

## Incorporating E-learning in teaching English language to medical students: exploring its potential contributions

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### Abstract

**Background:** The spread of technology has influenced different aspects of human life, and teaching and learning are not exceptions. This study aimed to examine the potential contribution of the use of technology in teaching English language to medical students.

**Methods:** This qualitative-action research study was conducted in Birjand University of Medical Sciences (BUMS), with 60 medical students taking a general English course in the Fall Semester of 2015. The class favored different tools and multimedia facilities such as a tube channel, e-dictionaries, educational films, and e-textbooks to enhance students' learning. In addition, the class had a weblog in which students could upload assignments and receive feedback from peers and the instructors.

**Results:** The results revealed that e-learning could enhance students' language proficiency and facilitate the teaching process. Learners preferred to use more e-dictionaries to learn the meaning of the new words, watch English medical films to boost their speaking and listening skills, and use the electronic version of their textbook as they could carry it wherever they wanted.

**Conclusion:** The students preferred this method of learning English as they became more independent by using the electronic facilities. They found that learning English did not have a fixed institutionalized method, and e-learning activities could provide them with authentic input for language learning even outside of the classroom.

**Keywords:** E-learning, English Language, Medical Students, Technology.

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### Introduction

Electronic learning or e-learning refers to "the use of information technology or the internet for learning activities" (1). With the advancement of technology and more access to the internet, e-learning has become more important and even some scholars believe that it has revolutionized medical education (1). This is because e-learning has made it much easier for the learners to access and share knowledge and information (2). Many researchers have tried to examine the possibility and effectiveness of integrating e-learning into medical curricula (1,3-7).

Incorporating e-learning and computer assisted language learning (CALL) in Eng-

lish language teaching is rather a new, but very growing scientific area aiming to help learners improve their language proficiency more efficiently (8,9). Considering that English language is the international language and people need to use it to satisfy their communicative needs, we could expect that the development of technology helps the learners to improve their knowledge of this language more conveniently.

Technology has made it possible for teachers to integrate different teaching methods based on the needs of learners (10). Many researchers (8,11) believe that innovative technological methods foster the interest and the motivation of the learners

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and enable them to access the target language, more input, and interaction opportunities. Furthermore, they could help the teachers to manage their teaching methods and the class more effectively, and provide students with more authentic instructional materials. Although it may sound useful, many teachers do not use this technology in their classes because of the lack of time, knowledge, and interest (12).

In the recent years, with the spread of smartphones and internet, students are more willing to use technology and online resources as assets to learn language (8). Nowadays, many students have dictionaries on their android systems, which can be helpful for finding the meaning(s) of the new words. EFL teachers can also design special tasks based on the use of different kinds of e-dictionaries (13). According to Golonka, Bowles, Frank, Richardson, and Freynik (11), the use of electronic dictionaries is very helpful since they facilitate quick search of words, and help students find the required information very easily. In a survey by Loucky (14), he found that Japanese students prefer electronic dictionaries to paper dictionaries, as they are more accessible and handy. Previous studies indicated that using technology could help learners improve their language proficiency (8,15-18); for example, it has been shown that learners who use technology are better readers and perform better in reading activities (19).

Besides, in the new era, the educational systems try to promote the idea of teaching learners to be independent, rather than teaching them in a directive teacher-centered manner; accordingly, it is the teacher's responsibility to change the methods based on the needs and demands of the students (20). The judicious use of blogs, twitters, tubes, podcast, smart boards and phones can facilitate and enhance both teachers and students' language learning as the use of these facilities is not only provide the learners with authentic input, but also they are gates to receive and share information (20). Moreover, it could help

students to be more independent as they "have control over the content, learning sequence, pace of learning, time," etc (1).

Reviewing the literature about using e-learning in teaching English language to medical students indicates the paucity of studies in this area. Besides, teaching general English language courses in Iranian universities has been considered as not very effective by stakeholders in developing students' language proficiency (21-24), mainly because of its reliance on "Grammar Translation Method" (25). Therefore, this study aimed at examining the potential contribution of using technology to teach English language to medical students to help them work on all the four language skills (speaking, listening, reading, and writing) simultaneously.

