Using Online Instruction in English for Art Education

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Abstract

Technology is not currently used in ESP classrooms at the College of Home Economics. Therefore an attempt was made to use online learning in ESP instruction from home, in addition to traditional classroom instruction. Comparisons of pre- and posttest scores of ten graduate students revealed significant differences in students' achievement. Results showed that in learning environments where technology is unavailable to ESP students and instructors, use of technology from home and even as a supplement to classroom techniques helps motivate ESP graduate students and enhance their mastery of English.

1. Background

Although Arabic is the medium of instruction at the College of Home Economics (CHE) in Riyadh, Saudi Arabia, graduate students majoring in art education at CHE need to be proficient in English to be able to read specialized reference materials in their major area of study, and need to locate information in English resources such as journal articles, reports, dissertations and reference books for their courses, assignments, term papers and theses. For those reasons, graduate students majoring in art education at CHE are required to take an English-for-Specific-Purposes (ESP) course in the first semester of the doctoral program. In Spring 2004, the author was in charge of designing and teaching this ESP course to Saudi female doctoral

students majoring in art education at CHE for 12 weeks.

Due to the latest advancements in information and communication technology, many forms of computer-mediated communication (CMC) such as interactive computer messages (E-messages), electronic mail (E-mail); online forums, and computer conferencing are being used in EFL/ESL instruction, in addition to a plethora of websites for teaching language skills, grammar, vocabulary, spelling, literature and so on.

The integration of technology in the teaching of ESP has been the focus of several research projects in various countries around the world. For example, Dahlman and Rilling (2001) described a distance learning course in Finland where technology was integrated into instruction to develop students' English through a variety of real-world language tasks. Distance learning was combined with traditional classroom instruction in an advanced EFL course for teachers, as part of an 8-week summer program at a Finnish university. Moreover, Goertzen and Howard (1995) developed a computer software to teach EFL skills for medical diagnosis. Their report describes the overall design of the courseware, hardware used, stages of development (preliminary planning, choice of authoring software, structuring and creation of the activity, graphics and sound, programming), planned improvements, problems and issues encountered, piloting with five learners, and time requirements for software development. However, online courses were not integrated into any of the projects that teach ESP to graduate and undergraduate students. A review of the ESP literature in the ERIC database showed that studies that investigated the effect of integrating online course in ESP classrooms on students' achievement are lacking. Therefore, an attempt was made by the author to use an online course from home as a supplement to classroom instruction. The aims of the present study were to find out whether the integration of an online learning component in ESP instruction significantly improves graduate students' achievement in ESP and whether the frequency of participating in the online course correlated with their achievement level, and whether online instruction had any effect on students' attitudes.

2. Participants

Ten female graduate students participated in the study. They were all art education majors and were in their first semester of the doctoral program in art education. They were enrolled in an English for Art Education course which the author taught for two hours a week, in partial fulfillment of the Ph.D. requirements. The students were concurrently enrolled in three art courses. All the subjects were working as lecturers at the Art Education Department, where they taught art courses to undergraduate students. They were all Saudi, and were all native

speakers of Arabic. Their median age was 32 years with a range of 28-36 years. They all had 6 years of EFL instruction in grades 6-12, and two semesters of English at the B.A. and M.A. levels.

3. Identifying Graduate Students' Needs

The first day of classes, the students' English language needs were assessed by a needs assessment questionnaire which consisted of the following questions: *(A) For what purposes do you need English while studying? (B) For what purposes do you need English after you graduate? (C) For what Purposes do you need to use the internet while taking your Ph.D. courses and writing your thesis? (D) For what purposes will you be using the internet after you graduate? (E) What kind of information would you like to locate in the internet?* Students' responses were tallied and their language needs were identified. It was found that all the students needed to learn English to be able to read specialized materials in English in their major area of study during the doctoral program and after graduation and to be able to translate the information that they need from English into Arabic.

4. The ESP Program

On the basis of the students' language needs, and their proficiency level in English, an ESP course was designed (see Procedures Section for the pretest). The course had four components: (A) a reading comprehension component, (B) a specialized vocabulary building component (C) a translation component. This study will focus on describing how the online course was integrated into in-class instruction and its effect on achievement and attitudes.

5. Online Instruction

In addition to in-class instruction, the students used an online course with Nicenet. They used their PC's and the Internet from home as the Internet was inaccessible from the CHE campus. The ESP class met once a week for 2 hours. Prior to online instruction, the students were given the class key and they enrolled themselves. The Nicenet course components such as "*Link Sharing", "Conferencing", "Course Materials"* were explained and instructions on how to use them were given.

