

The effect of a blended learning program using Schoology LMS on developing EFL preservice teachers' teaching knowledge and reducing their writing anxiety

Dr.Antar Abdellah
South Valley University

Abstract

The study aimed at developing preservice EFL teachers' teaching knowledge and reducing their writing anxiety. To achieve these aims, an instructional program based on the free LMS (learning management system) Schoology was developed. Schoology is a free-access, web-based, multi-function LMS that can be utilized in education at no cost. Ten units of the course (Practicum One) were designed to fit and benefit from the tools available in the LMS. Instruments of the study included an achievement test and a scale of writing anxiety. The test was developed by the researcher, while the scale was modified from Cheng 2004. Sample of the study consisted of 93 female students enrolled at the General Diploma program at Taibah University. Of them, 43 were treated as the experimental group, and 40 were treated as the control group. Results of the achievement posttest showed a significant and remarkable difference between the two groups favoring the experimental group. The scale results shows that experimental group students' writing anxiety was drastically reduced. Recommendations and suggestions are presented.

Introduction

Blended learning is a relatively modern term that refers to a software platform in which a student learns through delivery of content and instruction via digital and online media with some element of student control over time, place, path, or pace. "In blended learning, face-to-face classroom methods are combined with computer-mediated activities. The terms "blended," "hybrid," "technology-mediated instruction," "web-enhanced instruction," and "mixed-mode instruction" are often used interchangeably in research literature". (Norm, 2012, p.4). The concept of blended learning has been around for a long time, but

its terminology was not firmly established until about the start of 21st century. Graham and Bonk (2006) defined 'blended learning systems' as learning systems that "combine face-to-face instruction with computer mediated instruction." (p. 15). Currently, use of the term *blended learning* mostly involves "combining Internet and digital media with established classroom forms that require the physical co-presence of teacher and students." (Norm, 2012, p. 17).

There have been extensive discussions on the usage of online technology or computer mediated communication (CMC) in language education. Investigations on the latest communication channels such as weblog (e. g., Downes, 2004; Mortensen, 2008), discussion board (e. g., Bhappu, Ebner, Kaufman, & Welsh, 2009), social network (Boyd & Ellison, 2007; Ellison, Steinfield, & Lampe, 2007), and instant messenger (e. g., Jacobs, 2008; Lewis & Fabos, 2005) to name a few have been discussed in various studies. As a result, CMC has been indicated to contribute to students' linguistic development mediation (Darhower, 2002), help students identify language genres (Lam, 2004), increase their success in using the target language (Hanna & de Nooy, 2003), and provide more opportunities for negotiations, collaborations, interactions and communications (Jonassen, 2004; Kitade, 2000, 2006; Leahy, 2008).

Computer-mediated communication (CMC) environments such as discussion boards, blogs, journals, or wikis are now commonly available with learning management systems (LMs) such as *Blackboard*. These CMC modes have recently become an integral part of the life style of today's people who communicate through these media on their mobiles or tablets anywhere and anytime.

E-learning platforms, such as *Blackboard*, are characteristically equipped with facilities that integrate reading and writing in the foreign language, such as discussion boards, blogs and wikis. These facilities are particularly beneficial for language learners to develop their reading and writing skills. They operate in ways that can help both teachers and students

discover how the latter's ideas grow and improve over shorter or longer periods of time (Mak & Coniam, 2008; Lee, 2004; Coyle, 2010; Cabiness, Irvine, & Grove, 2013; Pena-Shaff, Altman, & Stephenson, 2005; Smith, 2006; Lloyd-Williams, 2007; Halic, Lee, Paulus, & Spence, 2010; Maag, 2006; Lundin, 2008). These tools also provide students with both reflective and interactive feedback and continually involve them in collaborative activities with their peers and teachers in a way that extends the learning opportunities beyond formal instruction times (Álvarez, 2012; Deng & Yuen, 2011).

The time has come for a major redesign of learning environment tools for classroom and online learning. Until now the design of Learning Management Systems has focused primarily on the "management" aspects of courses, mostly informing and guiding students on what they should do next in their role as a student. *Schoology* introduces a new user-centric approach to learning. *Schoology* is a learning platform designed to immerse students in an easy-to-use collaborative environment that strengthens the connection between them and their instructors.

