

How Word-focused Tasks May Assist Vocational College

Students' Vocabulary Acquisition

Hsiao-hui Yang

Department of Applied English

Abstract

Vocational college students generally encountered difficulty in learning English due to their low motivation and proficiency. English teachers keep thinking of how to increase students' motivation and improve their language ability. With the help of modern technology, the task-based CALL (computer assisted in language learning) has been proved to serve both purposes and been widely used in all areas of language learning. The purpose of this study is to examine how use of word-focused tasks may help to promote students' vocabulary learning and retention in a private vocational college. The participants, divided into one control group and two experimental groups, are freshmen in an applied English department in a vocational college. The data sources were the pretest, the two posttests and students' reflections. Overall, the three groups experienced important gains in acquiring new words, both receptively and productively. The descriptive statistics showed that the two Experimental groups outperformed Control group in posttests and delayed posttests. Both groups attained higher means than the Control group. It was observed from the study that under a word-focused task, learners tried to figure lexical meaning through interacting with the computer. They were indeed engaging in a process of making new words comprehensible, which facilitated their acquisition process. This study shows that both word-focused tasks and classroom instruction seem to be equally effective in promoting vocabulary acquisition.

Keywords: computer assisted language learning, word-focused task, vocabulary acquisition, retention

單字專注任務如何輔助技專生字彙習得

楊小慧

應用英語系 講師

摘要

技專院校學生通常因學習動機低落而影響其學習英語能力表現，使得教師持續思考如何以不同的方式教導學生。近來由於科技進步，任務導向活動與電腦輔助學習應用已廣泛被使用在英語教學上。本研究目的在以教師自行設計字彙專注任務探討字彙習得的過程：參與學生分為一個控制組與兩個實驗組，分析資料來源為一次前測與兩次後測成績，加上學生個人成果反思紀錄。實驗結果顯示，三組同學在後測成績上均較前測進步，而統計結果亦顯示兩個實驗組同學均較控制組表現更好，均得到較高成績。此結果可說明字彙專注任務可應用在字彙教學上，提供技專生另一種有效的學習方式。

關鍵字：電腦輔助語言學習，單字專注任務，字彙習得，記憶力

I. INTRODUCTION

According to a research done by LTTC in 2003, vocational college students generally encountered difficulty in learning English due to their low motivation and proficiency. Although the average score in 2003 was significantly higher than that in 2000 and 2001 ($p < 0.01$), their pass rate of GEPT beginning level under investigation was 18.1% depending on different grades. Such a low percent of pass rate made English teachers keep thinking of how to increase students' motivation and improve their language ability at the same time. With the help of modern technology, the task-based CALL (computer assisted in language learning) has been proved to serve both purposes and been widely used in all areas of language learning. The purpose of this study is to examine how use of computers may help to promote students' vocabulary learning and retention in a private vocational college. It was agreed that teachers usually start a class by instructing basic skills, such as vocabulary learning method. A common learning situation in a class of low language competence is that most students lack of vocabulary size and retention. By using relevant word-focused tasks, this study aims to provide teachers with an option of facilitating and sustaining students' lexical knowledge in an effective way.

II. LITERATURE REVIEW

A. Vocabulary acquisition

Vocabulary acquisition has been regarded as a complex and incremental process since the lexical knowledge is made up of different kinds of word knowledge and not all of it can be acquired simultaneously (Schmitt, 2000). This gradual learning sequence led researchers toward proposing different constructs from different fields in order to depict the process of lexical learning. The major assumptions were derived from theories of psychology and second language acquisition (SLA). The Depth-of-Processing (DOP) hypothesis from psychology states that deeper analysis of a stimulus or a greater degree of semantic involvement can lead to better long-term memory retention (Segler, Pain & Sorace, 2002). Henriksen further proposed three dimensions to understand lexical competence: a "partial-precise" dimension, a "depth of knowledge" dimension and a "receptive-productive" dimension. He regarded vocabulary development as an ongoing process which he called it a "semantization¹ process". Underlying the learning condition were two important elements: item-learning and system changing (Henriksen, 1999). When learners acquired a new word, they were dealing with mapping meaning onto form and building the network at the same time.

