Teaching at the Workplace: Does it Boost Learners' ESP Vocabulary Knowledge?

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Abstract

The main incentive behind this study was to investigate the effect of teaching ESP courses at the workplace on ESP terminologies promotion. In this respect the question of the current study is as follows: Does teaching ESP courses at the workplace enhance learners' ESP terminologies?

Accordingly, participants of the study that were chemical students were selected from among those who passed general English and English as a pre-requisite courses and randomly assigned to experimental and control groups. For their selection a standardized language proficiency test (Intermediate TOEFL Test Practices by Folse, 1997) was administered. In fact, experimental group was taught an ESP course in workplace while for control group this had been done

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in academic environment. At the termination of the study, the result of the study was compared through t-test. The findings revealed that in workplace ESP, terminologies can be learnt better and this is because they were exposed to ESP vocabulary in real situation.

Introduction

It is obvious for most second or foreign language learners that the acquisition of vocabulary is a fundamental component in all their courses. A good mastery of vocabulary is essential for both ESL and EFL learners, especially for those who seek to learn English for specific purposes. According to Nation and Coxhead (2001), it is wise to direct vocabulary learning to more specialized areas when learners have mastered the 2000-3000 words useful in general situations in English. In order to have easy access to specialized uses of vocabulary, learners need to learn specialized vocabulary and their use. Language learning should not be limited to only textbook and classroom activities. It is believed that language acquisition would be most effectively facilitated if it could be embedded with the learners' field of study or work. In the context of ESP, students need to practice using the vocabulary of their chosen field of study and this can best happen at the workplace.

Since English become the language of multicultural world and plays a key role in human lives, it is considered to be an inevitable part of general and specific education for people all over the world. Teaching ESP at the workplace can be a good way which results in the promotion of ESP terminology. In the workplace learners are exposed to the real use of technical words and in this way they can produce a picture of words in their mind. In the academic environment, students just memorize ESP vocabulary and they don't know how to use them in their

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vocational environment. So, teaching ESP words at the workplace can solve this problem and pave the way for learners to learn and use words better and easier.

Work Place Learning

The recognition that learning occurs within the workplace and that it is necessary for the development of working knowledge and skills is not new. However, in recent years an interest among employers, researchers and policy makers in what comprises learning and how it can be facilitated within workplaces has increased, and there are now many areas of research in which learning at and through work is a central concern.

Reeve & Gallacher (1999) argue that workplace learning is seen as a flexible form of learning which enables employees to engage in the regular processes of up-dating and continuing professional development which have been increasingly emphasized. Moreover, in so far as the learning is work-based, it is also seen as facilitating forms of learning. Boud and Garrick (1999) state that workplace has become a site of learning associated with two quite different purposes. The first is the development of the enterprise through contribution to production; the second is the development of individuals through contribution to knowledge and skills.

Vocabulary Learning in Work Places

The effectiveness of vocabulary learning methods and instructional techniques has been recognized as an important element in L1 and L2 pedagogy. Atay & Ozbulgan (2007) claimed that learners need to be given explicit instruction of

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vocabulary strategy in order to facilitate their awareness of vocabulary learning strategies that they can use to learn their own outside the classroom.

Therefore, it can be said that teaching ESP at the workplace can pave the way for learners to master specialized vocabulary related to their field of study much better and easier. The reason is they learn them in a situation in which they must be used in the future occupational opportunities.

Review of Literature

What is ESP?

English for Specific Purposes (ESP) is a branch of applied linguistics that focuses on relating the teaching and learning process to learners' needs. Widdowson (1981), a linguist and an early pioneer of the approach, describes the general concept of ESP by stating that "if a group of learners' needs for a language can be accurately specified, then this specification can be used to determine the content of a language program that will meet these needs."

According to Hutchinson and Waters (1987), "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning."

According to Hall (2001), the first step in designing instruction for the communicative approach to language teaching is to conduct a needs analysis. Thus, needs analysis aims at identifying the particular communicative activities that a particular group of learners is expected to participate in as users of the target language. Research findings during the past decade have generally supported the notion that work-based learning activities can invigorate the

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learning process and act as a positive force for students in both academic and career and technical education programs.

Role of Learning Needs in the Syllabus

Copa and Wolff (2002) found that learning needs to: (a) be progressive in achieving external standards, (b) engage learners in relevant and challenging experiences, (c) be learner-centered, (d) use real-life experiences and be project-oriented, (e) integrate academic and career and technical education, (f) use and closely coordinate non-school and school learning settings, (g) use multiple and continuous forms of assessment to improve learning, and (h) create and nurture learning communities.

