The effect of a blended e-learning environment on EFL students' academic performance, and attitudes towards Internet-assisted language learning and teaching

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Abstract

Blended electronic learning (e-learning) has become a very common learning environment worldwide. This study investigates the effect of the use of this environment on the academic performance of female Saudi students of English as a Foreign Language (EFL) in English phonetics and on their attitudes towards the Internet-assisted language learning and teaching. Participants in this study are 140 randomly selected female senior college students majoring in English (to be future English teachers) at the English Department, College of Education, at King Khalid University, in Abha. The participants were divided into two equal groups (70 students in each group)—control and experimental—and were pre- and post-tested. The treatment includes an online component, which was delivered on a Blackboard learning system. For the students in the experimental group, all of their lectures are presented online, including those face-to-face sessions. Course e-mail and discussion boards are used, for the discussion and to allow contact with the experimental group. A questionnaire was also given to the experimental group students to test the effect of the blended e-learning environment on their attitudes towards Internet-assisted language learning and teaching. Data was analysed using SPSS-16. The Mean score gain of the experimental group in post-testing was significantly higher than that for the pre-test. This was attributed to the use of blended e-learning. Further, the blended e-learning environment had a positive effect on female Saudi EFL students' attitudes towards Internet-assisted language learning and teaching. Thus, implementing blended e-learning in EFL teaching and learning can be recommended as beneficial.

تأثير بيئة التعلم الإلكتروني المدمج على أداء طلبة اللغة الإنجليزية كلغة أجنبية وعلى اتجاهاتهم نحو تعلم وتعليم اللغة الأجنبية بمساعدة الإنترنت

ملخص

لقد أصبح التعليم الالكتروني المدمج بيئة تعليمية واسعة الانتشار. تناولت هذه الدراسة تأثير استخدام التعلم الإلكتروني المدمج على الأداء الأكاديمي للطالبات السعوديات اللاتي يدرسن اللغة الإنجليزية كلغة أجنبية في مادة الصوتيات وعلى اتجاهاتهن نحو تعلم وتعليم اللغة الأجنبية بمساعدة الإنترنت. وكان عدد المشاركات في الدراسة 140 طالبة اخترن بطريقة عشوائية من المستويات العليا من طالبات اللغة الإنجليزية قسم التربية بجامعة الملك خالد، وقد تم تقسيم المشاركات إلى مجموعتين إحداهما ضابطة والأخرى تجريبية. درست المجموعة الضابطة بالطريقة التقليدية وجها لوجه أما المجموعة التجريبية فقد درست باستخدام التعلم الإلكتروني المدمج،حيث تم تقديم جميع المحاضرات على الموقع الإلكتروني بما فيها المحاضرات التي قدمت وجها لوجه، كما تم استخدام البريد الإلكتروني ولوحة المناقشة، وقد أجريت للمجموعتين اختبارين قبلي وبعدي ، كما تم في نهاية التجربة توزيع استبانة على طالبات المجموعة التجريبية لقياس مدى تأثير بيئة التعلم الإلكتروني المدمج على اتجاهات الطالبات نحو تعلم وتعليم اللغة الأجنبية بمساعدة الإنترنت وقد تم تحليل البيانات باستخدام برنامج التحليل الإحصائي (إ س بي إس إس) وكان متوسط درجات الطالبات في الاختبار البعدي أعلى منه في الاختبار القبلي، وقد عزت الباحثة الفرق إلى استخدام التعلم الإلكتروني المدمج، وعلاوة على ذلك فقد وجد أن استخدام التعلم الإلكتروني المدمج اثر بشكل ايجابي على اتجاهات الطالبات نحو تعلم وتعليم اللغة الأجنبية بمساعدة الإنترنت. وقد أوصت الباحثة باستخدام التعلم الإلكتروني المدمج في تدريس اللغة الإنجليزية كلغة أجنبية.

Introduction

Technology has developed rapidly since 1980. Computers and smart mobile phones have now become a part of everyday life. This widespread use of computers and smart mobile phones has prompted educators to consider how to utilise this technology in learning and teaching. Exploitation of these technologies has become particularly important now that their use has spread around the world. Rost (2002) indicates that the current computer technology has many advantages for second language learning. According to Kuo (2008), the potential of computer technology and the Internet is not measured by the medium itself, but by how that medium is used. Matheos et al. (2005) argues that technology enhanced learning alone is not enough, and that learners need practical learning for the mastery and continuation of knowledge and skills achieved through the blending of technology and face-to-face interaction.

