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TEACHING READING TO EFL FRESHMAN ARABIC STUDENTS ONLINE

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Abstract

The study investigated the effects of using an online course on reading skill development in Saudi EFL freshman students. Reading pre-test scores showed no significant differences between the experimental and control groups in their reading skill level. Then, both groups studied the same reading textbook, and completed the same lessons and exercises in that textbook in class. In addition, the experimental group used an online reading course with Nicenet which they accessed from home. The students checked the online reading texts, did the reading exercises, responded to the questions and discussion threads, added reading links, and posted reading threads. Comparisons of the reading post-test mean scores showed significant differences between the experimental and control groups in favor of the experimental group. Results showed that use of an online reading course from home as a supplement to in-class reading instruction helped enhance EFL students' reading skills in English. The students and instructor's attitudes, roles and the problems they faced are reported.

Keywords: *online instruction, online course, Nicenet, reading instruction, reading in EFL, freshman students*

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ОБУЧЕНИЕ ЧТЕНИЮ АРАБОЯЗЫЧНЫХ СТУДЕНТОВ ПЕРВОГО КУРСА, ИЗУЧАЮЩИХ АНГЛИЙСКИЙ ЯЗЫК КАК ИНОСТРАННЫЙ

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Аннотация

В исследовании изучается влияние применения онлайн-курса на развитие навыков чтения у студентов-первокурсников Саудовской Аравии, изучающих английский язык как иностранный. Результаты предварительного тестирования по чтению не выявили существенных различий между экспериментальной и контрольной группами по уровню развития анализируемых навыков. Обе группы изучали один и тот же учебник по чтению и выполняли те же упражнения в этом учебнике в классе. Кроме того, экспериментальная группа использовала онлайн-курс чтения с Nicenet, к которому они обращались из дома. Студенты проверяли тексты для чтения в интернете, выполняли упражнения, отвечали на вопросы и участвовали в темах для обсуждения, добавляли ссылки для чтения и размещали темы для чтения. Сравнение средних показателей чтения после теста показало значительные различия между экспериментальной и контрольной группами в пользу экспериментальной группы. Результаты показали, что использование онлайн-курса чтения из дома в качестве дополнения к обучению чтению в классе помогло улучшить навыки чтения студентов, изучающих английский как иностранный. Дается информация об отношении студентов, преподавателей, их ролях и проблемах, с которыми им пришлось столкнуться.

Ключевые слова: *онлайн-обучение, онлайн-курс, Nicenet, обучение чтению, чтение в преподавании английского языка, студент-первокурсник*

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INTRODUCTION

Reading is an important skill in the first and second language. Failing to learn to read and write in the early years results in more special education placement, retention, and poor self-esteem for the learner than any other cause (Casey, 2001). Computer technology proved to have many benefits for children with learning difficulties, including motivational aspects and development of fine motor skills (Casey, 2001).

A review of the L1 and L2 reading research on the effect of different types of technology on student achievement has shown two contradictory findings. The fist line of research found that use of technology had no significant effect on students' reading achievement. Computer assisted instruction had no effect on the reading achievement of 3rd -6th grade students in a low socio-economic status community. No significant differences were also found between boys and girls' reading achievement (Hamilton, 1995). In another study, Martindale, Pearson, Curda & Pilcher (2005) found that 5th grade students who used computer-based and web-based software applications (FCAT Explorer) scored significantly higher on the Florida Comprehensive Assessment Test (FCAT) than elementary school students who did not use the FCAT Explorer. At the high school level, no significant differences in scores were found between students who used the FCAT Explorer and those who did not use it. In a third study, Humble (2000) found that when 2nd grade students used the Living Books software (where the computer reads aloud to the students), their Informal Reading Inventory (IRI) scores were almost equal to the IRI scores of 2nd grade students reading the same stories aloud to an adult from a hardcopy book. This finding indicates that when a classroom teacher does not have the extra set of hands of an aide or parent volunteer, she can use the computer to aid in reading practice.

