

Blended Learning: A Ubiquitous Learning Environment for Reading Comprehension

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Abstract

Learning environments have turned to a hot discussion among language scholars. Very popular nowadays, blended learning is not a new concept. It enjoys the advantages of face-to-face classrooms and virtual learning. This study is an attempt to discover whether conventional or blended learning environments can better enhance the reading comprehension for EFL learners. 107 Iranian students majoring in English at Abadeh Islamic Azad University and Zand Institute of Higher Education in Shiraz were selected. A reading comprehension test was administered as the pretest. Then, the participants were put in control and experimental groups. For the treatment, the experimental group received the instruction in the classroom and had assignments through virtual environments whereas the control group had the instruction and assignments in conventional mode. A post-test of reading comprehension was administered, and the participants' performances in both tests were compared. The results indicated blending traditional classroom instruction with technology can help learners outperform in their reading comprehension.

Keywords: Blended learning, Traditional face-to-face instruction, Reading comprehension

1. Introduction

The history of using computers in language classrooms dates back to the emergence of Audio Lingual Method which supported language labs as the major tools by which learners could be able to develop their listening and speaking skills. Then, computers were considered as the tools for drill-and-practice programs (Gündüz, 2005).

Since 2000, computers have had an integrative role in language classes even more than before. Computers which are now equipped with the Web offer many opportunities for language learners from attending virtual environments, Web-Based Instruction (WBI), and distance learning to Mobile-Assisted Language Learning (MALL). Though computers and the Internet have taken a strong position in language classes, the positive role of teachers in traditional classrooms cannot be overlooked at all (Wright, 2000). This is what the basis of blended learning is: integrating face-to-face classroom instruction with online activities so that learners can take the advantage of both e-learning and face-to-face instruction. The growth of hybrid or blended learning as a

learner-centered approach has recently been very amazing. Enrollment in courses which enjoy both online and face-to-face (or as commonly written face2face) instruction has been doubled (Romano, 2006), and the trend seems nonstop (Mossavar-Rahmani & Larson-Daugherty, 2007).

Emphasizing the positive role of the Internet in language learning, the main objective of the present study is to find out if blended learning is preferred over traditional face-to-face instruction. This study is also done to find out whether there is any significant difference in the performance of male and female students taking traditional classes and those who attend blended learning environments or not.

1.1 Traditional Face-to-Face Instruction

From the very first days of education, people have certain expectations from a teaching environment – students and the teacher are together at certain time and in a certain space, and learning is best achieved through listening to the teacher, who is always physically present, and having close interactions with peers through doing a couple of exercises which are largely under the teacher's control. This is what we all accept as a real education (Younes, 2011). These are the taken-for-granted assumptions for a traditional classroom.

Angarita (2002) stated that it was about the end of the 19th century that a research firm came to amazing ideas on the use of face-to-face instruction. It was discovered that traditional training is very effective regarding learners' satisfaction. Most of the people who took part in the study reported that they are very comfortable with instructor-based classes and that they achieve their learning goals if they follow the instructor's guidance.

Redford (2006) stated that face-to-face instruction well showed the advantages of in-class teaching for trainers, too. They help the teacher not to lose his temper even if it is all for right reasons. That's why teachers are usually so patient. It helps a teacher never use inappropriate language; teachers are more familiar with kind and formal academic language than others. They learn how to handle unexpected situations and not assume that their lesson plan and activities do not need to be followed exactly. The last benefit for the teachers in traditional face-to-face classes is that they can make friends with their students.

Looking at the other side of the coin, based on what Sanchez-Villalon and Ortega (2004) mentioned, the major disadvantage of conventional language learning classes was that they offered limited access to additional information besides those given inside the classroom or within students' textbooks.

1.2 Blended Learning

Rapid developments in technology on one hand and approaches to language teaching and learning on the other hand require learning institutions to assess and evaluate their approaches and methodologies to pedagogy. E-learning has now gone toward a new direction. It is evolving by using a variety of models, the result of which is stepping into a world of multi-channel learning known as hybrid or blended learning. Like most dichotomies, the present and most probably future of learning lies somewhere in the middle. Learning is multi-dimensional, and it is enhanced through multiple inputs and through different sources. No wonder there has been a major shift from instructor- to learner-centered approach (Hart, 2008). The traditional face-to-face learning system has been around for centuries, and pure e-learning might not meet the needs of all language learners in different communities since the Web cannot replace a human instructor. But by mixing these two, we come up with an approach which both fits the individuals' needs and makes use of new technology in teaching.