### Methods

This qualitative study enjoys an action research design, as the researchers were the instructors and observers of the learning process. Action research "*refers to a disciplined inquiry done by a teacher with the intent that the research will inform and change his or her practices in the future*" (26). In fact "*action research is conducted by or in cooperation with teachers for the purpose of gaining a better understanding of their educational environment and improving the effectiveness of their teaching*" (27). The researchers in this study were interested to find whether the integration of e-learning can enhance students' learning and increase the effectiveness of their instruction.

The participants were 60 (35 male and 25 female) medical students taking a general English course in the Fall Semester of 2015. The class was held for 25 sessions, each of which lasting for two hours during the term.

### Teaching Context

The study was conducted in Birjand University of Medical Sciences during the Fall semester of 2015. The class was equipped with multimedia facilities such as comput-

ers, video projectors, and open access internet. The BUMS website has also a tube channel in which students and teachers can upload their educational videos and share them with others. Therefore, this course has a tube page in which, educational videos related to the textbook, were uploaded by the teacher on the weekly basis and the students could watch them.

### Procedure

At the beginning of the course, the students were asked to reflect on their approach to English language learning. Among all the answers, they mentioned the use of films, the internet, and the use of dictionaries on their phones. During the course, they were entered into an integrated and new process of language learning with many multimedia facilities. The main features of the class were using a tube channel, watching online films, using e-dictionaries, and having a weblog in which students could upload their assignments or ask questions to have the feedback of their peers and the instructors. These features of the class are schematically shown in Figure 1 and are explained more as follows:

### Tube Channel and Watching Films

There was an online movie time in each session of the class in which students were asked to watch medical films related to the

topic of the class. The films were selected and uploaded to the BUMS tube channel about one week before the time of each class to be easily shown in the class time. Uploading the films beforehand was very advantageous as the instructors made sure that they could be played without any waste of time in the classroom.

After watching a part or the full episode of a film, students were asked to share their ideas and talk about the words and pictures. Through these activities, they had to think about the experiences, activate their memory, share opinions, or sometimes work on the printed text of the movies to check and compare their understanding of the visual text with the written one. Here, they could use their dictionaries and find the relevant information about the new words such as the definitions, synonyms, pronunciations, and the examples provided. The special characteristic of these e-dictionaries was the verbal pronunciation of the words as the students had serious problems pronouncing English words correctly. Part of the reason might be the fact that in Iranian medical universities, many of the medical terms are pronounced based on the Farsi pronunciation of the words which are borrowed from French (“/interne/”, “/stagiaire/”); and accordingly, students face difficulty when encountering the English words with a different pronunciation in

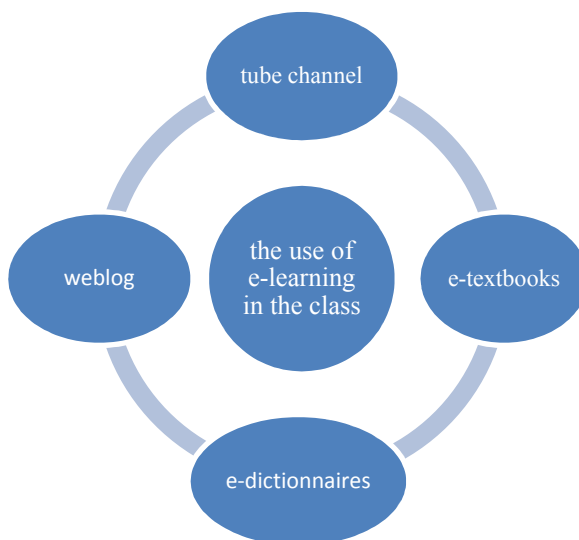


Fig. 1. Using E-learning during the Course

the films. These activities to check the pronunciation and the spelling of the words in the class were very helpful as the words were contextualized in the authentic movies and texts. Each part of the films that needed more revision on students' part was replayed, and the words and pronunciations were taught and practiced.

### *Using E-Dictionaries*

When learning another language, students use dictionaries as dependable sources since they provide them with the ability to be certain of their guesses about the meaning of the new words. Accordingly, using dictionaries can act as a facilitator of language learning process, if directed in a controlled way and do not make learners excessively dependent on them. Based on this assumption, the students were allowed to use their dictionaries judiciously after they guessed the meaning of the words.