In another group of studies, reading improvement was not due to use of technology per se, but to the appropriate difficulty level of the texts and activities delivered via the Internet, to the effect of technology on motivation and to the structured support provided through technology. Results of a study by Tracey & Young (2005) showed that 5th grade students, who received individually differentiated texts and activities via the Internet, significantly outperformed those in control classrooms. This finding suggests that the critical factor associated with students' success was reading at their correct level of difficulty, rather than Internet-delivery or time-on-task. This study

also suggests that the Internet may hold the potential to provide students with easy and inexpensive access to reading materials at the students' correct level of reading difficulty and that such access may be positively associated with achievement. Similarly, Kramarski & Feldman (2000) found that the effect of using an Internet environment embedded with metacognitive instruction on 8th grade students' reading comprehension, motivation, and metacognitive awareness showed a significant impact on motivation but none on achievement or metacognitive awareness. In Lewis' (2000) study, the reading performance of learning disabled students, engaged in unstructured interactions with talking storybook software, was not enhanced by the hypermedia-based children's literature. But when structured support was provided, their time on task increased, and so did gains in reading skills.

A second group of studies found that computer-based instruction, use of hypermedia and computer software were successful in enhancing elementary, high school and college students' reading achievement. For example, Chambless & Chambless (1994) found an educationally significant effect sizes on comparisons of reading scores and measures of writing in favor of the computer-based instruction group for at-risk students. These findings suggest that computer-based instruction is a powerful instructional tool for K-2 teachers. Similarly, Arroyo (1992) found a statistically significant increase in reading achievement of 7th grade students who used an intensive computer assisted instruction program. Use of hypermedia technology in kindergarten, 2nd and 5th grade classrooms resulted in an increase in students' comprehension, study skills, decoding, and vocabulary (Caldrone and Others, 1995). The reading scores of a rural southern junior high school significantly improved as a result of using computers for two years (Potter & Small, 1998). When 20 "Writing to Read" computer-based program, developed by IBM, were evaluated, results revealed increased kindergarten and first grade students' gain scores on word recognition and vocabulary; improved writing samples; increased ability to remain on task; greater self-confidence; fewer retentions; and enthusiastic support from teachers and parents. Results after the first full year of operation were similar to results achieved state-wide (Shaver & Wise, 1990). Lange, McCarty, Norman& Upchurch, (1999) found an increase in the reading scores of middle school students who lacked comprehension and vocabulary skills and could not read for understanding at grade level in the different content areas after utilizing a variety of software applications that incorporated reading strategies across the curriculum. By integrating technology with reading strategies, students demonstrated a transfer of knowledge in all the content areas. Likewise, Wepner and Others (1990) found the Sack-Yourman Developmental

Speed Reading Course software to be effective in allowing college students to quickly move from "chore" operations and didactic sections to "real" reading. Results of a third study indicated that TELE-Web, an Internet-based software, was effective in improving sight-word recognition of at risk students and that these improvements transferred to a standardized measure of reading achievement (Englert, Zhao, Collings, & Romig (2005).

The type of technology used may affect the reading strategies utilized by the students. When 3 undergraduate and graduate students read a group of email messages collected through a listserv discussion group, they treated email messages as on-going conversations rather than as reading texts; they skipped and skimmed through the messages. Lack of coherence of the message group did not seem to bother the students. Although the subjects had more than three years of email experience, differences in the strategies used in the online reading of email messages were visible. Those findings suggest that subjects use a wide range of strategies and some of them are only meaningful in an email context (Tao, 1997).

As in L1 classrooms, use of technology in L2 classrooms proved to be effective in developing students' reading skills. A study by Williams & Williams (2000) showed dramatic improvement in ESL students with limited English skills as a result of integrating reading and computers. Levine, Ferenz, & Reves (2000) also showed that exposure to authentic reading materials in a computerized learning environment contributed to the development of EFL critical literacy skills more than the conventional learning environment did. In a third study, South African college students with low reading ability who received strategic reading instruction in a technology-enhanced environment received higher marks on reading comprehension measures than students in the control group (Dreyer & Nel, 2003).

