Making Connections in Vocabulary Instruction

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Abstract

Vocabulary teaching and learning constitute a major problem for EFL instructors and students. The pretest showed that freshman students at COLT have difficulty in pronouncing, recognizing the meaning of, using and spelling English words. In their first semester, freshman students are required to take a vocabulary course that consists of 50 lessons (2000 words), each consisting of a presentation page and a practice page. To help the students learn, retain, apply and relate word, the instructional approach focused on connecting the printed form of the word with its pronunciation (the hidden sounds, double & silent letters, and homophones), with its part of speech, singular or plural form, synonym or antonym, English & Arabic meanings, usage, component parts, previously-encountered words and others while presenting the new vocabulary items in each lesson. Categorization, association, and visualization skills and mnemonic approaches were emphasized. Out of class extensive reading and listening activities were also encouraged. Quizzes required the students to make the above-mentioned connections. Comparisons of pre and posttest results and of the experimental and control groups' test scores revealed significant differences in vocabulary knowledge and skills. The experimental approach proved to be effective in enhancing vocabulary learning by struggling EFL college students.

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1. Introduction

Vocabulary knowledge is an important element in second language (L2) acquisition. By learning new words, students can increase their listening, speaking, reading and writing vocabularies and can improve comprehension and production in L2. Nassaji (2004) found that ESL students who had a wider vocabulary knowledge made more effective use of certain types of lexical inferencing strategies than their weaker counterparts. Depth of vocabulary knowledge made a significant contribution to inferential success over and above the contribution made by the learner's degree of strategy use. August, Carlo, Dressler & Snow (2005) also found that English language learners who experienced slow vocabulary development were less able to comprehend texts at the grade

level than their English-only peers. Such students were likely to perform poorly on assessments in these areas and were at risk of being diagnosed as learning disabled.

Students can increase their vocabulary knowledge formally in the classroom and informally through communication with others and through out of class activities. Many instructional strategies were devised and utilized by L2 language teachers to develop the general and academic vocabulary of students. For example, Woodard (1998) suggested some strategies for teaching vocabulary. Those included teaching word origins and structural analysis; using semantic mapping/webbing; showing students how to attack analogies; reading aloud; dramatize; showing students how to use the dictionary; using cloze sentences; and using computer programs. Smith (1983) reviewed the literature and found three basic assumptions to be accepted as important for direct vocabulary instruction and for facilitating vocabulary building. These assumptions are: Teaching collocations; knowing a word entails knowledge of the network of associations between that word and other words in the language; and knowing a word means knowing the semantic value of the word.

A mixed approach to vocabulary instruction was used by few studies such as Hill (1998), Laufer and Hill (2000) and Johnson (1997). Johnson (1997) used three methods of vocabulary instruction (contextual cues, definitions, and a mixed approach) supplemented by computer-assisted instruction (CAI) using a mixed approach.

Several researchers proposed aspects of effective vocabulary instruction that are important for both L1 and L2 students. For Example, Simpson and Others (1987) stressed the importance of using mixed methods, learning vocabulary in context, maintaining student interest, and active learning. They recommended use of three generative vocabulary strategies: Student-initiated vocabulary study, the keyword method of imagining, and concept cards. Similarly, Johnson & Steele (1996) recommended several generative vocabulary-building strategies: Vocabulary selection strategies, personal word lists, semantic mapping, imagery, and computer-assisted instruction. Peters & Dixon (1987) also recommended using learning new labels; learning concepts; and learning to learn meanings. For effective vocabulary instruction, Burke (2004) also suggested scaffolded instruction; multiple modes and graphic organizers.

Johnson O'Connor's proposed four stages of word learning and each stage is characterized by a type of confusion (a mislead). In the first or "look alike" stage, people tend to confuse a word with other words similar in sound or appearance, while in the second or "context" stage, people tend to confuse a word with others in the same setting. In

the third stage, one might have a greater knowledge of word meaning, but confuse it with its exact opposite, or antonym. The last or close stage would involve fine shades of meanings of a word.

To summarize, different types of instructional modes, approaches, vocabulary building activities and skills proved to be effective in developing children and college students' vocabulary in L2 environments. Practicing vocabulary in context, combining vocabulary with reading and writing activities, and providing the students with different lexical information about the words under study enhanced children and adult students' vocabulary acquisition.