¹ The term *semantization* has been used by Beheydt (1987) to describe vocabulary acquisition process and emphasize the semantic nature of the process.

Besides concepts adopted psychology, SLA researchers investigated the role of input and output in facilitating acquisition. Ellis and He studied whether modified input or output affected students' incidental learning of words. The participants' performance was assessed based on their score in comprehension, picture-matching (word recognition) and picture-labeling (word production) tests. The results showed that the negotiated output group outscored than the other two input groups. However, the authors were not confident in concluding that modified output worked better than modified input because of the difficulty in contriving conditions that distinguished modified input from output. Yet, they agreed that a better condition for incidental vocabulary learning lied in the opportunities for learners to use and negotiate new vocabulary items. The finding was consistent with Long's Interaction Hypothesis that negotiation of meaning can induce learners to modify their own output and, at the same time, may promote acquisition (Gonzalez-Lloret, 2002).

B. Use of task and computer on vocabulary acquisition

What researchers have in common to facilitate vocabulary learning is to increase deeper processing. Some researchers suggested that a mixed approach (explicit and incidental learning) were necessary (Schmitt, 2000), others focused on type of input and output (Ellis and He, 1999), still others required use of computer and multimedia (Gonzalez-Lloret, 2002; de la Fuente, 2003; Segler, Pain & Sorace, 2002; Duquette & Renie, 1998).

Based on DOP hypothesis in psychology and Interaction Hypothesis in SLA, it was believed that a mixed approach (explicit and incidental learning) was likely to promote vocabulary learning (Schmitt, 2000; Duquette & Renie, 1998). Use of tasks has been successful in many learning situation because it is capable of engaging learners in a better context for activating the learning process. There are advantages of applying task use in lexical learning. First, word-focused tasks can be designed for encourage explicit and incidental learning while asking for students' output in vocabulary acquisition. Second, researchers were criticized as focusing on the form-meaning mapping process instead of learners' ongoing process of constructing and reorganizing their interlanguage semantic networks (Henriksen, 1999). The well-designed tasks can serve the purpose by allowing learners more time dealing with reorganizing the semantic networks in addition to acquiring the new word forms and meanings. For example, tasks were used to classify the stages of learning words. According to Aitchison, learners are faced with three different but related tasks: labeling, packaging and network building (Aitchison, 1994). Labeling refers to the "mapping" process, discovering which sequence of sound can be used as a label for one entity. Packaging aims to categorize things under one label. It attempts to narrow down and expand the range of meaning or reference of a word. The last task, network building, is more demanding in the sense of discovering intentional links between words or organizing words into semantic networks.

Researchers have reached consensus on the effectiveness of task and multimedia use to achieve language competence. Recent research was focused on differentiating whether different task types, time spent on each task had impact on L2 learning.

There have been studies integrating task effect and computer use in vocabulary acquisition. Words had better occur frequently and be presented in specific contexts. (Duquette & Renie, 1998). A multimedia environment can serve the purpose of providing contexts since it is possible to repeat words, rules, and to adopt a mixed approach through the technology. Hill and Laufer (2003) conducted a computer-based study comparing the effect of task types on incidental vocabulary acquisition. Ninety-six ESL students were asked to perform one of the three tasks after reading a text presented on the computer with twelve target words. The results of posttest and delayed posttest (one week later) showed that students with the two form-oriented tasks performed better than those with the meaning-oriented task. Among the three task types, the form-oriented production task yielded the highest scores than the other two tasks (form-oriented comprehension task and message-oriented task). Another important finding was that there was no significant difference in time-on-task, but there was a significant difference in the amount of dictionary activity on the computer (English Meaning, Hear Word, Chinese Meaning, Extra Information) and the three tasks. Hill and Laufer concluded that it was the amount of word-related activity that the task induced determined the effectiveness for vocabulary acquisition. One limitation of the study was that the authors didn't consider the memory effect on the form-oriented production task. It was said in the study that a synonym or paraphrase of the target word was provided and the students had to choose its corresponding word form from four options (consisting of the correct target word and three distractors selected from the target words). Students might remember or memorize the definitions of the target word from the dictionary activity without comprehending the target word. It was more like a form-meaning matching exercise rather than a "production" task. Since task design could influence students' performance to a great degree, the task used for the present study would be based on Hill and Laufer's (2003) three components of a task (need, search and evaluation) and Aitchison's (1997) proposed stages on word development.