Given the contradictory findings of the above studies on the effect of technology on student reading achievement, it seems that the effect of technology on reading achievement depends on several success and failure factors such as students and instructors' unfamiliarity with the technology being used and their attitudes towards it, the mode of instruction, time on task and many others. For instance, in a study by Balajthy, Reuber & Damon (1999), 24 Power Macintosh computers equipped with "ClarisWorks," "Kid Pix," "Student Writing Center," and "Netscape Navigator" software were used by graduate-level clinicians in a university reading clinic to develop the literacy skills of 7-12 year-old-students. Computer lab observations, examination of clinicians' lesson plans, and software evaluation forms showed that in computerized instruction follow-through was a lower priority; time-on-task was less

targeted; computers were sometimes chosen for motivational value only; software was used for drill and practice word recognition instruction, word processing, electronic books, Internet, and one-on-one interaction; and hardware use resulted in frustrations because of unfamiliarity and availability issues. Teachers were moderately technically competent, and needed more time to familiarize themselves and plan. Skill and grade level of software needed to be pinpointed with a corresponding list. Motivational stimulation regarding computers had to be carefully determined.

Although computers and computer software motivated at-risk inner-city students, they served as an important medium of instruction for these students, and determined its success or failure, Wepner (1990) called for simulations requiring collaborative problem solving and continued use of motivational features of existing programs. When developing an online developmental reading course with asynchronous interaction among the students and instructor, Caverly & MacDonald (2000) recommended using research on effective readers and effective reading instruction to dictate course curriculum and instruction; using online course packages to deliver the course; and piloting the course on-campus prior to off-campus delivery. Haas (1987) also recommended that computer researchers work with software developers to alleviate difficulties with reading on computer screens. Finally, limited knowledge of e-mail systems prevented some students from taking a full advantage of e-mail as a unique communication tool (Wang, 1996).

Another factor that affects reading achievement is use of multiple technologies and practicing multiple language skills. Barrett (2001) developed creative reading activities to encourage resource students (who found reading difficult and did not like to read) to read more books for pleasure, many of which included the use of technology. Students were shown a weekly video tape of community leaders modeling the importance of reading. Resource students typed their writing assignments using Word, created PowerPoint presentations describing a career, wrote to a favorite author, wrote book reviews, interpreted poetry, wrote poetry, and illustrated poetry. All projects created on the computer or digital pictures of students were linked to their reading Web pages saved on their computer disks. Students also participated in a Drop Everything and Read (DEAR) Program, participated in a poetry reading, and read to a group of preschool children. Analysis of the data revealed that although not as many library books were checked out as predicted, resource students did read more and enjoyed using technology to complete reading activities.

Use of multiple technologies in reading instruction seems to accommodate students with different learning styles, abilities and interests. Multiple technologies also help students practice different reading skills at the same time. Web-based instruction has the advantage of combining several technologies such as online forums, e-mail, word-processing, WWW resources and L2 websites that provide additional activities and opportunities to practice specific reading skills. Therefore, the aim of the present study was to use a web-based (online) course from home, in combination with traditional writing instruction (depending on the textbook). It aims to find out whether the integration of a web-based course in traditional in-class reading instruction significantly improves the reading skills of low ability EFL college students. A mixed approach was used to develop EFL students' reading skills and a combination of online reading activities was integrated. The study tried to answer the following questions: (1) Does online instruction have any positive effects on EFL freshman students reading skill development as measured by the posttest? (2) Does the frequency of using the online course correlate with the students' reading skill level, i.e. are active participants better achievers than passive participants? (3) Does online instruction have any positive effects on students' attitudes towards reading in EFL?

To answer these questions, two groups of EFL freshman students participated in the study: One group learnt to read English using traditional in-class instruction; and the other used a combination of traditional and online reading instruction with Nicenet. The impact of online instruction using a mixed approach on EFL freshman students' reading skill development was based on quantitative analyses of the pre and posttests. The effect of online instruction on freshman students' attitudes was based on qualitative analyses of students' responses to a post-treatment questionnaire.

MATERIALS AND METHODS

PARTICIPANTS

74 female freshman students were enrolled in their first reading 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.

41 students (55.4%) were registered in the online course and 33 students (44.6%) were not. Registration in the online course was optional as some students had no access to the internet. Registered students constituted the experimental group, and unregistered students constituted the control group. Both groups were exposed to the same in-class instruction using the same reading textbook. In addition, the experimental group was exposed to online reading instruction. Students in the experimental group had no prior experience with online instruction.