Different scholars defined hybrid learning in different ways, and the three common definitions for blended or hybrid learning are the definition that Singh (2007), Rossett (2002), and Young (2002) offered. According to Singh, hybrid learning is combining instructional modalities; Rossett stated that it can be defined as combining instructional methods; Young said it is combining online and face-to-face instruction. Young's definition is the most agreed upon definition. Sahin (2007) defined blended learning as kind of distance learning that is used to support face-to-face (f2f) learning.

Blended learning incorporates all available technologies be used along with common classroom teaching. Hybrid learning takes place where teachers and learners come together face-to-face on the one hand and use e-learning elements in the form of computer-based training and web-based training on the other hand. Lee (2011) introduced the present century individuals as "net generation" or "digital native" learners as almost all people including language learners are quite familiar with media and information technology. He defined hybrid learning as an approach which combines face-to-face instruction with computer-mediated instruction. He maintained that the ultimate objective of hybrid learning is providing opportunities for learners and teachers to make learning independent, useful, and above all, sustainable. Elsenheimer (2006) stated blended learning should not only refer to mixing of training and delivery methods but also to the application of instruction, tools, practice, and evaluation to create a unified learning and performance environment. Osguthrope and Graham

(2003) pointed out that in blended learning, the student is actively involved in the learning process and has access to different online resources (Osguthrope & Graham, 2003).

Drigas, Vrettaros, Tagoulis, and Kouremenos (2010) designed a language course for the deaf based on e-materials, vodcasting and web 2.0 tools such as social networking and blog. The result of using the design for an instructional period offered an enhancement in learning process and helping the deaf achieving more effective learning results. Lavin (2006) also explored WBI and Web 2.0 tools especially weblogs and wikis as useful asynchronous computer-mediated communication tools in language education. Pinkman's (2005) action research indicated how teacher's incorporation in a blog project in a language class in Japan enhanced their language abilities. In their survey on the students' views on the application of weblogs in teaching, Zare-ee, Shekarey, and Fathi Vajargah (2009) emphasized the idea that blogging can support students and faculty members effectively by breaking down the limiting walls of the classroom.

In their study, El-Gayar and Dennis (2005) assessed the learning effectiveness of students in hybrid learning environment and the results attested the reliability of hybrid learning. Learners benefitted from both in-class instruction as well as virtual classrooms using videoconferencing, electronic discussion boards, and emails. The findings also showed that learners do not experience any feelings of anxiety and isolation. However, the results indicated that with respect to satisfaction with learning process, there was not any significant difference between pure e-learning and hybrid learning (El-Gayar & Dennis, 2005).

In their study, Yu, Choy, Chan, and Lo (2008) pointed out that hybrid learning increases the contact hours students can have with each other and as a result through interaction they enhance their learning compared to classical classes which enjoyed very limited and controlled interaction. They found that through blended learning, students and teachers find the appropriate software and e-learning environment to utilize the communication, collaboration, management and administrative tools to improve language skills. There are also other related research which confirmed the improvement in student learning (Maki, Maki, Patterson, & Whittaker, 2000; Hadidi & Sung, 2000).

Yet, one of the big challenges is whether the materials actually suit the varied needs and interests of learners. Rastegarpour (2010) confirmed that blended learning is a good idea, but affective domain would be missing in such mixed instruction.

1.3 Reading Comprehension & Blended Learning

As one of the language skills, comprehension of written texts, or reading skill, forms the stepping stone for the education of a learner. Dictionary definition of 'reading comprehension' is the ability of perceiving a written text in order to understand its contents. The main concept in reading skill is 'comprehension'. It is highly valued by students and teachers alike since it enhances the process of language acquisition and helps students to read for different purposes. The most successful readers are those who use cognitive strategies to comprehend the text better.