Schoology founders Jeremy Friedman, Ryan Hwang, Tim Trinidad, and Bill Kindler teamed up and founded *Schoology* in the 2007-2008 school year. Their mission was to "reinvent the way technology is implemented in the classroom. With a goal of improving student outcomes, they realized the need to disrupt the stagnant education technology market by making *Schoology* available for every educator. *Schoology* not only provides institutions with a configurable, scalable, and easy-to-implement solution, but also provides a basic version of its award-winning platform free for educators" (*Schoology* website, 2015).

Today, more than seven million educators, students and administrators around the world use *Schoology*, a unified platform with tools for instruction and curriculum management, dedicated mobile apps, access to an integrated global learning community, advanced analytics and reporting, and an open platform for third-parties to build on top of the *Schoology* LMS.

This news follows rapid global customer growth, including Uruguay's selection of *Schoology* for all 620,000 students in their national education initiative Plan Ceibal, and CSU Global Campus' choice to collaborate with *Schoology* for its premier global online university. *Schoology* has also been named the top overall education technology product at the 2014 SIIA CODiE Awards. (*Schoology* website, 2015).

Problem of the study:

EFL Student-teachers at Taibah University do not seem to make use of the many facilities that can be offered via online and blended learning programs. Learning to teach English cannot be achieved through attending lectures only. Having access to a wealth of resources and open discussions via an LMS can help in enriching the student-teachers' knowledge about teaching and reinforcing their practices. In addition, it was noticed that student-teachers avoid writing lengthy reports and prefer to resort to the seemingly safe option of having multiple choice-based tests. It is thought that through an interactive blended learning program, they may overcome their writing anxiety along their study of EFL practicum.

Questions of the study:

1. What is the effect of the suggested blended learning program on developing teaching knowledge of Taibah University EFL student-teachers?
2. What is the effect of the suggested blended learning program on reducing EFL student-teachers' writing anxiety ?

Hypotheses of the study:

1. There will statistically significant mean differences between the scores of the experimental group and those of the control group in the posttest of EFL teaching knowledge.
2. There will statistically significant mean differences between the scores of the experimental group and those

of the control group in the post application of the writing anxiety scale.

Review of literature

Staub (2013) conducted a quantitative correlational study to examine the relationship between teacher training and teacher use of a laptop in a one-to-one laptop program. Teachers recorded their training weekly throughout the twelve-week study. Teacher use of laptops was measured through self-reporting in a pretest and posttest design, focusing on four characteristics, based on the school district's technology goals: use of *Moodle/Schoology*, use of web 2.0 technologies, use of Apple's iLife suite, and the teacher's differentiation of instruction using the laptop. Teachers self-assessed their Level of Use in these four areas with a survey instrument derived from the Concerns-Based Adoption Model's Level of Use dimension. Teachers recorded the quantity and type of professional development training using a weekly time recording matrix. Using Spearman's Rho to conduct correlational analysis, statistical analysis suggest no significant correlation between teacher training and teacher use of laptops in a 1:1 laptop initiative. With the results of this study, suggestions for professional development, especially in educational technology, are made. The results of this study indicate a need for further research in more robust professional development plans when implementing new educational technologies.

Dang and Robertson (2010) report on a study investigating Vietnamese EFL students' reflection on a web 2.0 LMS (*Schoology*) that they worked with during a course. The main discussion focused on the local students' autonomous learning behaviors in relation to their cultural values in online learning. In second language learning, various attempts and initiatives have been developed and documented in different learning settings, especially in developed countries. However, in the context of Vietnam, where internet broadband has only recently become very popular and affordable, the employment of web 2.0 in EFL training has been very limited. Results showed that learners

achieved higher levels of autonomy after learning ESL via the LMS as compared to other learners who studied ESL traditionally.