The in-class use of the internet to clarify unknown topics with pictures also helped the learners to master the medical English words and topics that they could not recognize, and they could share them with other classmates. While reading the medical texts, the students were asked to first guess the meaning of the words and sentences, and if the definitions were not clear or if they needed to check their guesses, they used the electronic dictionaries they had on their smart phones. It should be mentioned that at the first session of the class, the students were advised and helped by the teachers to install the e-dictionary on their phone. The students could check the exact pronunciation, the synonyms and antonyms, and other relevant information about the words in the class, using their e-dictionaries.

### *Class Weblog and E-Textbooks*

The class was also supported with an English weblog, which was designed for the students. In this weblog, the materials that were discussed in the class or the review of the films with pictures and new words were shared. Moreover, some of the

homework was assigned to the students through the weblog. In addition, the students could ask questions, share ideas and experiences, using the weblog. Another important feature of the weblog was a list of useful websites introduced by the teachers that the students could use to improve their language proficiency.

Apart from the audio-visual materials used in the class, two e-textbooks were taught as the instructional materials for this course. One was a pamphlet consisting of different medical texts and some strategies for being a more skillful reader that was prepared by the researchers for this course. The second book was named: "*Home Health Handbook*". Both textbooks were scanned and turned into a pdf file so that the students could use them in their smartphones and laptops. One important feature of the readings in the e-textbooks was the fact that they were about medical issues, which made students more interested in reading and talking about them in the class.

### *Data Collection and Analysis*

At the end of the course and after 25 sessions (50 hours) of instruction by integrating e-learning activities, an open-ended questionnaire was distributed among the students asking them to reflect on their journey of learning English through this innovative approach, which was applied in the class, and answer the questions. The contents of the students' answers to the open-ended questions were analyzed, and the themes were extracted and presented in the following section.

### **Results**

The results indicated that the participants believed that integrating e-learning activities in the class helped them to achieve the followings: (1) to be more independent learners by using the educational websites introduced in the class weblog; (2) to have access to more authentic written and audio-visual materials to improve their language; (3) to increase their knowledge about their

major by reading and watching materials related to the medical issues; (4) to work on the four language skills simultaneously; (5) to become familiar with how to use e-dictionaries and other online resources to learn the language; (6) to be more motivated to learn English by reading and watching relevant materials on their interested field of study; and (7) to have access to the teachers and peers via the class weblog even when they were outside of the class.

What follows are some of the students' comments about the class:

#### *Sample Excerpt 1*

One student said, *"The films that were shown in the class were very interesting and we liked them. I think it would be very beneficial if we worked on the weblog more to share our ideas and talk about the films and the topics that were discussed in class."*

As maintained in this comment, having a weblog for the students provided them with the opportunity to share their ideas and learn from their peers and the instructors. If properly used, a weblog can be a type of learning environment that connects the classroom with the outside world.

#### *Sample Excerpt 2*

Another student commented, *"I think we could also enjoy a group in Telegram to exchange ideas and information."*

The number of social media, which students could use for learning, has been increasing. Recently, many students have used Telegram, so some of them believed that in this context having a Telegram channel for the class could be helpful as they could share the learning materials, and receive the feedback of the peers and the instructors on their writing and oral assignments, etc.

#### *Sample Excerpt 3*

One student said, *"Using the tube channel is very helpful. The films that we watched were very interesting."*

#### *Sample Excerpt 4*

Another student noted, *"A good point about this class was the use of films and the weblog."*

#### *Sample Excerpt 5*

A student said, *"This was a new method and I didn't know that I could learn English this way. I learned a lot about my major by watching the movies."*

Watching medical films was an integral part of this class. Birjand University of Medical Sciences has developed a Tube Channel, so based on the materials selected to be covered in each session, the instructors could search and upload the relevant and authentic video clips. As the content of the films were about medical issues, the students were more interested to watch them because they could improve their knowledge of their discipline and English language simultaneously.