The study done by Poorahmadi (2010) on reading comprehension showed that teachers should focus on the type of task and activities which assist students work cooperatively on task completion. On the usefulness of tasks and activities used for reading comprehension, Salimzadeh and Mohammadi (2009) did an empirical research and found out that cooperative reading activities such as group paraphrasing to understand a text leads to Iranian intermediate EFL students' reading comprehension. In her research on the role of collaboreading, Behjat (2011) stated that language learners can foster their comprehension if they get involved in activities which encourage them to read together.

Modern technologies dramatically changed global communication and had a profound effect on all aspects of language use. Computer and Internet technology enable hypertext and hypermedia to play a role in the comprehension of foreign languages. Although comprehending hypertexts can sometimes be difficult, utilizing reading skills and strategies can help one overcome this problem. An advantage of reading hypertexts on the net is that learners can have access to authentic materials since one of the main goals for many language learners is to be able to read what are commonly referred to as authentic texts. In their study, Verezub and Wang (2008) showed how using the net hypertexts could empower language learners with better comprehension of texts.

Rahimi and Behjat (in press) did an empirical research on online and offline reading comprehension for Iranian EFL learners and concluded that the learners' reading is fostered to a higher degree when they are exposed to online texts which have links to other sites providing more reading materials. Szymańska and Kaczmarek (2011) argued that in order for learners to become proficient readers in a foreign language, they need to have access to online texts which can help them to respond in an authentic way to what they have read.

Asadzadeh Maleki and Ahangari (2010) studied the role of computer-assisted instruction on reading and writing. The results of their survey revealed that the majority of EFL learners had a positive attitude towards the use of multimedia resources in their language program and appreciated saving their writing and using multimedia in developing their reading skill. In their paper, Ehrlich, Radde, Polleti, and Freitag (2011) presented the design and properties of an e-learning system that can be applied in the training of reading comprehension skills. In a website, they use authentic texts and a number of exercises, and concluded that implementing this web site, the learner was prompted to actively apply a wide range of different reading skills and strategies to increase his comprehension of written texts. Reading on the net can also help learners be able to analyze the text by themselves, reflect on it and try to comprehend it independent of asking for help from a teacher.

In their research on the effectiveness of blended learning on reading comprehension, Szymańska and Kaczmarek (2011) concluded that learners improved in a blended learning reading course using both printed and online texts in terms of both recall and comprehension of the texts.

Based on the above-mentioned pieces of evidence, the question which is raised in this study is as follows:

Question. Is there any significant difference between the performance of Iranian EFL students who practice reading comprehension through traditional face-to-face instruction and that of those who use a blended learning program?

2. Method

2.1 Participants

The participants were 107 sophomore students (13 males and 94 females) majoring in English translation and literature at Islamic Azad University, Abadeh Branch and Zand Institute of Higher Education in Shiraz who took part voluntarily in the study. As they were all in their second year of studying English, they had passed their Reading Courses (I) and (II) and thus were more or less at the same level of English comprehension. They were all Iranian students who studied English as a foreign language and were at an average age range of 20 to 27 years old.

2.2 Instrumentation

The instruments which were used for the study were two versions of Oxford Quick Placement Tests (Versions One and Two, 2004) including 60 multiple choice reading comprehension items. These two tests were reported to be standardized tests, and thus their validity, reliability, and item difficulty were at a satisfactory level. These tests were used as pre- and post-tests of reading comprehension.

2.3 Procedures

In order to answer the research questions, the following procedure were adopted. First, to observe ethical considerations, sophomore EFL students at Islamic Azad University, Abadeh Branch and Zand Institute of Higher Education in Shiraz were informed of the purpose of the study, and were asked to take part voluntarily in the study. Out of all available students, 107 sophomore male and female students were willing to participate and therefore they were selected for the study.

The participants were classified into two groups: a control and an experimental group. In order to see whether the participants in both groups were at the same level in English reading comprehension, the First Version of Oxford Quick Placement Test (2004) which consisted of 60 multiple choice reading comprehension items was administered before the instruction. Each correct item was scored one and no negative points were considered for wrong answers. A *t*-test was run on the participants' scores in the reading comprehension test, and since there was no significant difference in their performance, the groups were considered homogeneous. Due to the fact that the reading test was administered before the instruction, it was considered as the pre-test.