English language teachers have been the pioneers of using technology in the process of language teaching and learning (Amiri,2000). Nowadays in language teaching, the question is not whether to implement computers in teaching and why, but rather how to do so (Culhane,2003). The use of computer technology in EFL learning and teaching has been widely recognized by the educators for the convenience this technology affords to create independent and collaborative learning environments, and to provide EFL students with language experiences. Taylor and Gitsaki (2001) state that the Internet exposes EFL students to the target language in real-life situations, enhances their independency in learning, helps them to communicate with native speakers, and provides them with motivational online activities. For these reasons, several educators have encouraged the use of technology in teaching (O'Bannon & Puckett, 2007). They believe that its use will have positive effects on the students' academic achievement, and their attitudes towards learning.

Educators interested in improving learning have devised new and smart ways to use computer technology in learning. For example, the Blackboard learning system has been organised to create an electronic

learning environment that can either enhance the face-to-face traditional learning environment or replace it. Blackboard is a broad and supple electronic learning system that can deliver full online course management. It makes use of Internet facilities in teaching and learning. This learning system and similar electronic learning systems have been used widely in language learning programs. Such e-learning systems have been devised to 'encompass disciplines such as collaboration, traditional learning and content management' (Gartner, 2002).

E-learning is considered a modern type of distance education, delivered via the use of computers, the Internet and multimedia presentation . It can take one of three modes: facilitating, blended or full. Concerning blended e-learning environments, which is the focus of this study, Oliver and Trigwell (2005) identify three meanings for the term blended learning: the integrated combination of traditional learning with web-based online Approaches; the combination of media and tools employed in an e-learning environment; and the combination of a number of pedagogic approaches, irrespective of learning technology use. Many educators advocate the benefits of this mode for learning and teaching. For example, Garrison and Kanuta (2004) state that integrating online learning into traditional college face-to-face teaching could be transformative for universities since it grants opportunities for deep learning. As Kocoglu et al (2011) explain, blended e-learning approaches have emerged from the belief that both face-to-face interaction and online teaching are beneficial for learning. This approach thus aims at finding a 'harmonious balance between online access to knowledge and face-to-face human interaction' (Osguthorpe & Graham, 2003, p. 228).

Recently, there has been a shift in emphasis within the field of teaching, and within language teaching in particular, away from teachers and teaching and towards learners and learning (Larsen-Freeman,2000). In this context, and in the current study, the use of blended e-learning in EFL teaching is seen as one means to encourage life-long learning among learners. Statement of the Problem

Computers are widely used throughout the Kingdom of Saudi Arabia (KSA) for entertainment, work and learning, and a house is rarely found without a computer. The use of computer technology in education has been encouraged by the government. Instruction in computer use is now part of the curriculum in schools and universities. Inspired by the findings

of several empirical studies conducted on the effect of Internet use in EFL teaching (AbuSeileek, 2007; Almekhlafi,2006; Laufer & Hill, 2000), universities in Saudi Arabia have also started to integrate Internet technology into EFL teaching and learning. The use of e-learning is the most recent manifestation of this integration.

The result of this technology push is that e-learning has recently become one of the methods by which high school students in Saudi Arabia are taught English. With the increasing number of applicants to colleges in Saudi Arabia, it becomes important to devise appropriate approaches that also encourage and equip students for self-directed learning. Distance electronic education presents a solution for this problem. In 2005, King Khalid University (KKU) initiated its e-learning program, staffed by well-educated members and trainers. The Blackboard e-learning system was used to implement the e-learning environment for students and faculty members. This system includes a variety of learning and teaching facilities, such as course mails, discussion boards, Elluminate live classes, Tegrity classes, wikis and blogs. This was enhanced by training for students and teachers, presented both face-to-face and through online support.

