

The Effect of Virtual Classes on Student English Achievement at Tabuk Community College

Mohammed M. Alhawiti
University of Tabuk
Tabuk, Saudi Arabia

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Abstract. This paper examines the effectiveness of virtual classes on student English proficiency at Tabuk Community College for the first semester of academic year 2016–2017. The author believes that the state and unified system of education gave equal chances of learning English in most educational establishments in the Kingdom of Saudi Arabia. The population included 224 learners from the preparatory year program. The sample for the study consisted of two groups: the first represented the control group, and it consisted of 24 male students. The second group represented the experimental group, which consisted of 26 students from Tabuk Community College. The latter group comprised the experimental group, which studied via virtual classes, while the rest comprised the control group and studied via the traditional method. The independent variable—in other words, the treatment—consisted of the proposed virtual classes used to teach the students of the experimental group at Tabuk Community College. The dependent variable was student English proficiency. The study concluded that the students in the experimental group advanced significantly higher on the English achievement test, and the results of the two groups on the post-test were statistically significant for every component of English language.

Keywords: MOOC, Virtual Classes, TCC, PYP, Computer Applications.

Introduction

The development and improvement of higher technology (e.g., Facebook, YouTube and virtual classes) have changed methods of communication between people all over the world. Knowledge acquisition and knowledge exchange always use novel methods, such as distance learning, tutorials and lectures, that were not used before. These applications enable users to communicate, learn, chat, and interact with each other easily. Husu (2007) proposed that the new innovations in the field of information technology have massively helped

enhance the communicative and interactive methods in virtual classes, thereby helping people to interact and exchange knowledge collaboratively on a far wider scale. Depending on the constructivist paradigm, a student obtains and constructs new experiences by attempting initial self-motivated processes of using available knowledge. Bruner (1990) also mentioned that learners are motivated to share in a direct and indirect meeting with other learners and teachers as well as to cooperate with others in the classroom using outside and curricular practices to acquire new experiences. Additionally, modern computer applications have helped students and teachers communicate through this environment.

Tifaarlioglu (2011) emphasized that the modern channels of communication learners use have developed educational teaching methods in general, especially in the field of foreign language learning during the last decade. According to Facebook (2011), more than five hundred million people always use Facebook to communicate, interact, and socialize with others directly and indirectly.

More specifically, this study proposed the following question:

What is the effect of virtual classes on student English proficiency at Tabuk Community College (TCC)?

Social Media and Virtual Classes Use by students

Many modern technological applications are used by students in high schools, colleges and universities at different levels of their social and academic lives. Different modern smart tools are used by those students through networking, text messaging, blogging, content sharing, online learning and much more. In recent research, many computer applications and platforms have been found to be used by learners and teachers in most facets of their lives, especially Facebook, Wiki, YouTube, Bulletin Board, LinkedIn and Twitter.

The attention of experts, teachers, educators, and curriculum designers is drawn by people's wide use of social media to allow those people to use these modern technological and smart audio-visual aids in the field of education, particularly in teaching methods in both traditional and distance-learning environments.

Many definitions of virtual classes are provided in formal and informal resources. Margaret Rouse (2016) defined virtual classrooms as an online learning environment that is non-restricting, affordable, flexible, practical and accessible.

Participants

The participants in this study entered with an Arabic-language-school background and are supposed to understand and express themselves in good English during their lectures. However, in reality, that is not the case. As soon as they enter college, students suddenly come to realize that they need English to understand the courses in the different specializations available at Tabuk Community College, including computer science, medical records or administrative science; i.e., they need the language as a medium of

communication in the classroom. They are shocked when they are faced with a lecturing method that depends essentially on English. In short, a big gap is always present between the real proficiency level of the preparatory-year program students with respect to general English and the take-off point in the teaching of English at the college level. This gap invariably results in a cumulative language deficit.