During the instruction, which lasted for two and a half months, two hours a week, all learners in the control and experimental groups took reading lessons in the classroom in the form of traditional face-to-face instruction. The difference, however, was in their out-of-class activities. While the participants in the control group were assigned printed reading comprehension texts to study and write a summary of it, the experimental-group participants were involved in Web-based activities.

In the experimental group, technology-assisted language learning and the way they can be at the disposal of successful language learners were explained, and they were taught how to use them for the present research purposes. Thus, all participants in the experimental group were technology-wise. Another important factor to consider in using online materials was time. In order to control the time spent on each reading activity in both groups the researcher asked the participants to do their assignments in no more than two hours.

Since the materials of the experimental group were posted on the same blog, the teacher's weblog was introduced (<http://hybridlearning.blogfa.com>). The participants were asked to visit the weblog after the class to do their homework. The weekly reading assignments were assumed to be posted by the participants on the blog.

<Insert Figure 1 here>

The reading materials posted on the teacher's weblog were exactly the same as those assigned to control group in print form. Each week three different texts with the same degrees of difficulty were posted. Taking a learner-centered approach, the researcher asked the participants to choose the topic they liked, read the related texts and summarize them. The reading texts were in wiki form. That is, there were some links participants could click on to have access to more reading materials about a special term used in the text in other websites, and also there were some parts of the reading texts which could be edited by participants if they wanted to add more materials to the text to let others read. In fact, having links to other sites and editability are the outstanding features of wiki pages. The participants were required to discuss about the topic of their reading materials, exchange ideas, and have interaction.

<Insert Figure 2, Figure 3 and Figure 4 here>

After the treatment, the participants in all four groups took the post-test of reading comprehension. The parallel form of reading comprehension test administered at the beginning of the instruction, i.e. Oxford Quick Placement Test (version Two) was administered as the post-test. The participants' raw scores in the pre- and post-tests were then entered into a computer to be analyzed.

3. Results & Discussion

In order to see if the participants were homogeneous before the instruction, a *t*-test was run. The results are as follows:

<Insert Table 1 here>

According to Table 1, whereas the mean score for the participants' reading comprehension before the instruction was 31.11, the corresponding mean score for the experimental group was 33.05. Table 2 indicates the results of the *t* test to decide whether this difference has been significant or not.

<Insert Table 2 here>

As Table 2 shows, the significance level is .15 which is higher than .05. This means that the difference between the performance of the participants in the control and experimental groups was not significant. It can, accordingly, be concluded that the groups were homogeneous, and they enjoyed the same level of ability as far as comprehension of the English language was concerned.

Considering the possible role of gender, to find out whether there was any significant difference between the participants' gain scores in reading comprehension, a *t*-test was applied to the scores. Table 3 shows the descriptive statistics for the control and experimental groups' mean gain scores.:

<Insert Table 3 here>

Table 3 indicates that there is a noticeable difference in the mean between the gain scores of control and experimental groups in the reading comprehension. As for the control group, the mean for gain scores is 1.5962, that of the experimental group is 6.7091. To see if this difference is significant, the results of the *t*-test are represented in table 4 as follows:

<Insert Table 4 here>

Based on the data in Table 4, since the significance level is lower than .05, it can be concluded that the difference in the participants' mean gain scores in the two groups is significant. Therefore, the research null hypothesis stating that there is no significant difference in the performances of those who use traditional face-to-face instruction and those who enjoy hybrid learning is rejected here. It can be concluded that those who practiced reading comprehension in a blended learning environment can enhance their comprehension of English much better than those who only use the conventional method.

4. Conclusion

The present research supports Szymańska & Kaczmarek (2011) in that blended learning can positively affect the comprehension of a language as the learners enjoy the advantages of technology and online texts along with their reading instructions in the classroom. As the reading materials on an e-tool like wiki have links and are editable, they encourage the learners to do more reading on the same topic by just clicking on the underlined term or phrase and entering a new webpage. In other words, they will have access to more reading resources. That's why

it can be claimed that online reading encourages learner's autonomy to read more materials independent of what is presented in the classroom.