To ensure effective implementation throughout KKU, colleges were provided with e-learning labs, and faculty members were trained to be familiar with the new e-learning environment, regardless of whether they were using it for first kind (supportive-facilitating), second kind (blended) or third kind (full online) delivery. Faculty members were also provided with educational videos, posted on the University website, explaining the ways of dealing with the new system. This support has encouraged faculty members to use the new e-learning system in teaching their courses. Against this background of wide-scale implementation of the Blackboard learning system, the present paper investigates the impact of the blended e-learning environment on female Saudi EFL students' performance in English phonetics and on their attitudes towards Internet-assisted language learning and teaching. Recent studies in the field of blended e-learning have proven its effectiveness in teaching and learning (Cooner, 2010). Although there are several studies on the effect of the use of technology in language learning (Al-Tale', 2011; Dogoriti,2010), few studies have dealt with the effect of blended e-learning on EFL students' academic performance (Motteram, 2006). Even those studies on the use of the Internet in EFL teaching focus on online activities alongside, rather

than in place of, traditional teaching (Al-Jarf, 2004; Campbell, 2007). Moreover, most of the studies dealing with blended e-learning environments focus only on attitudes towards these environments (Wiebe & Kabata,2010); but performance is not measured. Those studies that have investigated the effect of blended e-learning on EFL students' academic performance have mostly been concerned with science and management courses (Motteram, 2006). To contribute towards filling these gaps in the literature, the present study investigates the impact of the use of blended e-learning on the academic performance (in English phonetics) of the participants, as well as on their attitudes towards Internet-assisted language learning and teaching. Leveraging on the teaching modes of KKU, blended learning is here instead of, rather than supplementary to, traditional face-to-face teaching.

Rationale of the Study

The present study is an investigation of the impact of the use of blended e-learning environments on the academic performance of female Saudi EFL future teachers in English phonetics as well as on their attitudes towards Internet-assisted language learning and teaching. The aim of this investigation is to evaluate the effect of the use of blended e-learning environments on EFL female Saudi students' academic performance, with implications for virtual/online learning education as a part of higher education methods in Saudi Arabia. Additionally, given the fact that shifting the emphasis from teacher-centred teaching to learner-centred learning is essential for developing the quality of teaching and learning, there is a need for more research on the impact of Internet-based technology on students' academic performance and their attitudes towards Internet-assisted language learning and teaching.

Previous research conducted in the field of blended e-learning (King,2002; Riffell & Sibley, 2003) has indicated the benefits that students, institutions and teachers can obtain from blended e-learning teaching through online communication, materials and resources. However, a local study is needed to determine whether these previous research findings remain valid for the e-learning implementation at KKU, and by extension, for our Saudi environment. Moreover, Kuo (2008) argues that being aware of student teachers' attitudes towards Internet-assisted language instruction is very important in evaluating and developing EFL teaching using technology.

Hypotheses

The study was premised on the following hypotheses:

1- There are no statistically significant differences between the control and experimental subjects on pre-testing on the achievement test.

2- There are statistically significant differences between the experimental group's Mean scores on pre-testing and post-testing in favour of post-testing on achievement.

3- There are statistically significant differences between the Mean scores of experimental subjects between pre-testing and post-testing on attitudinal assessment.

4- Blended e-learning environments have a positive effect on the students' attitudes towards Internet-assisted language learning and teaching.

Delimitations

The study was delimitated by both time and sample choices. Firstly, it was conducted in the academic year of 1431/1432 A.H. Second, the study was conducted on 140 Saudi female senior college EFL students at King Khalid University –College of Arts and Education.

Literature Review

Several empirical studies have been conducted to test the effects of the use of online teaching environments on student learning; most of these have been in favour of the integration of e-learning into classrooms. For example, King (2002) investigated the impact of online and blended classes on the development of quality and success of learning, teacher education and schools' educational programs. The results indicated that online discussions in the hybrid course promoted critical thinking, interaction with instructors and peer-to peer interaction. It was also found that online activities granted the students depth of insight due to their not having limited time as in classroom face-to-face activities. However, King also mentioned some limitations of the hybrid model, such as computer viruses, power failures and other technology problems.

In the same line, Cox, Carr and Hall (2004) evaluated the effect of online chat as a medium of instruction on students' performance and

participation, taking into consideration course design, group dynamics and facilitation style. It was found that these three factors contributed greatly to the successful use of this medium and to the participation of the students. Humbert and Vignare (2005) presented a case study based on the results of the first year of introduction of blended learning to the Rochester Institute of Technology. The authors reported that the results of that introduction were positive. The students were found to appreciate communication with one another, which increased because of the blended e-learning offered to them.

