reading English texts, lexical cohesion strategies, and their effects on vocabulary learning. In other words, do learners learn more vocabularies when they use lexical cohesion strategies, or when they encounter new words and listen to their teacher's explanation of words?

In the present study, the researchers aim to teach words that are to some extent synonymous and show the language learners' ways that help them in finding differences between the words that are seemingly synonymous such as *glass*, *cup*, *mug* but language learners should bear in their minds that these words cannot be used interchangeably. This

helps language learners a lot, while language learners are reading a text that is steeped with synonymous terms, they will not get confused in understanding and comprehending the meaning of synonymous words. Besides, they will understand that they should use words according to the context and situation that is suitable for words and they will get the point that they cannot use synonymous words interchangeably.

There exists a lot of problem toward learning words in researcher's country (i.e. Iran), which is being originated from rote learning method for language learners. In the researchers' country (i.e. Iran), words in the English books are presented in the dictionary practicing method. It means that the students have to memorize the meanings of them rather than to pay attention to their functions or meanings of words. Thus in textbooks in Iran, rote learning of words has been preferred to meaningful learning.

II.LITERATURE REVIEW

A. Vocabulary Instruction

Problems toward teaching the meaning of words. It can be claimed that the words used in the speech show what language learners are, how smart language learners are, what kinds of job people have, etc. Words are not just tokens that one might memorize to impress others. Indeed, words are integral parts of network to show knowledge. Vocabulary knowledge is knowledge; knowledge of words is not only about knowing the definition of words, but also it is about how words fit in to the world. For each word, there exist schemas. That is even for simple concepts such as dog; the schemas may be expanded from dog to special kinds of dog, to the comparison of dog with other creatures (Stahl, 1988). Regarding to the knowledge of world and personal interest, the researchers brings different words for understanding. A person who has an interest in dog knows more words than a fisherman, but surely the fishermen know different words, and of course some of these words are available in fish business. According to Stahl, (1988), the words language learners know define who they are. There are different kinds of words and these words have different demands and they should be taught in different ways.

B. The True Number of Words to Be Learned.

Gaining perfect knowledge of vocabulary seems to be very out of reach for many people, even adults and smart people. Many of the language learners know thousands of words but still in some situations they don't know some words. Estimating the number of English words is to some extent tough and complicated. The Oxford English Dictionary, the largest compilation of English words, holds about one million words. It seems that English add new words to it all the time, from other sources such as other languages, new slangs and compounds. Of course knowing all these words are not necessary. But indeed "there are out there to be learned and used" (Stahl, 1988, p.73). There are different estimates, one of them was done by Nagy and Anderson (1984), and they estimated that the number of different word families (in the book that children read from grades one through 12) is about 78000. according to them, an average senior high school knows about 45000 different words

which is of course a large number. It is believed that a student in grade one knows about 6000 different words, so to 45000 there are still 39000 words to be learned during the next 12 years. That would be about 10 new words each day. According to White, Graves and Slater, (1990), the average child does learn approximately 3,000 words each day. White and his colleagues stipulated a range of growth between 1,000 words for low achieving children and 5,000 for high achieving children per year.

C. The Gap in the World Knowledge among Children

If researchers accept that children must learn 10 words a day to make a normal progress in developing vocabulary, researchers need to find ways to make this learning easily. Obviously, 10 words a day is more than can be taught directly (Stahl, 1991, p162). The point is that few teachers teach 10 to 12 words a day, and even if they teach that, they are not ready to learn in the best way. According to Stahl and Fairbanks (1986), if specific words are taught directly, they are so effective in improving comprehension. However, a large number of words cannot be learned unless they are seen in the context, mostly thorough wide reading, (Stahl, 1991). There are many rare words in children's books. Words that emerge only once in each book or even once across several millions words of a text. According to Hayes and Ahrens (1988), some researchers found a higher density of less frequency words in an average children's book than in average television program, or even in the conversation of two college-educated adults. If there are good readers and text is full of rare words, few problems are seen among these kinds of readers, while regarding poor readers and those with reading difficulty, these kinds of texts cause problems in the book of children. Children's books are good sources for poor learners to learn words from the books but the problem is that they can read fewer books and they choose less challenging books (Stahl, 1991) , so other students improve day by day and they are left behind in learning, (Stanovich, 1986) . Students having difficulties in reading know fewer words and it is because of lack of exposure and doesn't have any relationship with reading ability