This study is, therefore, a trial experiment on the urgent need for the use of technology to help TCC students at the University of Tabuk overcome the usual difficulties that emerge between the processes of teaching and learning English and the use of modern technology in education.

The study sample consisted of fifty students belonging to the college's preparatory year program (PYP) who had been studying English for seven years in state schools. The age range of the participants was between 18 and 22 years. All the learners had effectively concentrated on English as a mandatory subject in their government funded schools and in TCC. To create uniformity among the members, the students were randomly divided into two sections: group 1 represented the control group, while group 2 represented the experimental group.

To control all the variables of the study—such as student level, duration of the study, text content, teacher qualification and teaching environment—the students in the control group were taught the same terms, definitions, sentences, acronyms, new idioms and abbreviations, all of which was taught to the students in the experimental group via the virtual classroom. Therefore, to obtain valid and reliable findings, the researcher did his best to control the impact of any external variable, meaning the same course content was taught to all learners in the two groups.

The second group was the experimental group and consisted of 26 students from the first year. This group studied via virtual classes, while the control group studied via the traditional method.

Literature Review

The development and unbelievable improvement of high technology in different types of computer applications has become more affordable, practical, and accessible for language acquisition and learning (Lou, 2010). As a result, the teaching/learning process has been influenced and improved by computer applications that transform the methods of teaching and learning from restricted to unrestricted environments in which learning can occur (Liu, Shih & Tsai, 2011). These applications provide opportunities for users to create an online community where they can mutually communicate, interact, and exchange ideas and opinions (Richardson, 2007; Shih, 2010). Additionally, familiar blogs or social media sites enhance student teamwork abilities, giving them the chance to express their views and give feedback to other participants more feely. Technological applications enable their users to communicate actively with each other, which will eventually result in far greater learning efficiency. (Chen, Liu, Shih, Wu, & Yuan, 2011; Lou, 2010). Thus, virtual classes can be a modern audio-visual aid in teaching English that enables learners and instructors to deliver such tasks (Lou, 2010; Shih, 2010).

Past studies have revealed that electronic distance learning via advanced

computer applications has become developed and advanced for education (Shih, 2010). In a study conducted by Barker and Gossman (2014) on virtual learning classes, they reported on an online survey into virtual environments used by 248 learners where Moodle development was used to motivate learners in learning English as a foreign language. They also discovered how virtual environments could be effective in improving student satisfaction, learning atmosphere and language proficiency. Smyth (2011) noted that computer applications enriched the process of teaching and learning and that using video conference technology can provide students with chances for more methods of electronic cooperative knowledge acquisition, both directly and indirectly. Hsu and Lin (2008) demonstrated how smart tools and internet applications can be considered a main method of teaching and learning globally.

Chang, Chen, and Li (2008) reported that students can acquire experiences through modern and developed technological applications, such as virtual classes, but they could not achieve the same results in the traditional classroom. Learning online enables students to practice their knowledge and access it freely without restrictions. However, the content of such courses should be designed on the bases and principles of e-learning, and the teachers should be experienced with these methods of teaching. In addition, Li and Chen (2009) discovered that online team learning gave the learners access to many facilities without the need for a traditional classroom. These facilities were explained in the introduction of this paper. Additionally, all parts of the educational process, including the learner as individual, teamwork and teachers, can use the online learning facilities in any community educational establishment (Cornelissen, 2011).

Yilmaz (2015) conducted a study to examine the impacts of a live virtual classroom on student achievement and to explore student feedback regarding a live virtual physics classroom using distance-learning technology. His sample consisted of 63 students from Distance Computer Education & Instructional Technology. During all the experimental course's classes, the instructor delivered all instruction and exams virtually. The study concluded that the experimental group using a live virtual physics classroom had significantly higher scores than students in traditional lessons, and the students who were interviewed about the experiment identified some important considerations about virtual classrooms.