AlHarbi (2015) investigated the effects of the online course tools, specifically discussion boards, blogs and wikis, the built-in facilities of *Blackboard* as computer-mediated communication integrated in e-learning environments on improving integrated reading and writing and on the attitudes of EFL college students towards literacy skills in e-learning environments. A pedagogical model was designed and described in a background of relevant research. The study made use of both quantitative and qualitative data to investigate the effects of these tools on both reading/writing performance and on attitudes. The findings indicated that the students' performance on an integrated reading/writing test was improved and so were their attitudes towards literacy skills. The findings also showed that the e-course tools at issue facilitated students' interactions and supported learning of the reading/writing skills in a growing online discourse community.

Emireta (2006) reports on a program that has been implemented in a blended-learning (b-learning) pedagogical model that includes: (a) learners work with English Online, software conceived as the backbone of the entire Communicative English Program, (b) online monitoring, (c) face-to-face EFL teacher-led classes, and (d) conversation classes with native speakers of English. This paper describes the elements of the b-learning model, issues about its implementation, and results obtained in the piloting of its first module. The results obtained with the pilot group in module 1 show a substantial improvement in the students' language skills, as well as high satisfaction levels with the entire Communicative English Program. The results support the success of the b-learning model implemented.

Hseih (2009) compared the effects of three instructional methods--collaborative synchronous online communication, asynchronous online communication, and independent study as

traditional in grammar translation method--in English reading comprehension. A quasi-experimental research design included pre and post reading comprehension tests for all three groups (N=138) and a post perception survey for the experimental groups. After treatment, collaboratively synchronous and asynchronous online communication users outperformed those in the independent study group. Yet, no significant difference was found in reading posttest scores between synchronous and asynchronous communication groups. Findings from the post perceptions survey of the experimental groups displayed no statistically significant differences between them. But, three variables, the perceptions of collaboration in computer-mediated communication (CMC), effects of CMC, and perceptions of *Moodle*, each showed positively significant effects on reading comprehension posttest scores.

With regard to writing anxiety, several studies were conducted to explore, assess and reduce EFL writing anxiety . Jahin (2012) assessed the impact of peer reviewing on their writing anxiety level and essay writing ability. Data collection was carried out via two instruments: Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004) and an essay writing test. The study sample consisted of 40 EFL major prospective teachers at Taibah University, KSA. These were equally divided into two groups: control (n=20) and experimental (n=20). Both groups were similar in terms of academic level, mother tongue background, and target language proficiency. The experimental group participants were introduced to peer-reviewing essay writing sessions while the control group participants were taught through the traditional teacher feedback-based essay writing. Results of data analysis showed positive impacts of peer reviewing on experimental group participants' writing anxiety and essay writing ability. Implications for using peer reviewing in ESL writing were discussed.

On the other hand, studies (e.g. Onwuegbuzie, Bailey, & Daley, 2000; Lee & Krashen, 2002, Atay and Kurt, 2006; Rankin-Brown 2006; Temesgen, 2009; etc.) indicated that the higher the

students' writing anxiety , the lower language their writing proficiency is. For example, Hassan's (2001) study revealed that high levels of writing anxiety negatively influenced the quality of students' writing composition. Atay and Kurt's study (2006) of Turkish prospective teachers' writing anxiety showed that more than half the participants had high or average writing anxiety . Abdel Latif's (2007) study showed that students with low English linguistic knowledge had more writing anxiety than those with high linguistic knowledge. Magno (2008) found out that writing anxiety was one of the factors that predicted writing proficiency in English. Temesgen's (2009) study showed that students who received training on peer review experienced significantly less writing anxiety than those who did not.

Zhang (2011) aimed to measure the level of ESL writing anxiety experienced by Chinese English majors. The effects of ESL writing anxiety on English writing performance, the students' perception the main causes of ESL writing anxiety and their learning style preferences in ESL writing class were also examined, which provided pedagogical implications of successful learning and teaching strategies for reducing ESL writing anxiety. This study was based on quantitative research and three questionnaires were used to collect data. The results of the SLWAI showed that there is a high level of ESL writing anxiety among Chinese English majors, and the Cognitive Anxiety is the most common type of ESL writing anxiety. The differences in the level of English writing anxiety between the groups of freshmen and sophomores reached the level of statistical significance. The sophomores were found to suffer significantly higher levels of English writing anxiety than the freshmen. Correlation analysis results suggested a negative relationship between measure of ESL writing anxiety and measures of writing performance (course grade and timed writing grade). An in-depth analysis of the causes of ESL writing anxiety revealed that linguistic difficulties, insufficient writing practice, fear of tests (TEM), lack of topical knowledge and low self-confidence in writing performance constitute the main sources of ESL writing anxiety experienced by Chinese English majors. Furthermore,