Riffell and Sibley (2003) investigated the impact on students' views of a blended learning biology course environment that included face-to-face classroom exercises and online homework. The results showed that the students enjoyed more interaction with their instructor than if it were a traditional face-to-face course. The students also indicated that online course homework enhanced their learning and time-management skills. Reasons, Saxon, Valadares, Kevin and Slavkin (2005) compared three different types of business course: face-to-face, blended and fully online. The courses were taught utilising similar pedagogical techniques. It was found that the Internet (online) course was better in performance than the other kinds of courses.

Johnson (2002) in his article 'Reflections on teaching a large enrolment course using a hybrid format' presented his experience using the hybrid method to teach a course including a large number of students. The author mentioned that traditional face-to-face instruction provided less interaction between teachers and students, limited access to course content and few outcomes of teaching. Based on his new experience of blended learning, Johnson found that planning, preparing and developing a large-enrolment hybrid course took much more time than would a traditional large-enrolment class, particularly because many activities needed to be completed before the beginning of the semester. It was also found that carrying out and maintaining a hybrid course took more time than would a traditional course. It was concluded that while there is no difference between the hybrid and traditional courses in terms of the efficiency of instruction, the hybrid instruction increases the students' interaction with their instructors and their ability to access course content.

Garrison and Garrison (2005) examined some discussions that occurred in both face-to-face and online modes. It was found that there

were similarities and differences in the two designs. It was concluded that college staff members should be trained to understand how to develop students' cognitive processing development through online discussions to make full use of blended learning environments that contain online discussions.

Wingard (2004) evaluated the effect of Web-based activities on the performance and attitudes of learners in traditional classrooms. The learners (course participants)reported that they experienced higher levels of interaction and comfort when using online delivery. Faculty members reported that such activities increased efficiency and were suitable for providing learners with updated course materials on the Web. They also reported that there was some continuity between the classes and student participation. Dziuban, Hartman, Juge, Moskal and Sorg (2005) explained different kinds of blended e-learning courses and their impact on student learning. In particular, the authors discussed the outcomes of blended learning, the effectiveness of the different styles and the students' levels of satisfaction. It was concluded that blended learning is a transformative construct in higher education.

As already mentioned, most of the studies that have dealt with blended e-learning were concerned with science and management courses. Few studies have dealt with e-learning's effectiveness on EFL learning. Further, as can be seen in the previous studies, most of the studies dealing with the effectiveness of blended e-learning have recommended the integration of technology into classrooms. However, there is still a weak tendency in some Arab countries to apply it (Mekheimer, 2005, p.149). One of the reasons behind this lack of interest is the fear that this kind of learning can lessen the importance of EFL teachers (Blumberg,2004). Al-Jarf (2004) adds other reasons for this lack of application related to the use of online instruction:

The effective use of technology depends on how it is used, what is being taught and for how long. Like [in] many parts of the world, use of online courses in EFL instruction in some higher education institutions in Saudi Arabia is not yet known due to insufficient number of PCs, lack of internet connectivity, lack of trained instructors and lack of administrative support (p.2).

Methodology

Research Participants and Sampling

The participants of the study were 140 female Saudi future teachers of EFL, studying as senior students in the College of Education, King Khalid University, Abha, Saudi Arabia in 2011. Future teachers entering the workforce were considered a suitable subject group for this research since their attitudes towards Internet-assisted language learning and teaching will affect their future EFL teaching. Their age group is between 20-23. The participants were randomly selected from the broader population of female students at this college.

Research Instruments

The Blackboard e-learning system was used to deliver the online part of the blended course for the experimental group participants. The participants were trained on the way to use the Blackboard e-learning system. The treatment required all of the experimental group's lectures to be presented online, even those that were also discussed in face-to-face sessions. Course e-mail and discussion boards were used, both for discussion and to provide more contact with the students. For the control group participants, the researcher used face-to-face lectures and discussion.