Khalid (2016) conducted research for an MA dissertation about the effect of employing a virtual learning environment for teaching science for sixth grade students to evaluate their achievements in a science course at UNRWA schools in Nablus District. The results showed that the differences were statistically significant between the mean scores of the experimental group who used the virtual class and the control group who did not. The researcher recommended employing a virtual environment in teaching and learning science for all grades, along with the use of modern technology.

A number of studies also revealed that group-based and collaborative activities could result in active learning (Liang, 2010). Online group communication enabled isolated learners or users who rarely participate in real and direct discussions to participate effectively in group discussions on different topics and in different courses through virtual classes or online dialogues

(Chang, Chen, & Hsu, 2010). In addition, the different images of communication between learners and their teachers and between learners and learners could be developed by these computer applications, which increased the learners' understanding of courses and topics (Liu, Ho, & Song, 2011).

A substantial number of people use different internet applications in poor, developed and rich countries all over the world for social, commercial, technological, educational and academic purposes. For example, Facebook has more than five hundred million active users currently (Facebook, 2011).

Many studies suggested that the outcome and the quality of student learning could be increased and improved via online peer assessment and team evaluation (Yang & Tsai, 2010). The study conducted by Chang and Chen (2009) concluded that students could evaluate their colleagues' performance and assignments, giving the necessary feedback immediately and directly in a teamwork fashion through virtual classes that relatively improved the educational process. Additionally, Barak and Refaeli (2004) examined peer assessment and knowledge exchange in a postgraduate MBA program and concluded that peer assessment through online group communication would enrich learning quality, criticism building, and knowledge exchange as well as enhancing the student environment. Liang and Tsai (2010) also revealed that participating in peer assessment of learners' writing is a very important function of the educational process. At the same time, Xiao and Lucking (2008) conducted a study in which they revealed the use of Wiki interactive software was very important to enable most of the learners to enrich their knowledge and ability in academic writing skills through their role-play as assessors in online group discussion. Researchers found that the role of the assessment changed through online peer assessment as another evaluation option in the process of education in general (Wen & Tsai, 2006).

Another study, conducted by Shih (2010), reached the conclusion that blending online learning with traditional teaching helps to achieve the required learning outcomes for students and teachers as well as facilitate online cooperative learning. Most study results in education recommend the beneficial influences of blended teaching and learning on student learning. Lim and Morris 2009, in addition, believe that blended instruction can enrich education, knowledge acquisition, social communication, cost effectiveness, and ease of revision, which are considered effective stimuli for second language learners to learn English more productively and effectively.

Therefore, this study examines the influence of virtual classes on student English proficiency at Tabuk Community College during the first semester of academic year 2016–2017.

Research Method

Data and Methodology

This study investigates the efficiency of virtual classes on student English proficiency at Tabuk Community College for the first semester of 2016–2017.

The Population

The population included 224 learners from the preparatory year program at Tabuk Community College for the first semester of academic year 2016–2017.

The sample

The study sample consisted of fifty students who belong to the college's preparatory year program (PYP), and who had been studying English for seven years in state schools. The students were divided into two groups: the first is the control group, which consisted of 24 male students. The second group is the experimental group, consisting of 26 students from Tabuk Community College (TCC). The experimental group studied via virtual classes, while the control group studied via regular methods of teaching that depend on traditional classes. The age range of the participants was between 18 and 22 years. The authors thought that the state and unified system of education gave the same chances of learning English in most educational establishments in the Kingdom of Saudi Arabia.

The variables of the study

The variables of the study were the following:

Independent variable: The treatment, which consist of the proposed virtual classes on the students of the experimental group in Tabuk Community College.

Dependent variable: Student English achievement in the following English components: reading comprehension, vocabulary, structure, listening, speaking, and writing skills.

Test validity

The first draft of the test was constructed and revised by the researcher, tested on two students, and then revised again to be more appropriate. While producing the test items, the following points were taken into consideration:

- A survey of previous English textbooks was carried out to select appropriate test items.
- Grammar targets from the English textbooks were adopted.