At the beginning of the semester, students in both groups were pretested. They took the same reading pretest. The pretest consisted of questions covering the reading skills to be studied in the textbook. Results of the independent T-test showed no significant differences between the experimental and control groups in their reading scores before reading instruction began (T = .39; Df = 72; P<.69).

IN-CLASS INSTRUCTION

The reading course was taught by the author in the spring of 2006 for 12 weeks. All of the students were exposed to the same traditional in-class instruction. They studied the same textbook: *Interactions I: Reading (Middle East 4th Edition) by Elaine Kirn and Pamela Hartman (2004).* The textbook consists of 12 chapters. Only 10 chapters were covered in class during the semester. Each chapter consists of the following parts:

Part I: Before you read; Read; After you read (recognizing reading structure, understanding the main idea; answering paragraph questions with details; discussing the reading).

Part II: Before you read; skimming, underlining the main ideas, matching paragraphs with given topics, learning to summarize; discussing the reading, talk it over.

Part III: Vocabulary and language learning skills: finding definitions of vocabulary items; recognizing words with the same or similar meaning; real-life reading; more real life reading.

Part IV: personal stories and humor, read stories quickly, summarizing main ideas; telling their opinions; tell or write your own story; reading funny cartoon, telling the point of each carton and why it is funny.

The following skills were emphasized:

- ***Reading skills:*** *understanding main ideas; finding details; recognizing paragraph topics; paragraphs in time order; time details, skimming for time and place; recognizing details of opinion; recognizing outline form; making inferences; using context to supply reference.*

- ***Vocabulary development:*** *using context clues, words with same or similar meanings, examples as definitions, recognizing meaning categories, illustrations of word meanings, recognizing similar meanings and meaning categories, recognizing nouns, adjective, adverb suffixes; recognizing word families; recognizing prefixes, stems.*
- ***Real-life reading****: college catalogues, physical and political maps, menus and food labels, community services and signs; classified ads; calendar notices and announcements; instruction for health emergencies; entertainment ads; personal ads; announcements and greeting cards.*
- ***Language skills****: recognizing book structure; summarizing paragraphs; using colons, semicolons, quotations marks; recognizing nouns and verbs; time expressions; summarizing historical information; conversation in paragraph form; summarizing narratives; adverbs of manner; connecting words and phrases; finding supporting reasons; comparisons and contrasts; sequence of plot events; summarizing a plot.*

The author started each unit by asking general questions about the theme of the reading text in Part I. Then, she read the text paragraph by paragraph. With her help, the students underlined the main ideas and numbered the details, wrote the topic of each paragraph in the margin, circled and underlined pronouns and their antecedents, words and their definitions, contextual clues showing meanings of new vocabulary items in the text, words and phrases that signal paragraph structure, divided words into root and suffixes by slash lines, and wrote the part of speech on top of the new words. She used a tree diagram to show the main topics of the text and the details supporting each topic. She guided the students through the two reading texts in Parts II and IV, reading, vocabulary, summarization and outlining exercises. Students did most of the reading exercises in class. While doing the exercises, the author monitored the students' work and provided individual help. Only errors related to the skill under study were highlighted. Feedback was provided on the presence and location of errors but no answers were provided. The students had to check the passages for clues by themselves. Students were encouraged to express themselves and give reasons that support their answers and points of view.

As for assessment, students were given two in-term tests. The following skills were covered by the tests: *Writing the topic of several paragraphs in the reading selection; locating specific details in the reading selection; finding the meaning of words in context; finding the referents of pronouns; writing a summary of the reading selection or parts of it; filling out an outline; classifying vocabulary items in*

categories etc. Both 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.

TREATMENT (ONLINE INSTRUCTION)

In addition to the traditional in-class instruction, students in the experimental group used an online course with Nicenet (www.nicenet.org), because using the Nicenet Online Course Management System did not require any special license or registration fees. It was easy to use. The students used their own PC's and the Internet from home, as the internet was inaccessible from COLT. The students were given the class key and they enrolled themselves.