The researcher used a pre-test and a post-test for both groups to test the effectiveness of the blended course as experienced by the experimental group (see Appendix A). The test is taken from Al-Tale (2011). A paired-sample t test was used in the study. In addition, the researcher used a questionnaire based on that made by Shin (2007) to obtain the students' experiences and attitudes towards Internet-assisted language learning and teaching(see Appendix B). The questionnaire was designed to obtain the participants' background information and experiences in using the computer and Internet, as well as to determine their attitudes towards Internet-assisted language learning and teaching. Moreover, the SPSS program was used to analyse the data statistically. Microsoft Excel was used to compute the Means of the students' answers to the survey questions, and to draw the graphs that display the computed Means.

Research Design

An experimental design was used in the study. The independent variable was use of blended e-learning environment, and the dependent variables were students' academic achievement and attitudes. The independent variable was defined by the use of blended e-learning environment (as in the experimental group), or the use of traditional face-to-face teaching (as for the control group). The researcher divided the participants into two groups: an experimental group and a control group. She taught both groups. The experimental group was taught the English phonetics course using the blended e-learning environment, while the control group was taught the same course using the traditional face-to-face method.

Procedures

After dividing the participants into an experimental group and a control group, all participants were pre-tested on their knowledge of the materials (English phonetics) that would be taught to them. Experimental group students were also assessed for their attitudes towards e-learning. The two groups then studied the same materials. The students in the experimental group were taught using the Blackboard e-learning system as well as through face-to-face sessions. Approximately70 per cent of their lectures were face-to-face, with the other 30 per cent delivered online using Elluminate live sessions. The students had all of their lectures presented on the site, even those that were discussed in face-to-face sessions. These lectures included some introduced by native speakers in the form of YouTube lectures with self-correction quizzes. Course e-mail and discussion boards were also used. The students in the control group were taught the same materials, but using only face-to-face explanations and discussions, and assignments. The researcher used a questionnaire to test the experimental group's attitudes towards Internet-assisted language learning after the experiment (see Appendix B).

By end of the term (17 weeks), all participants had been post-tested. The students' scores in the pre- and post-test for both groups were compared statistically using the SPSS program. The results were displayed in tables and graphs. The researcher also used the same questionnaire to test the experimental group's attitudes towards Internet-assisted language learning. The students' reactions and behaviour were also observed throughout the

experience. The Mean number of the answers to the questionnaire were computed and drawn into graphs using Microsoft Excel.

Results of the Research

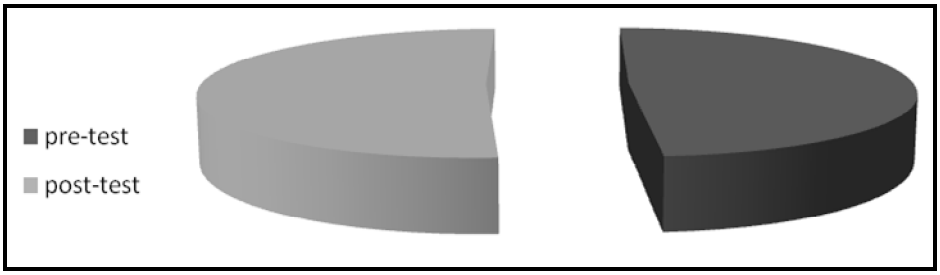
A paired-samples t test was used to test the effect of the use of blended e-learning on the performance of the participants on English phonetics. A questionnaire employing a Likert scale ranging from 4 (strongly disagree) to 1 (strongly agree) was given to the students to obtain their attitudes towards Internet-assisted language learning.

Effects on Students' Academic Achievement

Control group. The Mean score on the pre-test for the control group was10.6000, but the Mean score on the post-test for the same group was11.1143. The difference between the Means is -0.5143. The paired-sample t test shows that this difference is not significant: T = -1.400, P = .166 = 69. Therefore, it is concluded that the academic achievement of the control group in the post-test is low. Therefore, the first hypothesis is verified, indicating that both the control and the experimental subjects are equal in their performance, with no significant differences.