Based on the results of this study, teachers can use e-tools such as wikis for their students' reading comprehension outside the classroom. Materials designers can also incorporate some online materials in reading courses by introducing the website addresses at the end of each reading lesson, and teachers can encourage their students to use such websites to develop their reading skill by informing them how today's e-tools are effective in their learning. Thus, modern technology can be used to be at the disposal of teachers to improve their students' language skills.

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Table 1. Descriptive statistics for control and experimental groups' reading performances before the treatment

Reading pre-test	N	Mean	Std. Deviation	Std. Error Mean
Control	52	31.1154	6.40972	.88887
Experimental	55	33.0545	7.59975	1.02475

Table 2. *t*-test to compare the participants' performances in reading comprehension before the treatment

	Leven's test for equal variance		t-test for equality of means			95% confidence interval of difference			
	F	Sig.	t	df	Sig.	Mean difference	Std. error difference	lower	upper
Equal variance assumed	1.474	.227	-1.423	105	.158	-1.93916	1.36303	-4.64180	.76348
Equal variance not assumed			-1.429	103.681	.156	-1.93916	1.35654	-4.62933	.75101

Table 3. Descriptive statistics for control and experimental groups' reading performances after the treatment

Reading pre-test	N	Mean	Std. Deviation	Std. Error Mean
Control	52	1.5962	.72110	.10000
Experimental	55	6.7091	2.26628	.30559

Table 4. *t*-test to compare the participants' reading gain scores

	Leven's test for equal variance		t-test for equality of means			95% confidence interval of difference			
	F	Sig.	t	df	Sig.	Mean difference	Std. error difference	lower	upper
Equal variance assumed	25.880	.000	-15.539	105	.000	-5.11294	.32904	-5.76537	-4.46050
Equal variance not assumed			-15.902	63.390	.000	-5.11294	.32153	-5.75501	-4.47087