Each week, some websites (hyperlinks) about art were added in the *"Link Sharing"* area such as: *le Louvre, The British Museum, Turkish Plastic Arts Archives, fiber Arts for practice, visual elements and principles (line, shape, color, space, texture, balance, emphasis, movement/rhythm), art lessons, National Art Education Association (NAEA), the Getty, Digi*

Arts (from UNESCO), ARTcyclopedia (Artists, works of art, and art developments through history etc…), Dictionary of Art Terminology. Those websites were used as a source for the in-class reading material, vocabulary and translation instruction. They also served as a source for answering the weekly vocabulary, reading and translation homework-assignments posted online. The students had to download the material to be discussed in class. The texts were read on the screen (offline) in class. The students received instruction in text macro- and micro-structure, locating main ideas and supporting details such as names of artists, artworks and place names, characteristics, classification, time sequences, enumeration, comparison and contrast, outlining and highlighting key concepts and key terms. Vocabulary instruction focused on figuring out meanings of key terms from context. Art terms were broken into prefixes, suffixes and roots and their part of speech was identified by looking at the derivational suffixes. Verb-forming, adjective-forming and noun-forming suffixes were always identified. Translation instruction focused on rendering a translation of the overall meaning of paragraphs that had already been read and discussed in class rather than full or literal translation of those paragraphs. Students' work was monitored and feedback was provided. The author made sure translations were cohesive and meaningful. Students had to rewrite their translations at home.

Each week, a homework-assignment that required the students to locate art terminology related to art tools, materials, art schools, kinds of art …etc and post their answers to questions in the "*Conferencing*" area. They were also required to post their re-written translations so that they could read each other's and comment on them if they wished.

Throughout the semester, the author served as a facilitator. She provided technical support on how to use the online course tools, and responded to individual students' needs and requests for certain sites. Through e-mail and *"Conferencing"*, she sent public and private messages to encourage students to interact and communicate. The author did not correct anything that the students posted. Spelling and grammatical errors were not corrected. The online course was assigned 20% of the total course grade.

6. Procedures

Before instruction, the students' proficiency level in English was assessed by a teacher-made test consisting of four subtests: reading comprehension, vocabulary subtest, paragraph-writing and translation. The pretest consisted of the following questions: *(i) Write the Arabic meaning of the following words; (ii) Write the English meaning of the following words; (iii) Break the following words into prefixes, suffixes and roots using dashes (-); (iv) Read the following paragraph and fill in the table; (v) Translate the following paragraph into Arabic; (vi) Write a*

paragraph in which you introduce yourself and talk about your job and field of study. Results of the English Proficiency Test revealed that 90% of the subjects exhibited poor reading comprehension skills, poor vocabulary knowledge and very poor writing and spelling and translation ability (See Table 1).

At the end of the semester (week 14), the students took a posttest that consisted of 10 questions: (i) Write 5 types of art materials; (ii) Write 5 types of art tools; (iii) Write 5 art schools; (iv) Write 5 art elements; (v) Write the names of 5 artists; (vi) Write the Arabic meaning of the following words; (vii) Write the English meaning of the following words; (viii) Break the following words into prefixes, suffixes and roots; (ix) Read the text then complete the sentences; (x) Translate the following. The pre- and posttests were blindly graded by the author. An answer key was used. Each student was given 3 scores: a vocabulary score, a reading score and a translation score. Scores were converted into percentages. In addition, the students answered a post-treatment questionnaire that consisted of several open- ended questions, which aimed at finding out how the students felt about their experience with online learning and whether they found it helpful in improving their reading, vocabulary and translation skills.

7. Test Validity and Reliability

The posttest is believed to have content validity, as it aimed at assessing the students' comprehension of art texts, knowledge of basic art terminology and ability to translate the overall meaning of a paragraph. The content covered in the test was comparable to that covered in the online course materials and in class discussion and assignments. The test instructions were phrased clearly and the examinees' task was defined. All of the students comprehended the questions and responded to them as instructed.

Concurrent validity of the posttest was determined by correlating the students' total score on the posttest and their total score on the midterm test that measured reading, vocabulary and translation skills as well. The validity coefficient was .62 and it was significant at the .01 level.