C. Research questions

- (1) Are there any significant differences in posttests and delayed posttests between the control group and experimental groups?
- (2) What are teachers' and students' perceptions toward computer use in the classroom?

III. METHOD

A. Participants

The participants are freshmen in an applied English department in a vocational college. There were three classes consisting of 76 students in the study. Two classes were taught by one

teacher and assigned as Control group and Experiment I group. The author of the study taught Experiment II group. As for students' level, many of the participants were considered as "false beginners" judging from their English score in the entrance exam. Though participants' major is English, at least half of the class didn't major in English before college. Their background varied in hospitality, business, information processing and electronics. Their motivation to learn English was also diverse. However, most students are familiar with computer use because they had some working experiences relying on their computer skills.

B. Target words

Twenty-five target words were selected from a fifty-word-recognition pilot test. The test was to make sure that the target words selected were unknown to the participants. The twenty-five target words are listed following an alphabetical order: *acclaim, authentic, ceiling, cement, ceremony, content, critical, cuisine, eagerly, gather, impressed, ingredient, instructor, luxury, measure, muscular, occasion, open-air, release, ruin skyrocket, stall, stove, surface, tremendously*

C. Task-based CALL: Word-focused Task

The word-focused task was designed following Hill and Laufer's (2003) three components of a task (need, search and evaluation) and Aitchison's (1997) proposed stages on word development (Table 1). Instructions of the task with details were in Appendix A.

Table 1: The treatment: Word-focused task

Word-focused task	Aitchison's lexical development	Hill & Laufer's task components
I. Hot Potato Exercise (15 minutes)	Labeling , attention and noticing the target words	Need
II. On-line dictionary search (10 minutes)	Packaging , promote deeper processing	Search
III. Create a story using the target words (25 minutes)	Network building	Evaluation

D. Procedure

The quasi-experiment contained a pretest, an immediate posttest and a delayed posttest. One week before the treatment, the Experimental groups were instructed on Hot Potato exercise and on-line dictionary use in the lab.

1. Pretest

There were two reasons for the pretest. The first was to exclude students who knew more than one target word. The other was to test whether there's significant difference between the Control and Experimental groups before the treatment.

2. Immediate posttest

After finishing the word-focused task, the students were asked to take an immediate posttest without any notice. Students were asked to write the meaning of each target word either in English or Chinese. Its purpose was to test students' incidental vocabulary knowledge in recalling the word meaning in L1 or L2. To For qualitative analyses, students in the Experimental groups had to write reflections of the task after the posttest.

3. Delayed posttest (Appendix B)

Four weeks after the posttest, all students took a delayed posttest which had a different test type as that in the posttest. Instead of focusing on word-recognition knowledge (as shown in the immediate posttest), the delayed posttest used "multiple choice" to assess word-production knowledge and retention. Furthermore, to explore the role of computer use in testing, the Control and Experimental group had different access toward the delayed posttest. The former completed the traditional paper-and-pencil test while the latter took an online test.

IV. RESULT

The three classes were not significantly different from one another ($p > .05$) as the results shown from the pretest. The results are provided in Table 1 and Table 2.

Table 1. Mean and SD of pretest

	Min	Max	Mean	SD
Control (N=26)	3	26	13	7
Experiment I (N=26)	0	30	11.8	8.1
Experiment II (N=24)	2	30	13.5	7

Table 2. Results of independent-sample *t* test (pretest)

Group	<i>t</i> value	df	<i>p</i>
Control-Experiment I	0	51	1
Control-Experiment II	0.12	50	0.9

The mean scores and standard deviations (SD) in posttest and delayed posttest for the three groups are provided in Table 3. In the posttest, Experimental I yielded the highest score, followed by Experimental II and Control. However, in the delayed posttest aiming to test production knowledge and word retention, Experimental II produced the highest score, followed by Experimental I and Control. Between the two tests, the Control group made the most progress (+18.6), followed by Experiment II (+17.4) and Experiment I (2.4).