Real world tasks as defined by Nunan (1989) are those which "require learners to approximate, in class, the sorts of behaviors required of them in the world beyond the classroom". One of the main goals for an applied English program at a five-year college is to prepare students with appropriate English proficiency so as to help them become competent communicators in their future workplace.

Work-Based Learning

Work-based learning is not a new trend in education. In fact, what we term vocational and technical education was the premise of John Dewey's assertions during the late 19th and early 20th century. Dewey firmly believed that life and learning should be uniquely integrated (Dewey, 1916). He also believed that the best way to do this is to integrate the working world with education curriculum.

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Work-based university learning has been defined by Margham (1997) as: That learning which … utilizes opportunities, resources and experience in the workplace. It will, in general, have outcomes relevant to the nature and purpose of the workplace. A workplace needs analysis describes the entire context in which English is used.

Hutchinson & Waters (1992) argue that if learners, sponsors, and teachers know why learners need English, that awareness will have an influence on what will be accepted as reasonable content in the language course and what potential can be exploited.

Needs Analysis as the Basis for ESP

The ESP approach uses the needs analysis framework as the main tool to define learners' needs in a specific field because the awareness is more recognizable in a specific target situation representing a "real-life-situation". In an academic setting, the main concern of learners is the acquisition of knowledge related to their present field of study or future workplace.

Swail's (2000) recent study of data from the College Board's student descriptive questionnaire found that a higher percentage of students with work-based learning experiences in high school had a B or better Grade Point Average (GPA) in high school compared to all SAT test takers, even though they were more likely to be from less-advantaged backgrounds. Kampits and Swail (2001) found that 80 percent of college students surveyed in their study indicated they learn better through projects and real-world applications than through classroom and textbook instruction only, and that 83 percent planned to participate in work-based learning experiences during college.

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Chin et al (2000) found that students, through work-based learning activities, acquire "knowledge and skills in particular occupations; providing career exploration and planning; learning all aspects of an industry; improving personal and social competence related to work in general; and enhancing students' academic achievement and motivation through contextual learning."

The Main Question for This Study

Accordingly, the main question of this study can be stated as follow:

Q: Does teaching ESP course at the workplace enhance learners' ESP terminology?

From this question the following null hypothesis were found:
H: Teaching ESP at the workplace would not significantly promote learner' ESP vocabulary knowledge.

Research Methodology
A. Participants

The participants of current study were 40 students from Mahshahr Islamic Azad University majoring in chemistry who had passed general English and pre-requisite English. They were enrolled in ESP course. These learners have been chosen among from 90 students through administrating of a standardized language proficiency test (Intermediate TOEFL Test Practices by Folse, 1997). The aim behind his test was to homogenize students to enter the study, and then

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they were randomly divided into experimental and control groups. Each group consisted of an equal number, 15 students in each one.

B. Procedure

As mentioned before, two groups of students with the same range of language proficiency were selected from the chemistry department of Islamic Azad University, Mahshahr Branch, Iran. This was carried out through the administration of standardized language proficiency test (Intermediate TOEFL Test Practices by Folse, 1997). It was accounted as a pre-test. Then, 40 learners with mean of ± 1SD were identified as the participants. They were randomly assigned to experimental and control groups.

Each class consisted of 20 learners. On the first day of the experiment, the instructor talked about the importance of ESP vocabulary knowledge in forthcoming vocational opportunities and the importance role that they play in their lives progress. Both classes were taught by the same instructor using the same teaching material entitled *Scientific English for chemistry students* (Moghimi & Mirzaei,2010) with the same teaching schedule of instruction, except that in the experimental group, the students were taught ESP course at Mahshahr petrochemical company, Razi complex, while the latter, control group, was taught at the university, Mahshahr Branch.

The course book focuses on different topics related to English in the chemistry sector. Only the concrete words or those which are easy to make a mental imagery were selected. Classes were conducted two hours a week and the study continued for thirteen weeks.

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At the end of the experiment a post-test on ESP terminologies was administered to both of the groups. It was aimed at measuring the technical vocabulary knowledge of the participants to see if the treatment had made any difference in the ESP terminologies promotion of the two groups.

The post- test items were ESP vocabulary which was selected from the ESP book that was used as material of instruction. It had 30 multiple choice items on ESP terminology. Subjects were required to answer the questions in 25 minutes. The results obtained through post-test were analyzed and interpreted through Levene's t-test. The goal was to determine whether teaching ESP at workplace would enhance participants' ESP vocabulary knowledge.