D. Early Beginning of Word Knowledge Gap

There exists word – learning gap among students and it is possible to happen before entering school. Of course they can communicate easily in situations like home, but the problems starts when in school, they are exposed to academic words, sometimes as if they are foreign language words, (Nagy, 1990). In different studies, Hart and Risely (1995) found that children from advantaged homes, (i.e., children of professionals), had receptive vocabularies as much as five times larger than children from welfares homes, (i.e. children in families receiving aid to families with dependent children). It was observed that welfare homes faced with fewer words spoken to them and they had more imperative sentences and fewer descriptive or elaborative sentences. According to Tabors and Dickinson (2001), children's word knowledge in Pre School had important correlation with their comprehension in upper elementary school. And after some other studies on children word growth in grades 2 and 5,

they suggested that there are gaps to fill these gaps among learners, vocabulary instruction should start earlier.

E. Different Aspects of Learning Vocabulary

Vocabulary knowledge has a lot of advantages for language learners and one of the most important of which is in facilitating reading comprehension for language learners, so one of the most significant aims of vocabulary instruction could be developing language learner's ability in comprehending readings. Choosing such a goal, of course, would determine our choice of words and the method of the instruction. Imagine the goal of an educational institution for teaching vocabulary is preparing students for passing a special vocabulary test in the future, such as multiple choice vocabulary exams. In contrast, if the goals change to the developing reading skills by using more powerful range of words in students, the method and instructional activities would be more demanding, (McKeown, Beck, Omanson , and Pople , 1985) .There are efforts and view which are very supportive on the way to improve reading comprehension (Stahl , 1986).

However, it seems that the relationship between vocabulary knowledge and reading comprehension is complex (e.g. Anderson and Free body, 1981)

F. Aspects of Long Term Comprehension Approach and Improving Vocabulary

Attaining effective vocabulary instruction is a long term goal, so vocabulary instruction should start early in the educational life of learners and continue through the school days. Although the exact nature of effective instruction changes across grade levels, the focus on and commitment to vocabulary instruction is a sustaining component of school.

G. Teaching Individual Words

Whenever the vocabulary instruction is focused on, teaching individual words seem to be the first option. A number of studies have shown that if the vocabulary instruction is supposed to help language learners to increase their level of reading comprehension, it should be intensive, (Stahl and Fair banks, and 1986). Intensive or rich vocabulary instruction is one which gives students information about definition or conceptual aspects of a word, also, such an instruction should provide language learners with chances to process information carefully and apply that in different ways according to their knowledge. (Stahl, 1986), a number of instructional encounters, somewhere between 7 and 12, are necessary if students are going to reach real ownership of the instructed words. One problem is that, only small number of words is covered in this way. There is not enough research to know whether less intensive instructional methods are useful, but promoting the large scale is to some extent clear, and the researchers need to do more research about teaching individual words .Nagy (1990) provides the two other components of effective vocabulary instruction , extensive exposure to rich language and building generative word knowledge.

H. Exposure to Rich Language

Effective exposure to rich language is necessary for oral and written language instruction. Reading seems to be one of the most significant means of growing vocabulary, especially that of wide kind especially for proficient students (Nagy , 2001), on the other side research has shown that rich oral language is necessary for what Nagy calls less able readers, (Beck and McKeown, 1991; Beck, McKeown and Kucan , 2002; Biemiller, 2001) . In case the students are supposed to gain enough vocabulary knowledge to get meaning from the context, effective range of classroom activities should be applied, such as reading aloud, storytelling, play and conversations, all of which are effective ways for promoting knowledge of vocabulary. Rich language and exposure to it seems to be more suitable for older and less able students who tend to have restricted functional vocabularies. Such a group of students is unlikely to read so widely and their studies would not make any noticeable growth in their vocabulary. Of course it is on the part of the teachers to motivate these learners for more attempts to improve vocabularies but at the same time use oral language to promote the vocabulary of these students.

Many researchers back this idea that an important part of vocabulary growth occurs as children step by step, by means of repeated encounters with the words in text or conversation, language learners will learn the meaning of new words. Research has shown this fact that there exist only a low chance for learning a special word after encountering it once in a context. According to (Swan born and deGlopper, 1999), this is about 15%. Being exposed to rich language is an essential factor for promoting the vocabulary growth, but the advantages of such exposure accumulate slowly.

I. Productive Word Knowledge

“Productive word knowledge is vocabulary knowledge that can be transferred to the learning of new words” (Nagy, 2001, p.52). Ascribing vocabulary knowledge as isolated information about knowing the meanings of special words is not acceptable. In order to make students better word learners, there are word –learning strategies such as the use of the context and word parts that can be taught to them.