Since the author was the instructor and the scorer of the pretest and posttests for both groups, estimates of inter-rater reliability were necessary. A 30% random sample of the pretest and posttest answer sheets was selected and double-scored. A colleague who holds a Ph.D. degree scored the pre and posttest answer sheets. In scoring the sample answer sheets, she used the same answer key and followed the same scoring procedures utilized by the author. The marks given by both raters for each subtest in the sample were correlated. Inter- rater correlation was 98% for each group, which reflects the high accuracy with which the responses were marked.

Furthermore, examinee reliability was computed as it indicates how consistently examinees perform on the same set of tasks. Examinee reliability was calculated by correlating the students' scores on the even items with their scores on the odd items. Split halves reliability was calculated by correlating scores for the odd and even items. The split halves reliability coefficient was .68. Examinee reliability was also calculated by using the Kuder-Richardson 21' formula as it estimates the internal-consistency of the test items. The reliability coefficient of the posttest was .73. The split-halves and internal consistency reliability coefficients show that that the test has a good reliability, taking into consideration that it is a teacher-made test and the number of students who took the test.

8. Data Analysis

The mean, median, standard deviation, standard error and range were computed. To find out whether the students made any progress (gain) as a result of instruction, a within group paired T-test was computed using the pre and posttest scores. To find out whether the frequency of using the online course is related to the student's English achievement level, the online course usage frequency was obtained for each student. The usage frequency represented the total number of paragraphs posted by each student in response to all the conferencing topics and questions over the 12 weeks. For each student, the usage score was correlated with her posttest score.

Finally, the effect of online instruction on graduate students' attitudes towards online learning and whether it helped improve their reading comprehension, vocabulary and translation skills was based on qualitative analyses of the students' comments on and responses to the open-ended questions in the post-treatment questionnaire.

9. Results

9.1 Effect of Instruction on Achievement:

Table (1) shows that the median score on the pretest was 22.5% (range = 15% -48%) and the median score on the posttest was 62.5% (range = 40% - 88 %) with larger variations among the students posttest scores than the pretest score as revealed by the standard deviation values. Results of the paired T-test in Table (2) shows a significant difference between the pre and posttest mean scores at the .01 level, suggesting that the students' achievement significantly improved as a result of exposure to a combination of in-class and online instruction from home (T = 14.6, Df = 9).

Table (1)

Distribution of Pre- and Posttest Scores

	Mean	Median	SD	SE	Mode	Range
Pretest	27	22.5	9.49	3	20	15-48
Posttest	62.5	66.5	13.54	4.28	48	40-88

Table (2)

Paired T-test Results

	N	Mean	SD	SE Mean	t	df	Sig. (2-tailed)
Pretest	10	27.0	9.49	3.00	9.0	9	.000
Posttest	10	62.5	13.54	4.28	14.6	9	.000

Table (3)

Pearson Correlations among Vocabulary, Reading and Translation Posttest Scores

	Vocabulary	Reading
Vocabulary	-	-
Reading	.311	-
Translation	.77**	.51*

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

9.2 Correlation between the Vocabulary, Reading and Translation Scores:

Results of the Pearson correlation matrix in Table (3) show that there is a significant positive correlation between the students' vocabulary and translation scores (r = .77; P<001) and a significant correlation between students' reading and translation scores (r =.51; P<.05). However, the correlation between the reading and vocabulary scores was non-significant.

9.3 Correlation between Posttest Scores and Frequency Usage:

The Nicenet course statistics showed that the students posted a total of 229 messages (Median = 25; Range = 8 - 37). It was found that there is a significant positive correlation between the total posttest scores of the students and the frequency of using the online course (r =.39; P<.05). This suggests that a student's achievement in the ESP course correlated with the number of contributions she made to the discussion topics and questions posted in the *"Conferencing"*

area of the online course. This means that high and low usage frequencies of the online course were found to correlate with high and low achievement levels as measured by the posttest. It can be concluded that using the online course did contribute to the students' overall proficiency level.

9.4 Effect of Online Instruction on Attitudes:

Findings of the post-treatment questionnaire revealed that 90% of the subjects found the online course very important and very useful. They found it a new way of learning and doing homework. It made the art material easy to grasp, as art concepts and information were associated with real pictures, color paintings and art objects. They practiced reading and learning material in English about art topics that they already knew about in Arabic. The material posted in the online gave them an opportunity to exchange, share and discuss information. They developed the ability to search for information in online and conventional hard copy resources to answer the instructor's questions. They became more aware of art websites on the Internet, a resource that they will continue to use in the future.