Prior to online instruction, the students' computer literacy skills were assessed by a questionnaire. A tutorial was given to them for reference. The online course components were described and instructions on how to use certain course components were also posted in the "Conferencing" area. Online instruction was initiated by posting a welcome note and by starting a discussion topic and writing a sample response.

Every week, reading websites (hyperlinks) related to the reading skills covered in class were added in "Link Sharing". The links contained short stories, world newspapers, an ESL students' magazine, reading comprehension, main idea, recognizing details, and guessing meaning from context examples and exercises. The students checked the specific reading links posted, answered the reading quizzes and did the exercises. 30% of the websites were posted by the students. Examples of the reading websites posted are:

- *One Look Dictionary: http://www.onelook.com/*
- *Cambridge Dictionary: http://dictionary.cambridge.org/*
- *Short Stories: http://www.readingmatrix.com/directory/pages/Short_Stories/*
- *More Short Stories: http://www.englishclub.com/reading/short-stories.htm*
- *World Newspapers: http://www.actualidad.com/*
- *Topics magazine for learners of English: http://www.topics-mag.com/*
- *Many Books such as "Pride and Prejudice", "Hamlet": http://manybooks.net/*
- *Plain English: http://home.att.net/~tangents/issue/english.htm*
- *Reading Comprehension – Beginner: http://www.readingmatrix.com/ directory/pages/Reading_Comprehension_Beginner/*
- *Finding Main Ideas: http://elearn.mtsac.edu/amla/readingroom/Mainidea.htm*
- *Identifying details: http://elearn.mtsac.edu/amla/readingroom/details.htm*
- *Guessing word meaning from context: http://elearn.mtsac.edu/amla/*

readingroom/context.htm

- *BBC English: http://elearn.mtsac.edu/amla/readingroom/context.htm*
- *English Language Activities, Exercises And Tests: http://www.world-english.org/*
- *Study Guides and Strategies: http://www.studygs.net/*

Questions that required the students to write a paragraph about themes similar to those read in class were posted in the "Conferencing" area. Some examples are: *Favorite Communities; Housing Problems; My College Experience; My Story With Food; Personal Weather Stories; B-Vitamins; A Cross-Cultural Experience; How We View Foreigners; A Stranger In His Own Country; The Excitement Of A Foreign Country; Cultural Differences; Meaning Of Fine Arts; Stories About Beggars; The Great Wall Of China; My Travel Problems.* Such paragraphs were posted in "Conferencing". The discussion threads also covered paragraphs written by the students on themes of their choice such as: *A Personal Story; Globalization And Culture Identity; Avian Birds Flu; Would You Like To Know A Secret; The Eight Purposes Of Life Your Role Model; Learning From Negative Experiences; Servings Per Container & Rib-Eye Steak; Harry Potter; A Joke; Jokes In English; A Person I Admire Most; Daydreaming; A Story Of 4 People; Life Is A Daring Adventure; Mountain, Your Time Wasters, Ramadan Memories And Experiences.* Exercises that required the students to find the main idea, identify details, recognize the pattern of organization, guess word meaning from context, and understand idioms and phrasal verbs were posted. In addition, reading study guides and strategies, help with reading problems, test anxiety and factors that lead to success were also posted in the "conferencing" or "Documents" areas of the course.

Throughout the semester, the author served as a facilitator. She provided technical support on using the different components of the online course, and responded to individual students' needs, comments and requests for certain sites. The author sent public and private messages to encourage the students to interact and communicate. She had to look for relevant websites and post them in the "Link Sharing" area. She had to post questions and discussion topic and write model responses. The author did not correct spelling and grammatical mistakes. She would point out the type of errors they made especially in the reading threads and ask the students to double-check their posts or ask students to correct each other's mistakes. Students were given extra credit for using the online course as it was optional.

PROCEDURES

Before instruction, the students were pretested. At the end of the semester, the students took a reading posttest that consisted of a text and questions that covered all

of the reading skills and subskills studied throughout the semester: *(1) What is the whole text about? (2) Write the topic of the following paragraphs; (3)Questions about details; (4) Write a summary of the whole text; (5) Complete the outline; (6) Give the meaning of the following words as used in context; (7) What does each word refer to?(8) Give examples that illustrate each category; (9) Find 4 compounds, 2 words with a negative prefix, 2 words with a noun suffix, 2 words with an adjective suffix; (10) Identify the part of speech of each word as used in the text; (11) break the following words in their component parts.* 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.