Effective word learners also have knowledge about what forms a feasible word meaning which helps them distinguish between relevant and irrelevant information in the context (Nagy and Gentner, 1990). In word learning there is also what is called word consciousness. According to Blachowicz and Fisher (2004), it is an interest by the students to have an awareness of different perspective of a word, their meaning, their history and relationship with the other words, words parts and most importantly the way writers use words to have a better communication. So any vocabulary instruction if managed to lead to enhanced word knowledge has to address all these components by not only teaching individual words but also exposure to rich language and productive word knowledge, (Graves, 1984). And in fact there are different instructional intervention that effort to do so. As an example, Beck and McKeown’s text talk is a very promising book of comprehensive approach toward growing vocabulary for younger students (Beck and McKeown, 2002).

J. Links Underlying the Relation between Vocabulary Knowledge and Comprehension

It is believed that the reading comprehension and knowing vocabulary are correlated with each other (Anderson and Freebody, 1981). However, understanding the nature of this relation is intriguing to consider.

K. Instrumentalist Hypothesis

Having more vocabulary knowledge would lead to better reading comprehension. This is a common conceptualization between knowing vocabulary and reading comprehension. There is a causal connection between size of vocabulary and the ability to comprehend the text. This is what is called by Anderson and Freebody (1981), the instrumental hypothesis

The instrumental hypothesis seems to some extent be logical because the researchers will understand that other factors have a role in the correlation between vocabulary size and reading comprehension. The problem with the instrumentalist hypothesis is not that it is wrong but that is imperfect “and hence misleading, if one considers it as a whole picture” (Nagy, 2001, p. 85). The implication for instruction of this hypothesis is that word knowledge contributes directly to reading comprehension, so the teachers should teach vocabularies, if they want to enhance learner’s comprehension. One point is that instrumentalist hypothesis is out of complex range of factors that have implications. Vocabulary interventions are usually performed and researchers expect a successful intervention which would lead to better comprehension, despite some success, however the impact of vocabulary interventions on standardized measures of reading comprehension has been sporadic, and whenever there is an effect, it is not generally important. Researchers cannot expect that a short term vocabulary intervention can obtain large improvements in reading comprehension. According to (Nagy and Gentner, 1990, p.81), the effect of vocabulary instruction should be long term cumulative rather than short and dramatic.

L. Knowledge Hypothesis

Knowledge hypothesis was proposed by Anderson and Free boy, (1981), they focus on this fact that reader’s background knowledge has a significant role in reading comprehension. “It is not knowing the meanings of words that cause readers to comprehend what they read; rather, knowing the meanings of words are an indication of the reader’s knowledge of a topic or concepts”, (Nagy and Gentner, 1990, p. 92). In order to simplify the concept, imagine during a class, the teacher gives students a passage which is about playing chess, the students are supposed to read the text and answer the comprehension questions, but before the teacher provided the students with a vocabulary test, and put in the text all the terminologies about chess that are not used in a text. The noticeable point is that, the teacher should expect correlation between scores on this vocabulary tests, because those students who know more about chess can have a better understand of the text. It is not important

whether the vocabularies from the text were used in the text or not, knowledge about the chess is significant, and special words are part of this knowledge. That is they are part of symptomatic part of that knowledge, (Nagy, 2001). One point to keep in mind is that, word knowledge is not sufficient for reading comprehension, it is also important to know the concepts and their relation. Based on knowledge hypothesis, there exist a causal link between knowledge and comprehension, and knowing vocabulary is only a small part. According to (Nagy, 2001), the implication for the application of this theory could be this way that word meaning does not exist in isolation, instead they are parts of a bigger knowledge structure. Consequently, knowing word is not enough and it should be mixed with word knowledge so that they can lead to improved comprehension. In other words, vocabulary should be taught in relation with concepts and contexts (Nagy, 2001).