suggestions on learning and teaching strategies for reducing ESL writing anxiety were provided on the basis of the acknowledge of sources of ESL writing anxiety and students' learning style preferences in the ESL writing class.

Materials and instruments

This study included three data-gathering tools in addition to the instructional material represented in the suggested blended-learning program. The tools are: a teaching knowledge test, teaching practices report analysis, and a scale of writing anxiety .

The development of the program

An instructor's account was setup on the *schoology* LMS website for free. The course access code was given to the students of the experimental group to join the course on the same LMS. In the first lecture, the LMS and its different functions were introduced to the students, and they were encouraged to make the best use of all the different facilities provided by the LMS. In addition, a mobile application developed by schoology was also introduced for students to encourage them to synchronize their use of the website on both computers and mobile phones.

The program consisted of lectures, reading materials, educational videos, uploaded handouts, assignments, quizzes, surveys, open discussion forums, registering attendance, updates, and measuring students' interaction via analytics. (For samples of the training program, please see the screenshots in the appendix).

In the meanwhile, the control group was taught the practicum 1 course using the traditional method which in this context was mainly dependent on lectures using PowerPoint presentations. Although the presentations were the same ones use with the experimental group, the many other functions of the LMS were not available for the control group.

The development of the test

A content analysis of the topics of the course was undertaken and a total number of fifty test items were developed in the MCQ format. The content of the test was chosen based on similar other test items introduced in national and international EFL teaching knowledge tests ;(the national is the Saudi Qyyas test, while the international is the Cambridge TKT test). The test was validated by a group of EFL professionals in the college of Education at Taibah University, and the reliability of the test was calculated using the split half methods after applying it to a sample of 15 students in a third group other than the control and the experimental groups of the study. Alpha correlation for the two halves was..... which is an indicator that the test was reliable. (Please refer to the appendix for the full test). The test consisted of 40 items and the total score was 80 marks.

The writing anxiety scale

The study adopted the Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004)

The Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004) (see Appendix 3) measures the degree to which an individual feels anxious when writing in an L2 and consists of 22-items all of which are answered on a five-point Likert Scale, ranging from 'strongly agree' to 'strongly disagree'. The SLWAI has good internal consistency, with a Cronbach Alpha coefficient reported of .91 (Cheng, 2004).

Despite the evident internal consistency of the SLWAI, its reliability was assessed via the test-retest method. It was administered twice to a sample of students similar to the participants of the main study. An interval of five weeks separated the two administrations. An Alpha Cronbach's correlation coefficient of .89 was calculated. Besides, an internal consistency reliability check was computed and it was found that the alpha coefficient for the SLWAI was .91.89, which is close to the correlation coefficient reported by Cheng (2004).

Sample of the study

The sample consisted of 93 female student-teachers enrolled in the Diploma-in-Education programme in the academic year 2014-2015. 43 students represented the experimental group, and 40 represented the control group. All of them were graduates of the college of Humanities, English department at Taibah University and had no prior knowledge or practice of teaching English.

Results and Discussion

Results of the test

The teaching knowledge test was applied on both groups before and after the intervention. The total score was 80 by assigning two scores for each item. Tables (1) and (2) show the mean score of both groups before and after the experiment.