#### *Sample Excerpt 6*

A student said, *"This course helped me to improve my listening and speaking skills. Now I can find audio files and listen to them several times to improve my listening."*

#### *Sample Excerpt 7*

Another participant noted, *"I heard from my friends that in other general English classes the students translate texts about different topics, and the classes are very boring. However, this class was not boring because we read texts and watched films, and talked and wrote about them."*

As the main method for teaching English used in Iranian public schools is still 'Grammar Translation Method', which focuses mainly on memorizing vocabularies and learning grammatical rules while ignoring the speaking and listening skills, many students have very low language proficiency when entering universities. Therefore, it is the responsibility of the instructors at the universities to practice more innovative approaches and methods to language pedagogy and make students familiar with Eng-

lish language speaking, listening and writing skills as students will need them during the course of their studies. There are many teaching and learning materials for learning English language online, and they are only a few clicks away. Therefore, teachers should familiarize students with these materials and resources.

#### *Sample Excerpt 8*

Another participant noted, *“I think it is not possible to learn English well by passing one general course in our crowded class, but the fact that I learned how to work on my language using online sources was very satisfying.”*

#### *Sample Excerpt 9*

One participant commented, *“I think the best part of this course was showing me a way to find useful materials for learning English online. Now I can use them to learn English better even after the course.”*

#### *Sample Excerpt 10*

Another participant said, *“I had poor English proficiency, but I used the links in the class weblog to learn English, and my language skills are improving.”*

Students believed that they should have opportunities to practice English language even after the course. Therefore, introducing good educational websites to them was considered as a great help since they could find authentic materials, watch authentic videos, or even participate in forums and ask their questions and share their learning experiences with others.

### **Discussion**

The results obtained in the study revealed a significant shift in the learning of the students as they talked about the differences of this method and other methods of learning English that they had experienced previously. The use of multimedia and the internet brought a new atmosphere to the class, which was more interesting for the students. The e-dictionaries were fast, easily accessed, user friendly, and provided the

students with more information such as the origin of the words, the audio pronunciation, quick access to the meaning and definition of the synonyms or opposite words. Films brought authentic language to the class and powered the students with a lot of input such as words, pictures, pronunciation, and contextualized language.

The access to the internet in the class provided the students with the opportunity to search for difficult contents, and learn more about them by using the information they could find. The class weblog helped the students to make a link between the class time and the time outside the classroom by having access to other students and the instructors.

In line with the findings of this study, Larsen Freeman and Anderson (28) maintained that the use of technology in language teaching could be beneficial for both students and teachers. For teachers, it provides “teaching resources” as they can find authentic written and audio-visual materials online (28). It provides the students with more access to the target language as they can find many authentic materials (28). Another study revealed that incorporating e-learning activities increased students’ motivation to the class content (29).

The spread of technology and the internet in all parts of the world has influenced different aspects of human’s life, including teaching and learning. Currently, there are so many online courses for teaching different subjects, including English language. As this method of teaching is more convenient for the students and they can take the course from home, it seems that these courses will have more supporters in the future, especially for English language learning that does not need many laboratory facilities.

The incorporation of technology in language teaching can also help students to be independent learners. Therefore, instead of ‘giving them the fish’, the teachers should devote some parts of the class to teach them ‘how to catch the fish’. If teachers introduce to learners good learning materials

and educational websites, and teach them how to use them effectively, the students could improve their language by themselves.

This study tried to shed some light on the benefits of incorporating technology in teaching English language to medical students. The experience of this study fostered students' learning as they used to find English language so frustrating and almost ineffective in general English courses. The change of atmosphere was evident and it freed the students from doing direct translations and instead gave them a hand in comprehending the language. This study found that e-learning could enhance students' language proficiency and facilitate the teaching process, and further, it helped the students to learn faster and expand their input repertoire of their knowledge of English language.

Accordingly, this line of research should be continued by other researchers to explore more extensively the practical contributions of using technology in teaching English language to medical students. Moreover, based on the findings of this study, it is recommended that e-learning be incorporated by English language instructors in teaching English language courses to medical students. Furthermore, the officials of the medical universities should reduce the class size and provide more infrastructures such as multimedia devices for more effective implementation of e-learning activities.

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### Conflict of Interest

The researchers declare no conflict of interest.

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