Table 1:
Mean difference between pre-and post-test for control group scores

Control group	No.	Mean	Mean difference	T value	Degrees of freedom	Sig. level
Pre-test	70	10.6				
Post-test		11.1	-0.5	-1.4	69	.166

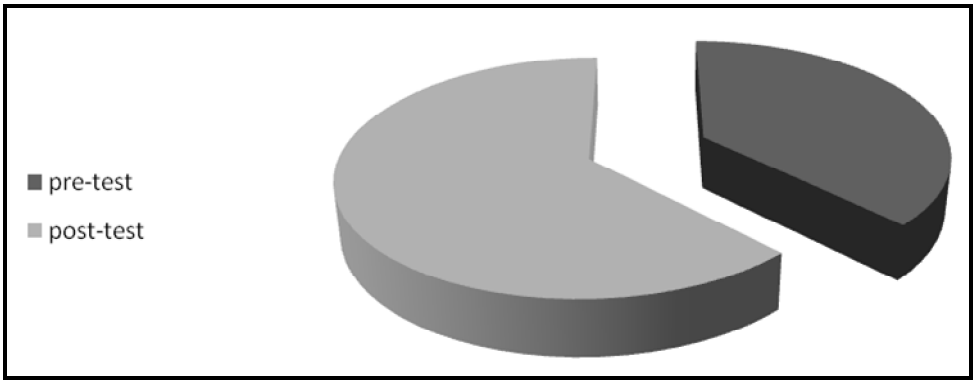


Graph 1. Mean difference between pre-and post-test for control group scores.

Experimental group. For the experimental group, Table 2 below shows that the Mean score on the pre-test was 9.6143 and the Mean score on the post-test for the same group was16.0857. The difference between the two Means is -6.4714. The paired-sample t test shows that this difference is highly significant: t = -9.617, P = .000 = 69. Therefore, it is concluded that the academic achievement of the experimental group in the post-test is high. This verifies the second hypothesis, that there are statistically significant differences between the experimental group's Mean scores for achievement on the pre-test and post-test in favour of post-testing.

Table 2: Mean difference between pre- and post-test for experimental group scores

Experimental group	No.	Mean	Mean difference	T value	Degrees of freedom	Sig. level
Pre-test	70	9.6				
Post-test		16.0	-6.5	-9.6	69	.000



Graph 2. Mean difference between pre- and post-test for experimental group scores.

Effects of Blended e-Learning on the Experimental Group Students' Attitudes Towards Internet-Assisted Language Learning and Teaching

Table 3
Experimental group students' attitudes towards Internet-assisted language learning and teaching

Questionnaire items	Strongly Disagree	Disagree	Agree	Strongly Agree
I enjoyed the experience of blended e-learning.	0 (0%)	3 (4%)	62 (89%)	5 (7%)
I think that the Internet can provide non-native speakers of English with a rich learning environment.	1 (1%)	5 (7%)	52 (75%)	12 (17%)
I think that the Internet is a useful tool for helping me to achieve my future EFL teaching purpose.	0 (0%)	4 (5.7%)	41 (58.5%)	25 (35.7%)
I think that Internet resources can replace textbooks.	3 (4.3%)	34 (48.6%)	27 (38.6%)	6 (8.5%)
I think that it is easy to find EFL teaching materials on the Web.	3 (4.3%)	18 (25.7%)	37 (53%)	12 (17%)
I think that EFL websites are useful for learning English.	1 (1.4%)	10 (14.3%)	48 (68.6%)	11 (15.7%)
I think that Internet-assisted learning will help me to improve my EFL learning.	0 (0%)	8 (11.4%)	59 (84.3%)	3 (4.3%)

The questionnaire given to the experimental group students at the end of the experiment yielded the following findings. As shown in Table 3 above, almost all of the students in the experimental group (96 per cent) enjoyed the experience of blended e-learning. The great majority of them (92 per cent)also felt that the Internet could provide non-native speakers of English with a rich learning environment. Similarly, 94.2 per cent of the students thought of e-learning as a useful tool for helping them to achieve their future EFL teaching purpose. However, more than half (52.9) maintained that Internet resources could not replace textbooks.

Other advantages of online resources included that most students (70 per cent) found it easy to find EFL teaching materials on the Web and 84.3 per cent of participants thought of EFL websites as useful for learning English. Further, 88.6 felt that Internet-assisted learning could help them to improve their EFL learning. These data show that the blended e-learning environment was positively received by Saudi EFL students. Thus, it was concluded that using blended e-learning is effective for teaching English phonetics to EFL students, and that the technology use positively affects students' attitudes towards Internet-assisted learning and teaching.