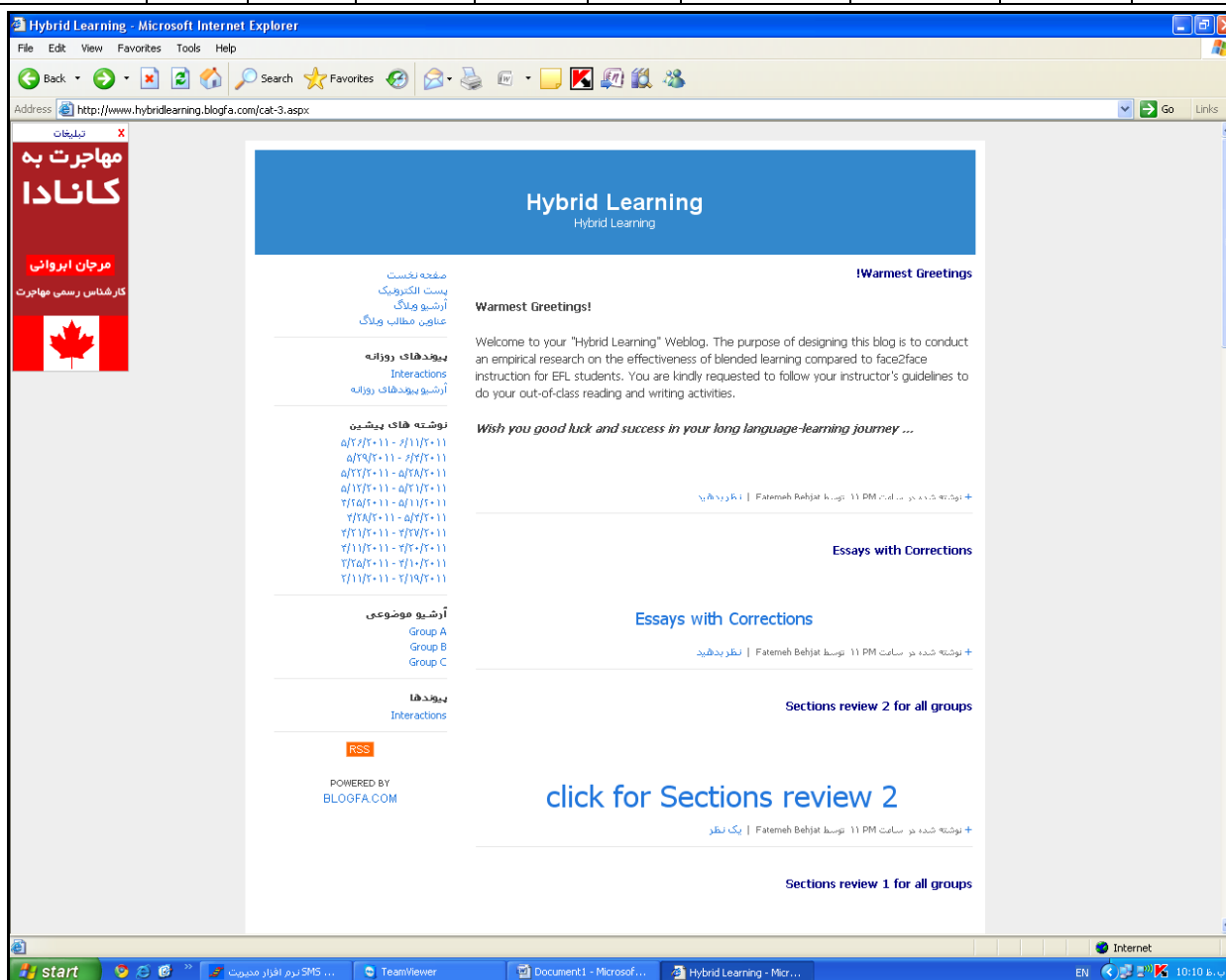


Figure 1. The Teacher's Blog Designed for Students' Activities in the Experimental Group