At the end of the course, all of the students answered an open-ended questionnaire, which consisted of the following questions: *(1) Why did you register in and use the online course? (2) What did you like about it? What did you not like? (3) Did your reading skills improve as a result of using the online course? In what ways? (4) Did it make any difference in reading in English? (5) If you did not post any responses or paragraphs in the online course, Why? (6) What problems or difficulties did you face in using the online course? How were those problems solved? (7) How often did you use the online course? (8) How much time did you spend using and browsing the online course? (9) Would you register again in a similar course in the future? Why? (10) Which links did you find most useful?*

TEST VALIDITY AND RELIABILITY

The posttest is believed to have content validity as it aimed at assessing the students' reading skill in EFL. 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 .55. 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 reading test was .72.

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 coefficient was .97 for the posttest. Furthermore, examinee reliability was calculated using the Kuder-Richardson formula 21'. The examinee reliability coefficient for the posttest was .65.

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 had made any progress as a result of online instruction, a within group paired T-test was computed using the pre and posttest mean scores. Since the experimental and control groups were unequal in size, Analysis of Covariance (ANCOVA) was run using the posttest scores as the response variable and the pretest scores as the covariate to correct for chance differences that existed when the subjects were assigned to treatment groups. This correction resulted in the adjustment of group means for pre-existing differences caused by sampling error and reduction of the size of the error variance of the analysis.

To find out whether there is a relationship between the students' posttest scores and frequency of using the online course, a student's posttest score was correlated with the number of responses she posted in the "Conferencing" area using the Pearson correlation formula.

Table (1): Distribution of Pre and Posttest Scores in Percentages

Groups	**Tests**	**N**	**Mean**	**Median**	**Standard Deviation**	**Standard Error**	**Range**
Experimental Group	Pretest	41	27.04%	26%	04.97	0.87	09-44%
	Posttest	41	65.44 %	64 %	10.73	1.68	06-90%
Control Group	Pretest	33	16.96%	16%	03.79	0 .66	04-34%
	Posttest	33	53.52%	52%	09.27	1.61	10-88%

RESULTS

Effect of Online Instruction on Achievement

Table (1) shows that the typical EFL female freshman student in the present study scored higher on the posttest than the pretest (medians = 64% and 52% respectively) with lower variations among student scores on the pretest than posttest (SD =10.73 and 9.27 respectively). This means that the students in both groups made higher gains as a result of reading instruction. However the median and mean scores do not

show whether the improvement in scores was significant or not. Therefore, the pre and posttest scores of each group were compared using a paired T-test. Results of the paired T-test showed a significant difference between the pre and posttest mean scores of the experimental group at the .01 level, suggesting that students' reading achievement significantly improved as a result of using a combination of online and traditional in-class reading instruction (T =16.54, Df = 40). Similarly, a significant difference between the pretest and posttest mean scores of the control group was found at the .01 level, suggesting that reading achievement in the control group significantly improved as a result of using traditional in-class reading instruction which depended on the textbook only (T = 15.26, Df = 32).

However, T-test results alone do not show which group made higher gains. Since the experimental and control groups are unequal in size, Analysis of Covariance (ANCOVA) on adjusted posttest means revealed significant differences between the experimental and control groups (F=99.67, P<.0001). The experimental group made higher gains in reading achievement than the control group as a result of web-based instruction. The effect size, i.e. degree of superiority of the experimental treatment over the control treatment was .52.

Correlation between Posttest Scores and Frequency Usage

To find out whether the students in the experimental group made the same gains as a result of using the online course, the total number of discussion messages posted by each student (usage frequency) and by all the students and the percentage of active participants were calculated. It was found that 30 (73%) students were active and 11 (27%) were inactive. Active participants are those who responded to the conferencing topics by writing messages. They posted a total of 297 posts (mean = 7.2 and the range = 0 to 38 posts). The frequency of using the online course by each student was correlated with her posttest score. A significant correlation was found between the posttest scores of the students and the frequency of using the online course. The correlation coefficient was .56 and it was significant at the .01 level. This suggests that students with high reading scores posted more responses than those with low reading scores.