Discussion of the Results of the Study

Pre- and post-testing students' knowledge of target material (English phonetics) revealed that academic achievement following instruction was greater for the experimental subjects than for the control subjects. This difference was attributed to the blended e-learning environment to which the experimental group was exposed. This environment encompassed the use of Elluminate live sessions, discussion boards and course e-mail. This finding verified the second hypothesis, which predicted statistically significant differences between the experimental group's Mean achievement scores on pre-testing and post-testing in favour of post-testing. This finding confirms Saengsook's (2006) belief that using both visualised instruction and self-paced learning will enhance students' achievement level. It also matches the positive findings of prior research dealing with the effect of blended e-learning on students' performance (Terry et al., 2001). Many researchers already believe that blended e-learning is beneficial (Dziuban, Hartman& Moskal, 2004;Garrison & Kanuta, 2004). However, the positive findings of the present study, along with those of the previous case studies using blended e-learning in different courses (Collentine, 2000),provide strength to this notion by supporting belief with field work.

In addition, qualitative data from the questionnaire given to the experimental group show that the use of the blended e-learning environment in teaching English phonetics positively affects students' attitudes towards Internet-assisted language learning and teaching. This finding verifies the fourth hypothesis, that blended e-learning environments have a positive effect on student attitudes towards Internet-assisted language learning and teaching. The findings also confirm the

positive findings of prior studies dealing with the effect of blended e-learning on students' and teachers' attitudes towards Internet-assisted language learning and teaching (Al-Saai, Al-Kaabi & Al-Muftah,2011).

It has thus been concluded in this study that blended e-learning environment save the potential to improve EFL learners' academic achievement and positively affect their attitudes towards Internet-assisted learning and teaching. This finding confirms Lee's (2000) advice that educators should use computer technology in second language teaching. Lee argues that technology is motivating for students, and that it enhances their academic achievement. Dziuban et al. (2004) similarly recommend combining face-to-face teaching and online learning to increase learning outcomes, lessen student rates of attrition and please most faculty members and students. Due to the very positive attitudes of the students in this study towards the experience of blended e-learning and towards Internet-assisted language learning and teaching more generally, this research affirms Martyn's (2003) belief that the hybrid model provides an excellent means for institutions to combine the benefits of both online learning and classroom face-to-face activities. As shown by the findings presented above, blending traditional and e-learning in this way results in an efficient student-centred learning environment that can be expected to provide students with the skills and interest to pursue life-long self-learning, which is commonly held to be the best kind of learning (Hayes, 2004; Merriam,2001) .

Conclusions and recommendations

The present study will be of interest to EFL teachers and researchers on the benefits of using online instruction in combination with traditional face-to-face teaching. The findings encourage the use of the Internet in language teaching and learning, particularly owing to e-learning's demonstrated capacity to help to facilitate learner-centred teaching and learning environments and to foster the development of life-long self-learners. Further research on student achievement resulting from blended and online e-learning environments, and the effect of these environments on student attitudes towards e-learning, should be conducted in other EFL courses to determine whether the findings of this study remain valid for other language learning contexts.

Based on the conclusions drawn from this study, the following recommendations are set forth for EFL teaching and learning:

1- Both face to face instruction and online instruction should be combined in teaching EFL Phonetics.

2- Materials for teaching EFL Phonetics should be developed to be suitable for blended electronic learning environment, and should be varied to suit different learning styles of the students.

3- English departments in Colleges of Education and Colleges of Languages and Translation need to be provided with computerized language labs connected to the interent so that teachers of Phonetics and Listening and Speaking and related courses can utilize computer and internet -based instruction.

4- EFL Learners should be trained on how to use internet for EFL learning to encourage self-learning and long-life learning.

5- Student evaluation must be appropriate to the technology used; i.e., students' performance on EFL Phonetics need to be evaluated using authentic material adapted for assessment purposes in a blended e learning environment.