A vocabulary instructional approach that focuses on multiple associations (connections) was used to develop EFL students' vocabulary. To help the students learn, retain, apply and relate word, the instructional approach focused on connecting the printed form of the word with its pronunciation (the hidden sounds, double & silent letters, and homophones), with its part of speech, singular or plural form, synonym or antonym, English & Arabic meanings, usage, component parts, previously-encountered words and others while presenting the new vocabulary items in each lesson. Categorization, association, and visualization skills and mnemonic approaches were emphasized. Out of class extensive reading and listening activities were also encouraged. The study tried to answer the following question: Does the experimental approach that utilizes multiple associations in teaching vocabulary items to ESL freshman students under study with several types of decoding, lexical, phonological, graphological, morphological, semantic and syntactic information have any positive effects on EFL freshman students' vocabulary acquisition as measured by the posttest?

To answer this question, two groups of EFL freshman students participated in the study. They were taught vocabulary using two approaches. The impact of experimental approach using a mixed approach on EFL freshman students' vocabulary acquisition was based on quantitative analyses of the pre and posttests.

2. Theoretical Framework:

Lado (1990) indicated that humans acquire and learn words, names, titles, expressions, sayings, and formulas as undifferentiated lexical items first and then develop systems to store and retrieve the lexemes and combine them into phrases and sentences.

The adoption of proficiency-based principles in L2 teaching does not mean using new methods of instruction, but rather providing maximum opportunities for students to perform communicative linguistic tasks in a variety of contexts and with a given degree of accuracy. Students need to internalize vocabulary in order to understand and access it effectively, and need to develop personalized vocabulary in order to talk about their own worlds (Glisan, 1988).

Machalias (1991) examined a number of techniques and strategies in the foreign-language classroom likely to encourage acquisition through formation of associations, in particular semantic networking systems that exist in the native speaker's mental lexicon.

Class size at elementary, secondary and college levels have been the focus of educational research for five decades. Prior studies have investigated several types of meaning and form associations and effective vocabulary teaching techniques that can be utilized in vocabulary development. Studies focusing on each of these aspects are reported below.

2.1 Types of Vocabulary Associations

With phonological, morphological, syntactic, semantic features

The relationship among phonological awareness, morphological structure awareness, vocabulary, and word recognition was investigated by McBride-Chang, Cho, Liu, Wagner, Shu, Zhou, Cheuk & Muse (2005). Data collected from 100 second graders each from Beijing, Hong Kong, Korea, and the United States showed that across languages, phonological awareness and morphological structure awareness were similarly associated with one another and with vocabulary knowledge. However, phonological awareness and morphological structure awareness had different associations with word recognition in different scripts among second graders. Levenston (1979) also concluded that phonological, morphological, syntactic, and semantic features of the learner's L1, L2, and other languages with which the learner is acquainted affect the growth and expansion of L2 vocabulary.

With lexical field

Vespoor & Winitz (1997) evaluated the effectiveness of lexical-field instruction for intermediate level ESL students in a language laboratory setting. Findings showed that the lexical-field instruction was an effective procedure for teaching general language knowledge through the meaning system.

With form and meaning

Barcroft (2004) presented an overview of major strands of research on vocabulary acquisition, and discussed some principles for effective L2 vocabulary instruction based on research findings on lexical input processing. These principles emphasized presentation of new words as input, allocation of limited processing resources during vocabulary acquisition, distinct components of vocabulary knowledge (e.g., form, meaning, mapping), and appropriate types of instruction for different stages of development. In another study, Sagarra & Alba (2006) investigated the effectiveness of three methods of learning vocabulary among 778 beginning second language (L2) learners. Rote memorization consists of memorizing the first language (L1) translation of a new L2 word by rehearsal. Semantic mapping displays L1 words conceptually related to the L2 word in a diagram. The keyword method involves associating the novel L2 word with an L1 keyword that is acoustically or orthographically similar, and then connecting the L1 keyword with the L1 translation of the L2 word. The Results revealed that vocabulary learning techniques requiring deeper processing through form and meaning associations (i.e., the keyword method) yield the best retention. In addition, rote memorization of L1-L2 equivalents was more effective than creating multiple meaning associations (i.e., semantic mapping). Results also suggested that using the keyword method with phonological keywords and direct L1 keyword-translation links in the classroom lead to better L2 vocabulary learning at early stages of acquisition.