Effect of Online Instruction on Attitudes

Analysis of the student comments and responses to the post-treatment questionnaires revealed positive attitudes towards online learning and the reading course under study. All of the students found the online reading course useful and fun, and considered it a new way of improving their reading ability in English and a new way of doing homework. It heightened their motivation and raised their self-esteem. It

created a warm-climate between the students and instructor and among the students themselves. They found the reading exercises posted in "Link Sharing" and “Conferencing” useful, as they provided extra practice, gave instant feedback and provided an opportunity to improve their ability to identify main ideas, paragraph topics, supporting details, text structure and inferring meanings of difficult words from context. They could use the online course any time and as many times as they needed. It made the reading skills studied in class easier to apply.

Some of the negative aspects of online reading instruction in the present study are that the students did not post any responses if not prompted by the instructor and if the instructor did not post new topics and post a sample response. Some students started a new thread dealing with the same topic instead of posting a response under that topic. Some wrote “Thank you” notes and compliments rather than real responses. Others just browsed and read rather than posting messages.

Inadequate participation in the online course was probably due to inadequate computer competence among some students. Hands-on practice could not be provided due to lack of computers in the classroom and lack of internet connectivity at COLT. Some students did not take online instruction seriously as it was not used by other instructors and students at COLT. The author could not make the online course mandatory and could not allocate a proportion of the course grade to it for administrative reasons. Using the internet as a learning tool was not part of some students’ culture. Some were so used to traditional instruction that depended on the book. They indicated that they were not net browsers and preferred to read books. They also believed that online courses should be used for fun not for credit and serious studying. Many Saudi college students do extra work for grades only. If online learning is not part of tests and grades, they will not participate. The author did not have sufficient time in the classroom to go through the material in the hyperlinks in class. Other shortcomings are due to the Nicenet online course design. The instructor could not design her own tests and exercises and could not upload graphics and Powerpoint presentations.

CONCLUSION

Significant differences were found between the experimental and control groups in their reading skills as measured by the posttest suggesting that reading achievement in the experimental group improved as a result of exposure to online instruction. This means that use of online instruction proved to be a powerful tool for improving students’ reading skills in English. Online instruction raised the good and average student’s reading performance and the performance of the lowest-performing students

as well. This finding is consistent with findings of prior studies in the L1 literature using other forms of technology in reading instruction such as Shaver & Wise (1990), Arroya (1992), Chambless and Chambless (1994), Coldrone & Others (1995) and Potter & Small (1998). As in Barrett's (2001) study, use of multiple technologies in the present study, i.e., the online discussion forum, WWW links and e-mail, significantly enhanced EFL college students' reading skills.

Moreover, the present study revealed positive effects of online instruction on students' attitudes towards online instruction and the reading course. This finding is also consistent with findings of other studies by Potter & Small (1998) in which a "Writing to Read" computer program was used with Kg and first grade children, and by Kramarski and Feldman's (2000) in which an Internet environment had a significant effect on L1 students' motivation. As in Tracy & Young's (2005) study, online reading instruction in the present study provided a self-paced and non-threatening learning environment and additional reading practice. The students enjoyed using the online course and felt it helped them to learn.

Unlike findings of studies by Hamilton (1995), Martindale, Pearson, Curda, & Pilcher (2005) in which computer assisted instruction and the FCAT Explorer had no significant effect on reading scores of L1 elementary students, EFL college students in the experimental group in the present study made higher gains in reading than the control group as a result of online reading instruction.

Finally, the present study recommends that online instruction be extended to other language courses and other college levels. Students of different college levels (i.e., lower and upper class students) enrolled in the reading I, II, III and IV courses can share the same online course together with their instructors. To encourage the students to participate, the instructor has to prompt and motivate them and rules for using the online reading course should be made clear. The minimum number of posts may be specified. Administrative support is also required to make online teaching a mandatory part of reading instruction, in order for the students to take it course seriously. The effect of reading instruction delivered fully online using course materials and quizzes designed by the instructor is still open for further investigation

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