C. Instrumentation

The first testing instrument was a standard proficiency test. This test aimed at controlling the proficiency level of the subjects.

The second material that all participants used was a course book entitled *English for chemistry student* (Moghimi & Mirzaei, 2010).

Thirdly, a post-test was administered to both groups so as to examine their knowledge of ESP vocabulary after the treatment in workplace and academic environment.

Data Analysis

With the use of the ESP vocabulary knowledge test scores from all the participants, the mean was first computed for the two groups. The preliminary

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descriptive statistics for means was examined to see if they differed from one another. Furthermore, in order to find out if the difference among the means will be large enough to be statistically significant, Levene's t-test was performed to see whether the difference of ESP vocabulary posttest sores between the experimental and control groups existed.

Results and Discussion

The preliminary descriptive statistics for the ESP vocabulary knowledge test appears in Table 1.

Table 1 Descriptive statistics of posttest for the experimental and control groups

Groups	Test	N	Mean	SD	SEM
Experimental	Posttest	20	25.97	2.95	0.54
Control	Posttest	20	21.73	3.56	0.65

As displayed in Table 1, experimental group's performance in the posttest was better than those in the control group. It was also revealed that after the instructional treatment, the mean of the posttest scores for experimental group was 25.97, while for the control group it was 21.73. In the case of SD, for the experimental group, it was 2.95, whereas that of the control group was 3.56. So, the findings suggest that teaching ESP vocabulary in workplace involved more beneficial effects than teaching ESP vocabulary at the academic environment.

Comparative Effectiveness between Experimental and Control Groups after the Treatment

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Table 2 Results of Levene's t-test between Experimental and Control groups' scores

Groups	Test	N	Mean	Mean Difference	SD	t	df	p
Experimental	Posttest	20	25.97		2.95	5.0157	58	0.0001
Control	Posttest	20	21.73	4.24	3.56			

*Significant at .05

In order to compare the effectiveness of the instruction in workplace on ESP vocabulary leaning , Levene's t-test demonstrated in Table 2 indicated that the mean difference between the experimental and control groups' scores measured at the time of posttest was significant (t = 5.0157, p<0.0001). The mean difference between the experimental group (M=25.97) and control group (M=21.73) was 4.24.

This indicates that the experimental group who were under the treatment at the workplace gained more ESP vocabulary than the control group that were under the instruction at the academic environment. Therefore, it can be claimed that this difference is due to the kind of instructional environment where the experimental group was taught there and this gives further evidence for rejecting the null hypothesis.

Conclusion

This study aimed at investigating the effect of teaching ESP at the workplace on ESP terminologies promotion. To this end, the following question was under consideration:

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Does teaching ESP course at the workplace enhance learners' ESP terminologies?

To perform this research, subjects were selected on the basis of standardized language proficiency test. Then, they were randomly put in one control group and one experimental group and were assigned to one of the two following instructional conditions:

Experimental group was taught the language at the workplace, while Control group was taught in the academic environment. For data analysis, Levene's t-test was used. The calculated t-test proved that ESP vocabulary can be learnt better at the workplace. The experimental group which was exposed to ESP words at the real situation in the workplace, gained considerable amount of vocabulary than the control group. So, the computation and analysis of the T-test provided us with the judgment to reject the null hypothesis of this study which stated that teaching ESP at the workplace would not significantly promote learners' ESP vocabulary knowledge.

Results of this study indicated that teaching ESP courses at the workplace might become a useful way for students to improve and facilitate their learning of ESP words.

Based on the findings, one concludes that teaching ESP at the workplace has much influence on the learning of ESP terminology. The reason is that in the workplace they are exposed to technical words in real situations. Therefore, they have an image of each word in their mind and learn how to utilize words in sectors in which they must be used.

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Pedagogical Implication

The current study may provide some support for the idea that teaching ESP at the workplace can have powerful effects on the learning of ESP terminology. Teaching ESP at the workplace can boost the students' interest and help them to construct mental image of words in their mind. Findings of this research paved the way for the acceptance of this belief. The major implication to be drawn from this research is that students need to learn technical words in a real situation where they must use them. So, the role of ESP syllabus designers is to provide conditions where ESP courses will be taught and where they must be used.

Suggestion for further research

This study aimed to answer just one question: Does teaching ESP course at the workplace enhance learners' ESP terminology?

However, many other questions may be raised as the follows:
1. In this study, only chemistry students were involved. It is suggested that learners of other majors participate in further studies.
2. The participants in this study were all male learners. Thus, another study can investigate female students' performance in workplace.

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