With context

In order to develop a procedure for vocabulary building in ESL college classrooms, Smith (1983) reviewed studies on first language acquisition, second language learning, semantic relationships between lexical items, and the effectiveness of inductive versus deductive teaching methods and gave three basic assumptions that are important for direct vocabulary instruction and for facilitating vocabulary building. These assumptions are: Teaching collocations; knowing a word entails knowledge of the network of associations between that word and other words in the language; and knowing a word means knowing the semantic value of the word.

Qian (1996). Challenges the assumption that contextualized vocabulary learning invariably leads to superior retention. The article compares two different instructional

treatments in a university classroom experiment in China in the teaching of EFL: the study of contextualized versus decontextualized English word lists.

With background knowledge

Johnson and Others (1986) described semantic mapping, an effective strategy for vocabulary instruction that involves the categorical structuring of information in graphic form and requires students to relate new words to their own experience and prior knowledge. Another study by Rosenbaum (2001) demonstrated how students who use background knowledge, context, morphology, and dictionaries learn words more effectively.

2.2 Effective Vocabulary Building Techniques:

Systematic teacher-directed Instruction

Lee (2003) investigated vocabulary use in the writing of 65 secondary school multi-grade and multi first language intermediate ESL learners at a Greater Vancouver public secondary school. Proposes systematic vocabulary instruction based on teacher-directed interaction and negotiation and psycholinguistic principles of word learning.

Amount of instruction

Johnson and Others (1987) compared two computer-assisted instructional vocabulary programs used with 25 learning disabled high school students. Results indicated that the program utilizing smaller teaching sets and cumulative review exercises was more effective in helping students achieve mastery than the program using a large teaching set and no cumulative reviews.

Word grouping

Researchers have explored the possibility that grouping words in a manner other than the traditional list of nouns, all fitting under a common theme, might be more beneficial for students. This suggests that it might be helpful to give a list of words that are not semantically related. Hippner-Page (2002) attempted to find out whether grouping vocabulary words thematically result in more words learned by L2 students than semantic grouping. Third, fourth, and fifth grade students received the same level of ESL instruction. Results showed both word groupings were beneficial, suggesting teachers might consider using both semantic and thematic groupings to help L2 elementary students learn new

vocabulary words. Hsia & Others (1995) reported data collected by supervised student investigators on learners' use of strategies in organizing words when learning ESL. Results proved that word grouping was a worthwhile study. A second study investigated word organization strategies of secondary school students given a list of 50 words.

Individualizing instruction

Crozer (1996) proposed the Individualized Vocabulary Instruction (IVI) program, a a self-contained, individualized computer program, that has been used to provide vocabulary instruction to disabled students at California's Los Angeles Pierce College (LAPC) since 1987. The IVI program is divided into two main word groups, called modules, with each module containing 1,125 words. The program performs pre- and post-testing of students, provides instruction, presents students with abundant opportunities for practice and repetition, administers regular tests, and controls and monitors student progress. The only staff member required is a facilitator who also monitors student progress, drops students from the computer as necessary, and moves students to new modules upon completion. The modules are divided into "chapters" of 15 words, with each chapter further divided into the following 4 lessons: (1) learning the meanings of the words in the chapter; (2) learning to spell each word associated with its meaning; (3) a practice quiz; and (4) a review of previous chapters. Students must complete all four lessons in a chapter before taking the chapter test. Upon completion of all the chapter tests, a final exam is administered. The IVI program has proven to be an effective method of teaching vocabulary and improving students' learning skills at LAPC.

Using visuals and concrete experiences

Bazeli & Olle. (1995) discussed research findings regarding vocabulary instruction and suggested methods to develop vocabulary using visual aids. They pointed out a strong need to relate concrete visual experiences to vocabulary development, providing active, meaningful, and repeated word use. Visual methods for developing vocabulary that involve students actively taking part in their reading vocabulary development include using: interactive video; student illustration of vocabulary; computer software packages designed to develop reading skills; activities that involve visual perception; and graphic organizers, including story maps, collaborative rehearsal of new vocabulary, and student-made flash cards. The use of visuals, combined with cooperative learning groups, provides an effective environment for the development of vocabulary and reading comprehension.