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Appendices

Appendix A: Pre-test and Post-test for both the Control Group and the Experimental Group

Oral Test

1. Open the book at page … read the words/sentences/parts of the passages.
2. What is the difference between /…/ and /…/?**Written Test**

I. Choose A if the statement is true and B if it is not:

1. All English vowel sounds are voiceless.
2. During the pronunciation of back vowels, the back of your tongue is high.
3. Both lingua alveolars /t/ and /d/ have strong aspiration.
4. The third-person singular –s in 'cats' is pronounced as /z/.
5. 'k' is silent in 'know'.
6. The vocal cords vibrate during the pronunciation of all consonant sounds.
7. /p/ is a sound that is pronounced by using the lips.
8. For /l/, the air is not released along the sides of the tongue.
9. During the pronunciation of nasal sounds, the oral cavity is closed.
10. Liquids are also called 'semi-vowels'.
11. 't' in 'tray' is aspirated.
12. The word 'sister' has six sounds.
13. Diphthong means that we put three sounds together.
14. There are three kinds of simple English vowel sounds according to the part of the tongue used.

II. Choose the correct complement:

15. The letters 'sh' in 'shoe' are pronounced as _____.

    A. /s/ B. / ʃ/ C. /tʃ/ D. /ʒ/

16. The vowel sound in the word 'pie' is _____.

A. short B. long C. diphthong D. triphthong

17. During the pronunciation of the vowel sound in 'reed', your lips are_____.

A. half-rounded B. rounded C. spread D. half-spread

18. The vowel sound /i:/ in 'peel' is _____.

A. front B. central C. back D. none

19. The vowel sound /ɪ / in 'hit' is_____.

A. close B. open C. mid-close D. mid-open

20. The vowel sound in 'cot' is _____ the vowel sound in 'cod'.

A. shorter than B. longer than C. the same as D. none

21. The 'ed' in 'opened' is pronounced as_____.

A./t/ B. /d/ C. /əd/ D. /id/

22. During the pronunciation of /ʒ/, your vocal cords are _____.

A. vibrating B. open C. closed D. none

23. The underlined part in 'would you' is pronounced_____.

A./ʃ/ B. /tʃ/ C. /ʒ/ D. /dʒ/

24. When you pronounce /d/, you bring the_____ of your tongue firmly against your alveolar ridge.

A.tip B. back C. sides D. center

25. The underlined part in the noun 'use' is pronounced as_____.

A./s/ B. /z/ C. iz D. ez

26. The regular past tense marker '-ed' is pronounced as /d/ when it is _____.

A. preceded by voiced sounds B. preceded by voiceless sounds
C. followed by voiceless sounds D. followed by voiceless sounds

27. /p/ and /b/ differ in their _____.

A. voicing B. manner of articulation
C. place of articulation D. Both B and C
E. None of the above

28. The vocal cords are open during the pronunciation of all _____.

A. consonant sounds B. voiceless sounds

C. voiced sounds D. all speech sounds

29. The air is released through the nose during the pronunciation of _____ .

A./k/ B. /m/ C. /n/ D. both B and C

30. /p/, /t/ and /k/ _____have strong aspiration.

A. always B. never C. sometimes D. none

Appendix B: Questionnaire

Questionnaire

This questionnaire is designed to investigate your attitudes towards the implementation of IALL for teaching Phonetics at the English Dept., Colleges of Arts and Education, Abha. There is no right or wrong answer for each question. Please respond to all sections of the questionnaire.

Section 1: Biographical Data

Please write your responses or tick one (✓) that best represents your view.

1- Name (Optional):
2- Age:
3- GPA:
4- How many years of Phonetics learning experiences do you have?
5-

Section 2: Attitudes towards Internet-Assisted Language Learning

1- I think that the Internet can provide non-native speakers of English with a rich learning environment.

Strongly Disagree Disagree Agree Strongly Agree

2- I think that the Internet is a useful tool for helping me achieve my future EFL teaching purpose.

Strongly Disagree Disagree Agree Strongly Agree

3- I think that Internet resources can replace textbooks.

Strongly Disagree Disagree Agree Strongly Agree

4- I think that it is easy to find teaching EFL materials on the Web.

Strongly Disagree Disagree Agree Strongly Agree

5- I think that EFL Websites are useful for learning English.

Strongly Disagree Disagree Agree Strongly Agree

6- I think that internet-assisted learning will help me improve my pronunciation.

Strongly Disagree Disagree Agree Strongly Agree

7- I think that internet-assisted learning will help me recognize consonants.

Strongly Disagree Disagree Agree Strongly Agree

8- I think that internet-assisted learning will help me recognize vowels.

Strongly Disagree Disagree Agree Strongly Agree

Thank you very much for your cooperation and time.