Table 3. Results of posttest and delayed posttest

Group	Min		Max		Mean		SD	
	Posttest	Delayed posttest						
Control (N=26)	10	32	94	96	40.5	59.1	24	16.4
Experiment I (N=26)	14	36	96	100	65.3	67.7	24.5	15.2
Experiment II (N=24)	22	28	84	100	52.7	70.1	16.7	19.8

The first research question addressed whether there's significant difference between two posttests among three groups. There were statistically significant changes in the two posttests ($t=3.2$ $*p<.001$; $t=2.1$ $*p<.02$). Results are shown in Table 4 and Table 5.

Table 4. Results of independent-sample *t* test (posttest)

Group	<i>t</i> value	df	<i>p</i>
Control-Experiment I	3.2	53	*.001
Control-Experiment II	2.1	51	*.02

Table 5. Results of independent-sample *t* test (delayed posttests)

Group	<i>t</i> value	df	<i>p</i>
Control-Experiment I	1.8	51	*.03
Control-Experiment II	2.2	50	*.02

The qualitative data from students' reflection showed that some students were satisfied with computer use and assistance in vocabulary learning. Some students reported that they seemed to concentrate on learning while they did the on-line exercise. Others could never believe that they could read and use English-to-English dictionary before the study. One student replied when asked about how computer may help:

“I found it easier for me to remember the word when I found relevant picture corresponding to the word. I searched under Google and found great pictures for the target words, such as *cement*, *ceremony* and *stall*.”

V. DISCUSSION

The data sources were the pretest, the two posttests and students' reflections. Overall, the three groups experienced important gains in acquiring new words, both receptively and

productively. The descriptive statistics showed that the two Experimental groups outperformed Control group in posttests and delayed posttests. Both groups attained higher means than the Control group.

It was assumed that students could have forgot a lot of the target items in the delayed posttest. However, a surprising finding was that the Control group and Experimental II seemed successfully retained the words and achieved higher score than those in the posttest. One possible reason was that the delayed posttest was taken only one week before the school's final exam. Some students could have reviewed the words for the final. As for the significant gain in the control group, there are two possible reasons. First, students could have encountered the pressure of the final exam and prepared for it and this was also found in De La Fuente's study. Second, the purpose of the study was not to downgrade classroom instruction but to suggest an option of vocabulary instruction through combining task and computer use. The present finding was also consistent with what Ellis and He pointed out in their study that the traditional teacher-controlled instruction was successful as well in promoting vocabulary learning (1999).

The Hot Potatoes program, which consists of modules for creating six different types of web-based exercise, is an excellent resource for creating on-line practice. Based on teachers' interview data, the new technology has created a totally new learning context and given different roles onto them. That is, teachers serve as a monitor or facilitator which is more likely to promote students' independent learning in the future.

VI. CONCLUSION

It was observed from the study that under a word-focused task, learners tried to figure lexical meaning through interacting with the computer. They were indeed engaging in a process of making new words comprehensible, which facilitated their acquisition process. This study shows that both word-focused tasks and classroom instruction seem to be equally effective in promoting vocabulary acquisition. Future study may include a longitudinal study, incorporating more participants and explore how as well as a variety of different task components (Hot Potato exercise, on-line dictionary use and interaction during task) may facilitate in learning. Furthermore, the word-focused task demands different learning strategies. It will be meaningful to discover what kinds of strategies are involved in the task and their relationship with lexical competence.

The effectiveness of the tasks depends on the use teachers make of the program. Teachers should remember good word-focused activities are that they focus on strengthening the relationship between word form and meaning. The qualitative data from the study suggested that students seemed more motivated to learn after the experiment as long as they were given a variety of adequate learning resources. This study hopes to provide insights about the application of task-based CALL for vocational teachers under the pressure of dealing with students' low motivation and proficiency simultaneously.