However, the students felt that two hours per week were insufficient to develop reading, vocabulary and translation skills. Since they were involved in teaching and were concurrently taking 3 specialized courses, they could not devote a lot of time to internet searching, reading, learning vocabulary and translating extra texts. They expressed a need for having the first semester of the doctoral program fully devoted to learning English and developing internet searching skills. Other shortcomings were related to the Nicenet online course design and tools, since the students could not format their posted material, could neither insert nor upload digital pictures. They could not have audio or video conferencing with each other or with the instructor over the weekend.

10. Discussion

The present study found that use of the Nicenet online course as a supplement to in-class instruction was significantly more effective in enhancing students' reading comprehension, art vocabulary and translation skills than using in-class instruction alone. using the online course had a positive effect on students' attitude towards the course. It enhanced their motivation to learn the material and to locate extra information about art. The amount of student participation in the online course increased in a favorable innovative context. The online course provided the students with extension activities that they enjoyed. Finally, online instruction provided a student-centered learning environment in which students were

encouraged to explore different aspects of art autonomously.

Throughout the classes, the students were excited, enthusiastic and eager to learn. They always submitted their homework on time. Although they were intimidated by technology at the beginning of the semester, they felt more comfortable browsing the internet and using the online course in English at the end of the semester.

The positive effect of online instruction on reading, vocabulary and translation skill development as well as attitudes of female doctoral students obtained in the present study is partially consistent with findings of other studies in the literature that used other forms of technology. In a study that aimed at determining students' perceptions of the role of the instructor in technology-enhanced language learning, the accessibility and relevance of technological components and the effect of technology on foreign language learning experiences, Stepp-Greany (2002) found that students attributed an important role to instructors and perceived that cultural knowledge, listening and reading skills were enhanced, but were divided in their perceptions about the learning and interest values. Data collected by Kung & Chuo (2002) revealed that students had an overall positive attitude to using the teacher-selected websites for learning English. They reported that they were helpful in learning English. However, the students seemed reluctant to use ESL websites for independent learning unless they were required to do so. They reported that the main reason for not accessing websites was lack of time and use of more convenient media like TV, newspapers and books to learn English. By contrast, a study by Izzo (1996) found that use of technology in ESP was ineffective. Hand-written essays were significantly longer and more organized than technical essays produced by college students learning ESP in Japan using computer workstations, because the instructor spent time teaching about workstation use instead of the writing process and the students could not see what the final paper looked like. In addition, they wasted time working on other homework and activities while using the workstations.

11. Recommendations

In the present study, online instruction was found to be a powerful learning tool for improving graduate students' proficiency level in English. Results also showed that in learning environments where the internet is unavailable to ESP students and instructors in the classroom, use of online courses from home and even as a supplement to in-class techniques helps motivate and enhance graduate students' language skills and knowledge. To improve graduate students' reading, vocabulary and translation skills, use of the online courses in instruction is strongly recommended. ESP instructors may be trained to develop and use online courses in teaching

ESP courses to graduate students from home as it requires no scheduling, no equipment and no connectivity from campus. Administrative support is required for making online instruction an integral part of ESP courses.

For online instruction to be successful in promoting students' comprehension and vocabulary skills, the minimum requirements of students' contributions in the online course, a minimum number of topics posted by each student may be specified. The instructor can always prompt the students to use the course site by sending public and private messages and by responding to and commenting on students' ideas. The students can be encouraged to select and post their own art topics. Class discussions about the material to be posted in the online course may be held before and after the material is posted. To enable students to upload pictures and video clips and have teleconferences, other online courses such as Blackboard, WebCT or Moodle may be used instead of Nicenet. In addition, online courses used for teaching ESP to art education students may become more effective if online activities are executed not only independently but also collaboratively.

Furthermore, studies like this could be improved and become even more successful in promoting ESP students' reading comprehension, vocabulary and translation skills by using a larger group of students, and by using an experimental and a control group of equal sizes and comparable pre-treatment test scores. Subjects in those groups may be randomly selected or may be assigned to the experimental and control groups by matching. The control group can learn ESP using in-class instruction only, and the experimental group can learn ESP using a combination of in-class and online instruction. Pre- and posttest scores of both group can be compared to determine the effect of online instruction on achievement. When Internet access is available to students and instructors on campus, the ESP course can be accessed from the classroom or computer lab under direct supervision and feedback from the instructor. Finally courses that are fully delivered online may be offered. The effect of fully delivered online culture courses on the achievement of groups of EFL male and female students in general is still open for further investigation.

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