Teaching mnemonic strategies

Scruggs and Others (1986) taught 96 gifted and non-gifted fourth- and fifth-grade students either Italian vocabulary or information about North American minerals via free study or mnemonic instruction. They were then asked to transfer their learning strategy to a novel content area. Results indicated that both gifted and non-gifted students can benefit from mnemonic strategy instruction.

One of the mnemonic strategies is the keyword method which involves the association of the novel L2 word with an L1 keyword that is acoustically or orthographically similar, and then connecting the L1 keyword with the L1 translation of the L2 word. A study by Zhang & Schumm (2000) found that the keyword method appears to be effective in helping LEP students to recall word definitions rapidly and efficiently, to comprehend sentences, and to retain vocabulary learning over a one-week period. Avila & Sadoski (1996) trained Hispanic ESL students to use Spanish keywords to acquire English vocabulary. Results indicated that the keyword method produced superior recall and comprehension immediately and after one week and that this method is readily adaptable to ESL classrooms. Konopak & Williams (1988) also noted that the use of mental pictures to aid students' learning --the keyword method-- is effective for both good and poor readers. Hollaway (1989) investigated problems experienced by learning disabled (LD) students in recalling specialized science and social studies vocabulary. Lists of selected key terms from each content area and grade level were created, and on single sheets of paper a keyword was illustrated interacting with the meaning or attribute of the term. These sheets were used in training sessions, and students' understanding of the terms tested. Results indicated the program was effective, with LD students in the 85-116 IQ range showing both clearest ability to use the keyword system and commensurate benefits. Interviews with students showed heightened awareness of the relationship of mnemonic aids to improved recall.

A second mnemonic strategy is the graphic organizer or semantic mapping in which L1 words conceptually related to the L2 word in a diagram. In a study by Kaelin (1991), the efficacy of the mnemonic graphic organizer strategy on the vocabulary acquisition of beginning and advanced adult ESL students. Subjects in the control and experimental groups received the same instruction in the topic material, but subjects in the experimental group used a mnemonic graphic organizer strategy for vocabulary acquisition. Results indicated that the use of graphic organizers across high and low ability groups was as effective in subjects' vocabulary acquisition as the regular classroom technique, and was

significantly effective with beginning ESL students over and above the regular classroom instruction. Monroe & Pendergrass (1997) compared the effects of two models of vocabulary instruction: (1) the integrated graphic organizer/discussion model; and (2) the definition-only model on the mathematical vocabulary use of fourth grade students. Results showed a larger number of mathematics concepts recorded by the group using the integrated graphic organizer/discussion model.

Encouraging students to use a dictionary

Knight (1994) examined incidental vocabulary learning from context and 2 factors that might influence it, access to a dictionary and verbal ability, among 112 second-year university students. Results indicated that subjects learned more words while reading for meaning, but high verbal ability students and those using a dictionary learned more. Similarly, Gonzalez (1999) found that dictionary work was laborious but necessary, and that ESL college students need to be taught prudent use of the dictionary.

Nagy & Gentner (1987) investigated the nature and effect of constraints on the hypotheses that learners make about the meanings of words. Two experiments were conducted at a large Midwestern university: the first, involving 68 undergraduate students divided randomly into two groups, tested taxonomic and durative constraints on nouns, and time of day and cessation constraints on verbs; and the second, involving 56 students, presented students in each of two groups an opportunity to assign meaning to a target word, either a noun or verb, in order to determine if those reading the noun would associate object properties with the target word and those reading the verb would associate information about the manner in which the action was performed. Results confirmed that persons possess implicit knowledge of constraints on possible word meaning, and that they apply this knowledge in tasks which represent important aspects of natural word-learning situations.

Jitendra, Edwards, Sacks & Jacobson (2004) summarized published research on vocabulary instruction involving students with learning disabilities. Nineteen vocabulary studies that comprised 27 investigations were located. Study interventions gleaned from the review included keyword or mnemonic approaches, cognitive strategy instruction (e.g., semantic features analysis), direct instruction, constant time delay, activity-based methods, and computer-assisted instruction (CAI). While findings for the keyword, cognitive strategy, direct instruction, constant time delay, and activity-based procedures were generally effective in enhancing vocabulary performance for students with learning

disabilities, results for CAI were mixed. The studies are discussed with regard to study characteristics (e.g., intervention intensity, instructional arrangement).