M. The Aptitude Hypothesis

One other thought about correlation between vocabulary knowledge and reading comprehension is aptitude hypothesis. According to this hypothesis those who have larger vocabularies, can understand what they read better, because there is a third factor which intervenes and affect both vocabulary and comprehension. Actually this third factor has a relationship toward verbal aptitude. According to Nagy (2001), high verbal IQs can produce better readers and better word learners. People with high verbal IQs, not only language learners can understand better a text but also they can learn large body of vocabularies. Many learners may have learned a lot of their words by means of oral language, and not reading, but still knowing these words have an effective role in their comprehension, because verbal ability is a factor for learning the words in the best way, and it will also lead to better comprehension. There is one suggestion by Sternberg and Powell (1983), in which inferencing ability is effective for reading comprehension and also for learning new words that readers face as they read the text. Nagy (2001) proposes another version called metalinguistic hypothesis in which he suggests that part of a correlation between test of vocabulary and reading comprehension is because of the fact that both need metalinguistic awareness- the ability to reflect on and alter language. Vocabulary instruction's ability is to ask students to think about words and their meanings in an abstract way. According to Nagy (2001), reading comprehension is metalinguistically a demanding task. If the language learners want to be successful in their conversation, they should have a careful attention toward these factors: intonation, gesture, facial expression, ability to ask questions and even a large amount of a shared knowledge. In contrast, when the language learners are reading, they are so much dependent on the text, and when they don't comprehend anything, they should have the ability of reflecting on the language of the text, if they want to have a true picture out of it. There are strategies for such situations; however they mostly require some kinds of metalinguistic ability. Inferencing is a group of strategies which are useful in such conditions, and help language learners to infer the meanings of text by guessing words in the text so that the comprehension of the text would be much easier. Metalinguistic hypothesis, is indicative of this fact that part of the correlation between vocabulary knowledge and reading comprehension ability is related to this point that vocabulary tests like reading

comprehension tests are test of ability to deal with decontextualized language , and these two depend on metalinguistic skills. There are various instructional implications for aptitude hypothesis, and they depend on the specific version used. According to Sternberg and Powell (1983), the implication is that the students should receive instruction that help them infer meanings of new words. Fukkink and deGlopper (1988), Kuhan and Stahl (1988), have suggested that this kind of instruction can help students learn the meanings of new words.

III. METHOD

A. Participants

The participants of the study were 50 EFL male learners from a larger population of 100 students at Sepehr language Institute in Arak, Iran. They were all teenagers and their first language was Persian. The participants were chosen randomly from four classes. Although the participants selected for this study were studying English at the same level determined by the institute, additional Nelson proficiency test was administered to see whether there were any significant differences among them or not. Afterwards, 50 students from those who got one SD above and below the mean were assigned randomly to two groups, namely control and experimental groups. The remaining students were discarded. All the participants were living in Arak. It is worth noting that they had passed Interchange level one successfully and enrolled in Interchange level two.

B. Instrumentation

The instruments in this study included the assessment materials and the tasks and activities for each group. The proficiency test was the test of Nelson (adapted from Nelson English Language Tests, by Fowler & Coe (1976), (Series 100D). This standardized and validated test was administered in order to check the homogeneity of the experimental and control groups. The test included fifty multiple-choice items of Grammar and Vocabulary.

Two tests were prepared by the researchers to be used as the pre-test and the post-test. The tests consisted of 20 vocabulary items which measured the knowledge of the vocabulary taught during the study. It should be pointed out that the same vocabularies were tested in both the pre-test and the post-test. In order to validate the test, its face validity and content validity were confirmed by two PhD experts. Then the researchers carried out a pilot study for the test on a group of 30 students. The Cronbach's Alpha coefficient for the pilot group was 0.70 which is a desired value and leads to a reliable test.

In addition to the assessment materials, certain activities and tasks were practiced during the course of instruction. The experimental group was asked to guess the meaning of seemingly synonymous word. On the other hand, in the control group exercises such as finding the meaning of words by using dictionary were used as activities. These exercises were prepared and photocopied by the researchers and distributed to the students each session to practice the new words.

C. Procedures

First, the Nelson Test was administered to the two groups. Each correct answer received one point and there was no penalty for incorrect responses. After correcting the answer sheets, each participant received a mark.

Then, the two groups, namely the control and experimental groups, enjoyed a series of instructions through which 40 words were practiced in the course of 10 sessions, 4 words in each session, with a 4-day interval between them.

In the experimental group, 4 words were taught to the participants in each session. The participants were exposed to a definition of each word with exposure to contexts in which the words were embedded. The instructor explained the meaning of the words and tried to assist the learners as to how and in which situation or context the words were used. The participants were asked to work on the differences between the newly-learned synonymous words. Participants were supposed to work on the meaning of words for the next session. . It should be noted that the instructor's most important comments focused on the correct use of the words in the context. It should be mentioned that the researchers assumed that the participants knew how to guess the meaning of synonymous words prior to the treatment based on what they had studied in Interchange series.

In the control group, the same four words were taught to the participants each session. Afterwards, some matching exercises (matching the words with their definitions) were done each session. Meanwhile, the instructor supervised to see whether all the participants were doing the exercises and in cases where there was a problem, the instructor would explain the exercise for them and corrected their errors. In the end, all the exercises with their correct responses were presented to class to make sure that all students had noted the correct use and format. In effect, this group received some placebo treatment.