Table (1) Participants' scores in the PRE-Teaching knowledge test

Group	Number	Teaching knowledge pretest			t-value	Sig.
		Mean score	SD	Percentage		
Control	40	13.0500	3.706	16%	1.308	.194
Experimental	43	14.0465	3.228	17.5%		

Table (2) Participants' scores in the POST-Teaching knowledge test

Group	Number	Teaching knowledge posttest			t-value	Sig.
		Mean score	SD	Percentage		
Control	40	45.35	8.033	56.68%	13.428	.000*
Experimental	43	72.48	10.308	90.6%		

As table (1) shows That both group scored relatively the same in the pretest; (16% and 17% for the control and the experimental groups respectively). T-test found no significant mean differences between the two groups in their knowledge about TEFL before the experiment. Table (2) however, shows that students who used *Schoology* LMS surpassed their

counterparts who didn't use it. A remarkable difference was witnessed in the experimental group achievement in the posttest. While the control group scored a mean of 45.35 (56%), the experimental group scored a mean of 72 (90%). This means that while students in the control group benefited from the course in its traditional medium, the experimental group reflected a bigger benefit from the course when using *Schoology* LMS. The difference is statistically significant at 0.000 level.

The results of the knowledge test thus answers the first question of the questions of the study which was stated as: What is the effect of the suggested blended learning program on developing teaching knowledge of Taibah University EFL student-teachers? The results shows that the effect is a highly positive one. This also makes hypothesis one of the hypotheses of the study sustained.

Results of the scale:

The quantitative part:

Data collected from the SLWAI were analyzed by summing the subjects' ratings of the 22 items. Fifteen statements in the SLWAI are negatively worded. The scale for these items was reversed so that strongly agree took (1) and strongly disagree took (5). Only seven items were positively worded. These are items 1, 4, 7, 17, 18, 21 and 22. The scale for these items ranged from 'strongly agree' taking (5) to 'strongly disagree' taking (1). This was done so that, in all instances, the higher the score, the higher the writing anxiety level and, correspondingly, the lower the score, the lower the writing anxiety level. A total score above 65 points indicates a high level of writing anxiety, a total score below 50 points indicates a low level of writing anxiety, and a total score in-between indicates a moderate level of writing anxiety. Responses were processed statistically using the Statistical Package for Social Sciences (SPSS). Tables (3) and (4) show the mean ranks attained by both groups before and after the intervention and the significance of the difference between the two groups.

Table (3) comparing each group with itself in SLWAI scores before and after the intervention

Group	number	Writing anxiety scale Pre-administration		Writing anxiety scale Post-administration		T-value	Sig. (2-tailed).
		Mean	SD	Mean	SD		
Control	40	149	13.2	142	17.5	1.404	.168
Experimental	43	143	18.09	109	22.92	5.475	.000*

Table (4) comparing the two groups' scores in SLWARI after the intervention

Group	number	Writing anxiety scale Post-administration		T-value	Sig. (2-tailed).
		Mean	SD		
Control	40	142	17.5	6.999	.000*
Experimental	43	109	22.92		

As tables (3) and (4) show that both groups had a high level of anxiety / anxiety when facing writing tasks before the intervention. The control group had an anxiety rank that scored (149) and the experimental group was close to that with a rank that scored (143). This means that both groups were equally anxious about writing tasks.

After the intervention and using *Schoology* LMS, however, the experimental group seem to have gained confidence in writing and reduced their anxiety from 143 to 109 which shows a big shift in their attitude towards writing and a really big leap unto writing confidence. The control group on the other hand do not seem to have gained sufficient confidence in writing. Their rank fell from 149 to 142 which means that they are still encountering negative feelings when it comes to writing in EFL. This can be attributed to the nature of the teaching method utilized with them; mostly presentations and MCQ quizzes with minimum opportunities for writing tasks.

When comparing both the control and the experimental groups on the post administration of the scale (table 4), we find that there is indeed a statistically significant mean difference at .000 level in the writing anxiety scores favoring those of the

control group – a thing which emphasizes that the low score in anxiety , the better.

The qualitative part:

In order to unveil the complexities of students' anxiety / anxiety when writing EFL, an additional open-ended question was added in the experimental group's version of the scale in the posttest administration. The question was as follows: *How do you think your experience with Schoology improved your writing confidence?*

By reviewing students' responses, we find that almost all of them agreed that Schoology helped them improve the quality of their writing as well as the confidence they lack in approaching writing tasks. Some their comments include the following¹:

-Yes, it is my best way to learn how to write, although I discovered my mistakes after I sent my comments but I feel that I am learning more about writing skills.