Reference

1. Bygate, M. (1999). Task as context for the framing, reframing and unframing of language. *System*, 27, 33-48.
2. Chapelle, C. A. (1998). Multimedia CALL: Lessons to be learned from research on instructed LA. *Language Learning and Technology*, 2(1), 22-34.
3. Duquette, L. & Renie, D. (1998). The evaluation of vocabulary acquisition when learning French as a second language in multimedia environment. *Computer Assisted Language Learning*, 11(1), 3-34.
4. Egbert, J. & Hanson-Smith, E. (1999). CALL Environments: Research, practices and critical issues. Virginia: TESOL, Inc.
5. Ellis, R. (1995). Modified oral input and the acquisition of word meanings. *Applied Linguistics*, 16(4), 409-35.
6. Ellis, R. & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies in Second Language Acquisition*, 21, 285-301.
7. Fuente, Maria, J. (2003). Is SLA integrationist theory relevant to CALL? A study on the effects of computer-mediated interaction in L2 vocabulary acquisition. *Computer Assisted Language Learning*, 16(1), 47-81.
8. Gonzalez-Lloret, M. (2002). Designing task-based CALL to promote interaction: EN Busca De Esmeraldas. *Language Learning and Technology*, 7(1), 86-104.
9. Hegelheimer, V. & Tower, D. Using CALL in the classroom: analyzing student interactions in an authentic classroom. *System*, 32, 185-205.
10. Henriksen, B. (1999). Three dimensions of vocabulary development. *Studies in Second Language Acquisition*, 21, 303-317.
11. Hill, M. & Laufer, B. (2003). Type of task, time-on-task and electronic dictionaries in incidental vocabulary acquisition. *IRAL*, 41, 87-106.
12. Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W.C. Ritchie & T.K. Bathia (Eds.), *Handbook of research on second language* (pp. 413-468). San Diego, CA: Academic Press.
13. Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge University Press, Cambridge, United Kingdom.
14. Tsou, W., Wang, W., & Li, H. (2002). How computers facilitate English foreign language learners acquire English abstract words. *Computers & Education*, 39, 415-428.

Appendix A

Word-focused task

I. Hot potato exercise

II. On-line dictionary search

If you still don't understand the meanings of the word in the previous Jmatch and Jcross exercise, feel free to use the on-line dictionary for further search.

III. Story-telling: use the target words to create a story in your group. You need to present the story to the class in PDF or GIF files.

Target words: *cement, acclaim, stall, authentic, instructor, father, ruin, skyrocket, tremendously, critical admit, ceiling, ceremony, content, cuisine, eagerly, fame, impress, ingredient, measure, muscular, occasion, open-air, surface, stove*

1. Identify the words

Verbs	Nouns	Adjectives	Adverbs

2. Create a story using the target words

Appendix B

Delayed posttest

1. They were late so the dinner was _____.
2. We _____ around the workstation and watched the chef make the dish.
3. Tom _____ opened his birthday present because his father promised him a MP3.
4. We all enjoyed ourselves _____ at the party.
 - (A) ruined
 - (B) gathered
 - (C) tremendously
 - (D) eagerly
5. The teacher was _____ with students' progress this week.
6. The report is highly _____ of safety standards at the factory.
7. He lifted weights (舉重) and became more _____ than he was before.
8. I really want to learn how to make _____ Italian food.
 - (A) authentic
 - (B) critical
 - (C) muscular
 - (D) impressed
9. She seems happy and _____ with school life.
10. I like to go to an _____ swimming pool because of the fresh air.
11. The traditional Chinese temple has a high _____.
12. I've left some soup on the _____ for you.
 - (A) content
 - (B) open-air
 - (C) stove
 - (D) ceiling
13. Vic Chou _____ his second album a few months ago.

14. The famous group “F4” _____ to fame after their appearance in the soap opera.

15. We just _____ the bed to make sure it fitted in this room.

16. The group’s first album _____ F4’s popularity in Asia.

- (A) cemented
- (B) skyrocketed
- (C) released
- (D) measured

17. The list of _____ included 250g of sugar for the cake.

18. Oil covered the _____ of water.

19. The graduation _____ will be held on Jun 12 this year.

20. After winning public _____ at home, the show moved overseas.

- (A) ceremony
- (B) acclaim
- (C) surface
- (D) ingredients

21. At the wedding, he sang a special song specially written for the _____.

22. The _____ is piled with fruit and vegetable in the market.

23. My family like Japanese _____ very much.

24. He has been a swimming _____ for over 10 years.

- (A) instructor
- (B) occasion
- (C) stall
- (D) cuisine

25. As the _____ begins, several dancers come onstage.

- (A) luxury
- (B) performance
- (C) assistant
- (D) creator