Awareness-raising

Yang (1995) investigated how ESL students improved their use of learning strategies through awareness-raising in group interviews and informal training. 68 Taiwanese university students in two freshman English classes responded to an English learning strategy questionnaire at the beginning and end of the semester. During the semester, students were interviewed in small groups, in which they examined and discussed details of their strategy use when learning vocabulary, listening, reading, writing, and speaking inside and outside the classroom. Pre- and post-test results showed significant increases in learning strategy use. Results suggested that the group interview provided learners with an important opportunity to focus not only on language but also on the learning process, and offered teachers an opportunity to convince their students of the value of learning strategies and to encourage their active use and improvement.

Encouraging extensive reading and listening

In several studies, vocabulary instruction was combined with listening, reading, and writing skill instruction.

Students need to internalize vocabulary in order to understand and access it effectively, and need to develop personalized vocabulary in order to talk about their own worlds. From the beginning, students should be taught strategies for listening, and should have exposure to authentic listening and reading materials (Glisan, 1988). In addition, Adelson-Goldstein (1998) described the importance of developing ESL students' active vocabulary, discussing active versus passive vocabulary, selection of active vocabulary for development, and vocabulary development and the communicative framework.

Wesche & Paribakht (1994) described a classification scheme developed to examine the effects of extensive reading on primary and second language vocabulary acquisition and reports on an experiment undertaken to test the model scheme. The classification scheme represents a hypothesized hierarchy of the degree and type of mental processing required by various kinds of vocabulary exercises. These categories include: (1) selective attention; (2) recognition; (3) manipulation; (4) interpretation; and (5) production. This hierarchy was tested in an ESL classroom by comparing the vocabulary gains of learners in a thematic reading program with those in the same reading program in which

some readings were replaced by vocabulary enhancement activities. Results indicated that although both groups in the reading program experienced substantial gains in word knowledge, those performing vocabulary enhancement techniques along with reading activities learned more words and achieved greater depth in their knowledge of these words than those students exposed to extensive reading alone.

3. Participants

143 female freshman students were enrolled in their first vocabulary course. All of the students were majoring in translation at the College of Languages and Translation (COLT), King Saud University, Riyadh, Saudi Arabia. They were concurrently taking listening (3 hours per week), speaking (3 hours), reading (4 hours), writing (4 hours) and grammar (2 hours) courses in EFL. The subjects were all Saudi and were all native speakers of Arabic. Their median age was 18 years, and the range was 17-19. They all had 6 years of EFL instruction in grades 6-12 prior to their admission to COLT.

The experimental group consisted of 71 students and the control group consisted of 72 students. The experimental group was exposed to the mixed approach, whereas the control group was exposed to single approach.

Before instruction, students in both groups were pretested. They took the same vocabulary test. Results of the independent sample T-test showed no significant differences between the pretest mean scores of the experimental and control groups, indicating no significant differences in vocabulary knowledge between the experimental and control groups at the beginning of the semester before the treatment began (T= 1.10, Df = 141, P<.27).

4. The Vocabulary Building Course

The vocabulary course was taught for 12 weeks. Students in the experimental and control groups studied the same textbook: *Vocabulary in Use: Pre-intermediate and Intermediate (3rd Edition), by Stuart Redman (2003).* The textbook consists of 100 lessons. Only 50 lessons were covered in class. The topics covered in class were: *Classroom language, prefixes, noun suffixes, adjective suffixes, nouns and verbs with the same form, compound nouns, compound adjectives, collocations, idioms and fixed expressions, verbs and adjectives followed by prepositions, preposition + noun, some functions, phrasal verbs (form, meaning, grammar and style), have and have got, make, do and take, give, keep, break, see, leave, catch and let, get (uses and expressions), go*

(uses and expressions), the senses, partitives, uncountable nouns and plural noun, the physical world, animals and insects, countries, nationalities and languages, the body and what it can do, around the home, the place where you live, money, physical injuries, clothes, food, cooking and restaurants, jobs, in the office, computers and the internet, and global problems.