-Yes, very much. Before I was afraid from making writing mistake. But now my confident increased because I read my message more than three time before I send it and notice my mistake. So I don't commit it again.

-Actually Schoology opens my eyes to points I did not think of it. I have not to be afraid if my writing is not good and not to be shy if my writing being chosen as a sample for discussion in class. Also, I have not worried if other people read or evaluate my writing because I want to know the good and bad things in my writing in order to improve or correct it.

-My experience with schoology is enjoyable. I think that Using this program during the march Scholastic is develop our language, because, through this way we practice the writing skill and make us save a rich set of words and with this program my writing confidence is very improved .

-It is a good chance to share my opinions with my classmates . I'm not afraid of making mistakes . I'm still student and it is okay if i still make mistakes but to be honest I sometimes blame myself for making mistakes especially if they were very clear.

¹ students' errors were not corrected for authenticity of quotation

On the other hand two students expressed their reluctance to write and their residual anxiety even after the intervention. For them, it is believed that a longer exposure to similar training programs can help in reducing, and eventually eliminating their writing anxiety . Sample of their responses are the following:

-Improved slightly beginning to use it I think that with the passage of time would be much better my writing

-I cannot decide yet but I think it will be another good way to improve my English because I used to check my English before submitting any comment because I hate my English to to be rated as poor by my teacher or colleagues.

The result of the writing anxiety scale provides answer to the second question of the questions of the study which as stated as: What is the effect of the suggested blended learning program on reducing EFL student-teachers' writing anxiety ? The results show that the program had a positive effect on reducing students' writing anxiety . In their detailed written views, students showed how they became more confident in writing professional standard English. The results also make the second hypothesis of the hypotheses of the study sustained.

Recommendations

Based on the attained results, the following recommendations are suggested:

1. Using learning management systems (LMSs) in education should be part and parcel of the instructional process not only in EFL but also in all disciplines and for all educational stages. Schoology is but one example of the power of blended learning and how it can help improve knowledge and reduce fear.
2. While some LMSs are highly expensive for Egyptian universities to purchase (for example *Blackboard* and *Jusur*), many other LMSs are free and highly reliable (like *schoology*, *Edmodo* and *moodle*). Thus, a faculty member does not need to wait until his/her institution purchase and impose certain LMSs. They can start immediately by making use of the free LMSs on the internet.

3. While students in the university level can find their way in the web for the information required in a course, they are still in need of guidance and mentoring, and here comes one other benefit of blended learning that takes in consideration students' inclination towards technology and guides its use.
4. Technology has repeatedly proven to be a challenging as well as entertaining environment for students' edutainment. So we should not refrain from making use of the available technology (LMSs) in reducing fear, anxiety and anxiety, and increasing self-confidence and creativity.
5. Course designers are requested to include blended learning practices in their new courses. A handbook-only course is no something of the past. A real effective course is one which is both printed and virtual, practical and theoretical, educating and entertaining.

Suggestions for further studies:

The following studies are suggested based on the results of the present study:

1. A study is required to use *schoolology* LMS for developing other language skills such as listening and speaking for students of EFL at different education stages.
2. A study is required to make use of *schoolology* in developing practical teaching performance skills where students would be observed regularly in their school practice.
3. A study is required to use *schoolology* for reducing speech anxiety and increase taking confidence among students in first as well as second language classrooms.
4. A study is required to compare the use of more than one free LMS (*Schoolology, Edmodo, or Moodle*) in teaching different language skills.

Conclusion:

Technology has made it easy for university students to reach different pieces of academic information both quickly and cheaply. However, a systemic guided program run by the course

instructor is something that cannot be undone with. It will enrich students' knowledge, open their eyes to new horizons in the study, and guide their endeavors while exploring the different aspects of the new world of the course. The present study is thought to have provided an example of how this can be achieved. It is believed that by using one free LMS, many things can change both academically and psychologically. It is our duty as educators to help the rising generations to attain these aspired changes.

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