Then, the second edition of this proposed test was revised, reviewed and judged by a jury of two faculty members, experienced instructors and two native experts in education to evaluate whether the test was proper for the study participants. In the light of the faculty members' comments, the tests were adjusted, corrected, and produced as a final draft by the researcher.

Discussion and Findings

This study aimed to examine the effectiveness of virtual classes on student English attainment at Tabuk Community College and to evaluate student development in English learning. The following components of English

proficiency were investigated: reading comprehension, vocabulary, structure, listening comprehension, speaking and writing.

After establishing the validity and reliability of the pre-test, the pre-test was then administered to discover the relationship between the two groups at the beginning of the experiment.

Table 1 summarizes the statistical findings of the pre-test conducted at the beginning of the treatment on the experimental and control groups of students. As can be seen from the table, the mean of students in the control group is (33.4) and the standard deviation of the students in the same group is (6.96), while the mean of students in the experimental group is (30.69), and the standard deviation of the students in this group is (8.07). These results indicate that no statistically significant difference was found between the first and the second groups in the English achievement pre-test. Therefore, it can be concluded that the two groups showed almost equivalent knowledge of English language at that particular stage.

Group	No. of students	Mean	Std. deviation	Sig.
Control	24	33.4	6.96	.278
Experimental	26	30.69	8.07	

Table 1: Results of the pre-test, mean scores and standard deviations of the control and the experimental groups

Table 1 indicates that students in the first group also achieved higher mean and component scores than students in the experimental group on the English achievement test. The differences between their mean scores were statistically significant at a level of $\alpha = 0.05$.

The study was conducted among first year undergraduates of TCC. The authors tended to follow simple computerized statistical process data analysis, avoiding complicated statistical analysis, to enable ordinary readers to understand the results of the study.

Students were distributed into control and experimental groups. The experiment was administered to collect information about student English levels in the physical and virtual classrooms, and first year academic daily performance was the subject of the study. The teachers were asked to record their observations and notes about the subjects of the study, both negative and positive, during the experiment. Additionally, they were asked to ask students in the virtual classes some related questions about the experiment to be used for feedback. Each question was related to usual day-to-day activities, and each answer was designed to correlate with a learning virtual class.

Because each oral question allows respondent to select one or more options, different learning style combinations (multiple learning styles) were possible. Since questions related to virtual class activities, respondents were able to freely express their normal response(s) for given situations. If respondents noted that any question was not related their personal experiences, they were

free to leave it without any response. Each question was assessed based on a teacher evaluation that was previously related to the experiment.

As a result of written and oral feedback, the researchers noticed that the students in the experimental group showed that they were interested in the virtual classes. They tended to use daily English expressions, idioms and phrases in the virtual classes and to prepare their homework to a higher degree.

Additionally, the students in the experimental group enjoyed the class to a greater extent and hoped it would not end.

The results were presented in Table 2, summarizing the statistical results of the pre- and post-tests of the first and the second groups. The tests were administered at the end of the treatment on the students of the experimental and the control groups. The statistical analysis of the two groups was further tested to determine if there was any significant difference between them. As can be seen, the percentage of student success in the control group is (66.7%), while the percentage of student success in the experimental group is (92.3%). This result means that a statistically significant difference was found between the first and the second group in the English achievement post-test. Therefore, it may be concluded that the students in the experimental group performed much better than the students in the control group. The results of the two groups on the pre-test revealed that they were nearly equivalent.

Group	No. of students	Over 50	Pre-test	Over 50	Post-test
Control	24	1	4.2%	16	66.7%
Experimental	26	1	3.85%	24	92.3%

Table 2: Results of the pre-test and post-test for the control and experimental groups

The high mean score and the component scores for the experimental group are apparently due to the virtual classes that emphasized most of the educational and psychological principles of teaching and learning, that included the student motivation and interest and that focused on the attractive educational tool. Many scholars and experienced teachers indicated that virtual classroom use in teaching English enhanced achievement levels. The findings of the present study agree with the findings of Chen and Bryer (2012), who indicated that the use of social media and modern computer applications by 57 teachers and instructors was for personal communication and virtual classes for academic practice in 28 high education establishments in America.