This process went on for 10 successive sessions with a 4-day interval between each in both groups. It should be mentioned that Persian equivalent of the words were given as the last resort and were given to the subjects in case they weren't able to understand them in English.

At last, the participants sat for the post-test. On the basis of this test, the efficacy of lexical cohesion on finding differences between seemingly synonymous terms was checked.

IV. RESULTS

The main purpose of this study was to investigate the effect of lexical cohesion on finding subtle differences among words that are seemingly synonymous so as to improve Iranian male students 'level of vocabulary'. Therefore, at first the current study stated the differences between learning new words with/without lexical clues and finally investigated whether there was any relationship between lexical cohesion and learning seemingly synonymous words or not, the results of which are shown below.

Table 1: The Result of Pretest Descriptive Statistics for Learning Seemingly Synonymous Terms by Means of Definition in Control Group

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Control group	25	11.50	7.00	18.50	12.6300	2.74536	7.536

As table 1 shows that, the mean of the scores for the control group in the pretest is 13, the median is 12.5, the mode is 10, and the standard deviation is around 2.74. Also the minimum score is 7 and the maximum score is 18.5

Table 2: Posttest Descriptive Statistics for the Control Group

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Control group	25	11.75	7.00	19	12.9600	2.74211	7.519

As the table 3 shows, the mean of the scores for the control group in the posttest is 13, the median is 12.5, the mode is 11, and the standard deviation is around .74. Also the minimum score is 7, and the maximum one is 19

Table 3: Pretest Descriptive Analysis in Learning Seemingly Synonymous Terms in Text for Experimental Group

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Experimental Group	25	8.50	7.50	16.00	11.7100	2.05609	4.228

As table 3 shows, the mean of the scores for experimental group in posttest part is 12, the median is 11, the mode is 11, and the standard deviation is around 1.58. Also the minimum score is 7.5 and the maximum one is 16.

Table 4: Post Test Descriptive Statistics for Experimental Group

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Experimental Group	25	6.75	12.00	18.75	15.000	1.58935	2.562

As table 4 shows, the mean of the scores for the Experimental group in posttest is 15, the median is 15, and the mode is 15, and the standard deviation is 1.58. Also the minimum score is 12, and the maximum one is 18.75

A. Data Analysis and Results for the First Hypothesis

Table 5: Independent sample t-test for learner’s proficiency level in Control Group

	N	Mean	Std. Deviation	Std. Error Mean	Difference Mean	df	T	Sig.
pre	25	12.63	2.745	.549	.33	24	-.635	.531
post	25	12.69	2.742	.548				

Based on the information given in table 5, it can be concluded that there is no significant difference between the two groups participated in the study since the alpha is .531 which is greater than .05. Thus it can be safely stated that lexical cohesion does not affect learning new words.

B. Data Analysis and Results for the Second Hypothesis

Table 6: Independent sample t-test for the learner’s proficiency level in experimental group

	N	Mean	Std. Deviation	Std. Error Mean	Difference Mean	df	T	Sig.
pre	25	11.71	2.056	.411	3.29	24	13.573	.001
post	25	15	1.589	.317				

Based on table 6, it can be stated that there is a very significant difference between the scores obtained from the two groups since the alpha is .001 which is highly significant. Thus it can be stated that lexical cohesion affects learners’ ability to find differences between seemingly synonymous terms.

V. CONCLUSION

There are a lot of conclusions which can be drawn from the present study. This study helps teachers and students to have a positive view towards discourse analysis and lexical cohesion tasks. Also it helps teachers to design different vocabulary teaching tasks to help language learners use every word in a special context, establish a relationship between a words and its suitable context to learn the word much better than before and so forth to develop the vocabulary level of students in institutes. Using contextual clues methods in Iran high schools is a better and more efficient method because teaching synonymous vocabulary by means of using suitable context for every kind of words can be more effective in teaching

synonymous word in comparison with other types of vocabulary teaching such as synonyms, antonyms etc.

It also helps creative teachers to combine vocabulary learning tasks with lexical cohesion tasks to create more variety in their tasks since learning vocabulary tasks are more flexible in comparison with other types of tasks and can be easily combined and used with other types of tasks such as writing, listening, reading or speaking tasks.

The current research helps textbook writers and material developers look at the learning vocabulary tasks positively and allocate time and energy to design different vocabulary tasks for books.

Also, textbook writers can design word lists with special contexts in text books to help students learn them easily since memorizing all new words is a time-consuming job for high school students especially by considering the little time they have.

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