Students in both groups did most of the vocabulary exercises in class. While doing the exercises, the author monitored their work and provided individual help. Only errors related to the rule or topic under study were highlighted. Feedback was provided on the presence and location of errors but no correct forms were provided. The students had to check the rules and examples in the book by themselves. Extra credit was given to students who could do all the items in an exercise correctly and within the designated time.

As for assessment, students in both groups were given two in-term tests and several pop-quizzes. The following skills were covered by the tests: Recognizing silent letter, recognizing hidden consonants, recognizing double letters, recognizing words with the same vowel but different pronunciation and words with different vowels but same pronunciation, identifying the part of speech, count/non-count, recognizing singular & plural forms, American vs British usage, word synonyms and antonyms, adding prefixes, suffixes, recognizing derivatives and compounds, idioms and collocations, capitalization, giving the English definition, giving the Arabic meaning, and using words, idioms and phrasal verbs in sentences. All the tests were graded and returned to the students with comments on strengths and weaknesses. Words of encouragement were given. Answers were always discussed in class.

5. Treatment

To help the students learn, retain, apply and relate word, the instructional approach focused on connecting the printed form of the word with its pronunciation (the hidden sounds, double & silent letters, and homophones), with its part of speech, singular or plural form, synonym or antonym, English & Arabic meanings, usage, component parts, previously-encountered words and others while presenting the new vocabulary items in each lesson. Categorization, association, and visualization skills and mnemonic approaches were emphasized. Out of class extensive reading and listening activities were also encouraged. Quizzes required the students to make the above-mentioned connections.

The following skills were emphasized: Pronunciation (recognizing silent letter, hidden consonants, double letters, words with the same vowel but different pronunciation and words with different vowels but same pronunciation, syllabication and stress); spelling changes and spelling variants; part of speech, count/non-count, singular & plural forms; American vs British usage; word synonyms and antonyms; English and Arabic meanings; word formation: prefixes, suffixes, derivatives and compounds; idioms and collocations; word families.

6. Posttesting

Before instruction, the students were pretested. The pretest consisted of questions covering the vocabulary skills and themes to be studied. At the end of the semester, the students took a 250-words vocabulary posttest that covered all of the vocabulary skills and topics studied throughout the semester: *(1) In each row, circle the word in which the underlined letters are pronounced differently (2) Circle the word in which –er is not a suffix; (3) Circle the abstract nouns only; (4) Write the silent letters in each word; (5) How are the underlined letters pronounced; (6) Change each word into an adjective; (7) Change each word into a noun; (8) Add a preposition or more; (9) Circle the compounds only; (10) Write the plural form; (11) Write the singular form; (12) Write the Past Participle form; (13) Give a synonym; (14) Write the name of the group; (15) Circle the nouns that are Uncountable; (16) Write the opposite; (17) Add a verb; (18) Give the Arabic meaning of each word; (19) Give the Arabic meaning of each phrase; (20) Complete the following sentences; (21) Give a brief meaning of each word or phrase in English; (22) Rewrite each sentence changing the underlined verb into a noun; (23) Give the American equivalent; (24) Use each word or phrase in a sentence; (25) Add an adjective or adverb to describe each word.* Most of the questions required production. The pre and posttests were blindly graded by the author. The students wrote their ID numbers instead of their names. An answer key was used. Questions were graded one at a time for all the students. Marks were deducted for spelling mistakes.

7. Test Validity and Reliability

The posttest is believed to have content validity as it aimed at assessing the students' achievement in vocabulary. The tasks required in the posttest were comparable to those covered in the book and practiced in class. In addition, the test instructions were phrased clearly and the examinee's task was defined. Concurrent validity of the posttest

was determined by establishing the relationship between the students' scores on the posttest and their course grade. The validity coefficient was .98. Concurrent validity was also determined by establishing the relationship between the students' scores on the posttest and their scores on the second in-term test. The validity coefficient for the vocabulary test was .89.

Since the author was the instructor and the scorer of the pre and posttests, estimates of inter-rater reliability were necessary. A 30% random sample of the pre and posttest papers was selected and double-scored. A colleague who holds a Ph.D. degree scored the pre and posttest samples. The scoring procedures were explained to her, and she followed the same scoring procedures and used the same answer key that the author utilized. The marks given by the rater were correlated with the author's. Inter-rater correlations was .99 for the posttest. Furthermore, examinee reliability was calculated using the Kuder-Richardson formula 21'. The examinee reliability coefficient for the posttest was .69.