In methods of teaching and learning English, the learners' needs and interests are considered via the modern educational aids and tools more than is the case with traditional teaching methods. Therefore, within the context of this concentration, virtual classes can be seen as responding to modern teaching and learning needs. This phenomenon is consistent with the findings of Chang, Chen and Hsu (2010), who noted that online interaction could also motivate learners to discuss their own ideas with their teachers and colleagues to deepen their perceptions of the topics. Students also observed the virtual classes as an added

opportunity, and they perceived its activities more positively and with more interest.

Most of the students in the second group scored fifty or higher. In other words, 24 out of 26 students in the experimental group passed; whereas only 16 out of 24 students in the control group passed. This finding is consistent with the finding of Vivian (1984), who aimed at providing students with language skills that were related to audio-visual aids in learning. Courses based on student strategies and interests motivate and encourage students to learn and to build self-confidence and positive attitudes toward the learning process (Luo 2011).

This motivation was observed during the experiment. Even weaker students showed more enthusiasm and took part in most of the experimental activities. The students felt that there were topics and themes that deserved to be discussed and learned, especially those presented in the virtual classes that made learning interesting and that increased the motivation level. Most students preferred the new technique and method of teaching and learning and the materials taught through the proposed online method. Unlike their counterparts, the subjects in the control group had a modest improvement in different language skills (vocabulary, structure, reading, listening, speaking and writing) on the post-test (see Table 2). This result might be attributed to ignorance about using virtual classes as a motivating tool, giving a chance for individualized learning and making positive attitudes towards the teaching and learning process. These findings are consistent with those suggested by Kim (1992).

Psychologically speaking, higher student motivation, self-confidence, and positive attitudes towards the teaching and learning process led to greater interaction with the teacher. This phenomenon might in turn motivate teachers and cause more positive interactions with their students.

To conclude, this high level of interaction between the students and their teachers and vice versa led to an effective process of teaching and learning, resulting in a significant improvement.

The results revealed that students had done well on the English achievement test. This result could be indicative of the fact that English proficiency is strongly related to English achievement, a fact that may be justified by the assumption that students exploited what they had acquired in the virtual classes to use in English. Therefore, it could reasonably be assumed that the students in the virtual classes were able to use their English proficiency during their dialogues outside the classroom and to participate in class to achieve the desired terminal behavior expected of them, namely, to use structures and the vocabulary, not because they were items on the syllabus but because they wanted to express them in real-life situations.

The students in the traditional classes had less motivation; they often asked about the most appropriate methods and techniques of teaching and learning English. This issue was vital to the whole process of teaching English; there was little motivation or justification for adult students to learn English as a result. Their experiences, objectives and inclinations were different from how they were learning.

The high mean and component scores of the experimental group are likely due to the virtual environment. This result aligns with Luo (2011), in which the positive course results from virtual classes included development of

useful classroom communication skills, practice in content oral skills, and development of reading and writing skills. On the other hand, the low mean scores and adequacy levels of the control group could be due to the non-virtual class course.

Conclusions

1. This study is in response to student interest at the University of Tabuk.
2. It is in the line with modern trends in methods of teaching.
3. The students in the experimental group made significantly higher progress in general on the English achievement test.
4. Results of the post-test showed the amount of progress was statistically significant for every component of English language.
5. The high level of interaction between the students and their teachers and vice versa led to an effective process of teaching and learning and caused this significant improvement as a result.
6. The different faculties at the University of Tabuk should further adopt virtual classes as long as English continues to be used for academic purposes.

Recommendations

- Students and teachers should make use of virtual classes in teaching English language courses at Tabuk Community College and other educational establishments.
- Studies in the same field should be conducted by scholars.

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