8. Data Analysis

The pre and posttest raw scores were converted into percentages. The mean median, standard deviation, standard error and range were computed for the pre and posttest scores. To find out whether the students in the experimental group had made any progress as a result of the mixed vocabulary instruction, an independent T-test was computed using the pre and posttest mean scores.

9. Results and Discussion

Results of the analysis of the posttest scores of the experimental and control groups reported in Table (1) show that the typical EFL female freshman student in the experimental group scored higher on the posttest than the typical student in the control group (medians = 60.5% and 43.5% respectively). The experimental group's posttest mean score was also higher than that for the control group (means = 62.90 and 47.93 respectively) with large variations among students within each groups in their achievement score and hence cultural awareness (Experimental SD = 20.65 and control SD = 24.53).

Table (1)
Pre and Posttest Mean, Median, Standard Deviation, Standard Error and Range Scores for the Experimental and Control Groups

Test	Group	N	Mean	Median	SD	Std. Error Mean	Range
Pretest	Experimental	72	20.00	21	1.19	.19	0-40
	Control	71	18.48	19	1.25	.14	0-40
Posttest	Experimental	72	62.90	63	20.56	3.25	27-100
	Control	71	47.93	46	23.56	3.71	11-100

Results of the independent sample T-test results indicated significant differences at the .01 level between the experimental and control group posttest means scores in vocabulary acquisition ($T = 3.38$, $Df = 141$, $P < .002$), suggesting that achievement (vocabulary development) in the experimental group was higher than that in the control group as a result of using a mixed approach in vocabulary instruction.

10. Conclusion

Significant difference were found between the experimental and control groups in vocabulary achievement as measured by the posttest suggesting that achievement in experimental group improved as a result of exposure to the mixed approach. This means that use of mixed approach proved to be a powerful tool for improving students' achievement in vocabulary. The mixed approach raised the good and average student performance and the performance of the lowest-performing students as well. This finding is consistent with findings of prior studies using other types of mixed approaches in vocabulary instruction such as Dana & Rodriguez (1992). Dana & Rodriguez found that TOAST (test, organize, anchor, say, and test), a study system designed specifically for studying vocabulary, is more effective with sixth grade students than student-selected methods for both immediate and delayed retention.

Bazeli & Olle. (1995) discussed research findings regarding vocabulary instruction and suggested methods to develop vocabulary using visual aids. They pointed out a strong need to relate concrete visual experiences to vocabulary development, providing active, meaningful, and repeated word use. Visual methods for developing vocabulary that involve students actively taking part in their reading vocabulary development include using: interactive video; student illustration of vocabulary; computer software packages designed to develop reading skills; activities that involve visual perception; and graphic organizers, including story maps, collaborative rehearsal of new vocabulary, and student-made flash cards. The use of visuals, combined with cooperative learning groups, provides an effective environment for the development of vocabulary and reading comprehension.

Nation (2003) examines effective ways of building vocabulary among ESL learners. Discusses using word cards, studying word parts, and using a dictionary and highlights the keyword approach.

On-lai (1994) examined the effectiveness of two factors in second language vocabulary teaching: (1) presence or absence of a text; and (2) use of a variety of explanation types. The study's context was three 9th grade and one 10th grade class of ESL students in Hong Kong. All classes were taught by different teachers. Their classroom techniques for vocabulary instruction were videotaped and identified as nonverbal (use of objects, use of blackboard drawings, use of pictures, demonstrations, use of gestures) or verbal (use of synonyms, paraphrasing, exemplification, dictionary definition, use of affixes and word roots, L1 explanation, solicitation of L1 explanation from students). Each of the four classes was then given a different treatment for instruction of 10 vocabulary items: use of a text and multi-type explanations; text and single type of explanation; multi-type explanations without use of a text; and single explanation type without text. Comparison of pretest and posttest performance suggests that use of text is effective in helping learners abstract word meaning, but it was not clear whether single or multiple explanation types were more effective.

Finally, the present study recommends that mixed instruction be extended to other vocabulary courses and other college levels.

Regardless of the method chosen, it is crucial that students: demonstrate generalization abilities; be given time to learn new material; periodically review what they learn; and learn inductive reasoning strategies.

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