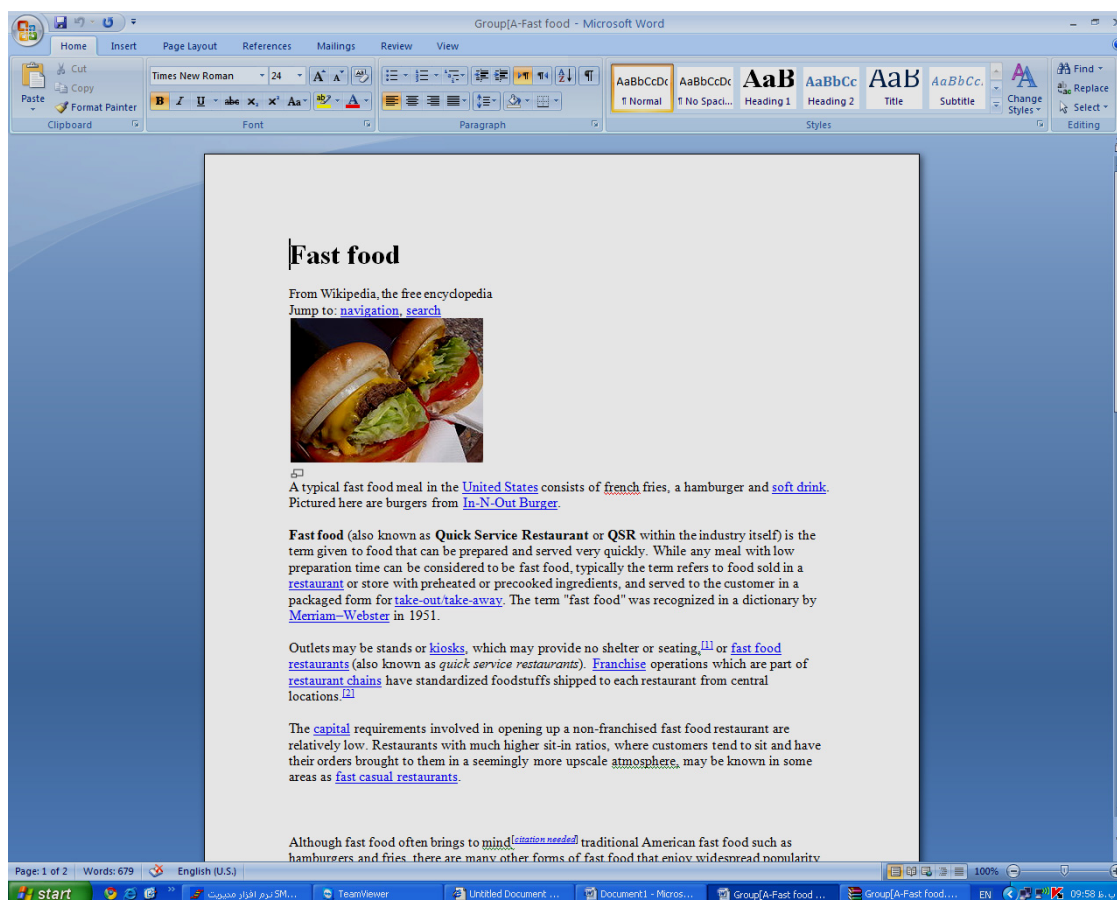


Figure 2. The Sample of a Wiki Text in the Weblog Used by the Experimental Group

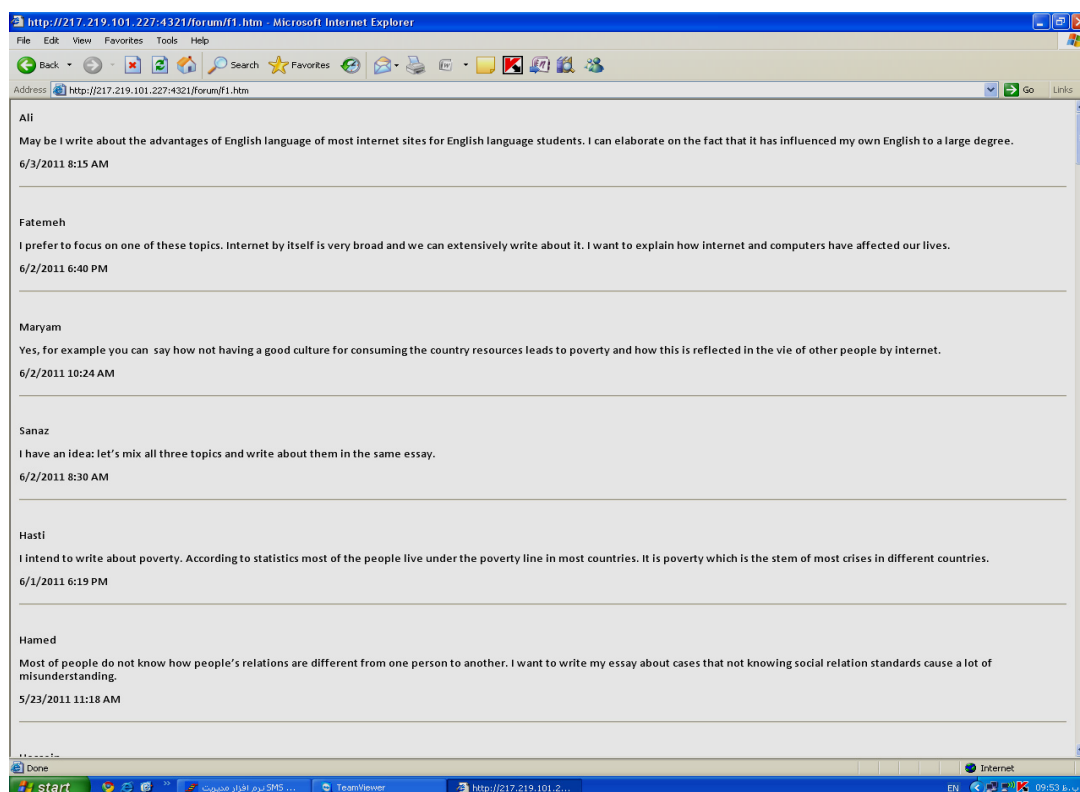


Figure 3. The Participants' Interactions in the Blog

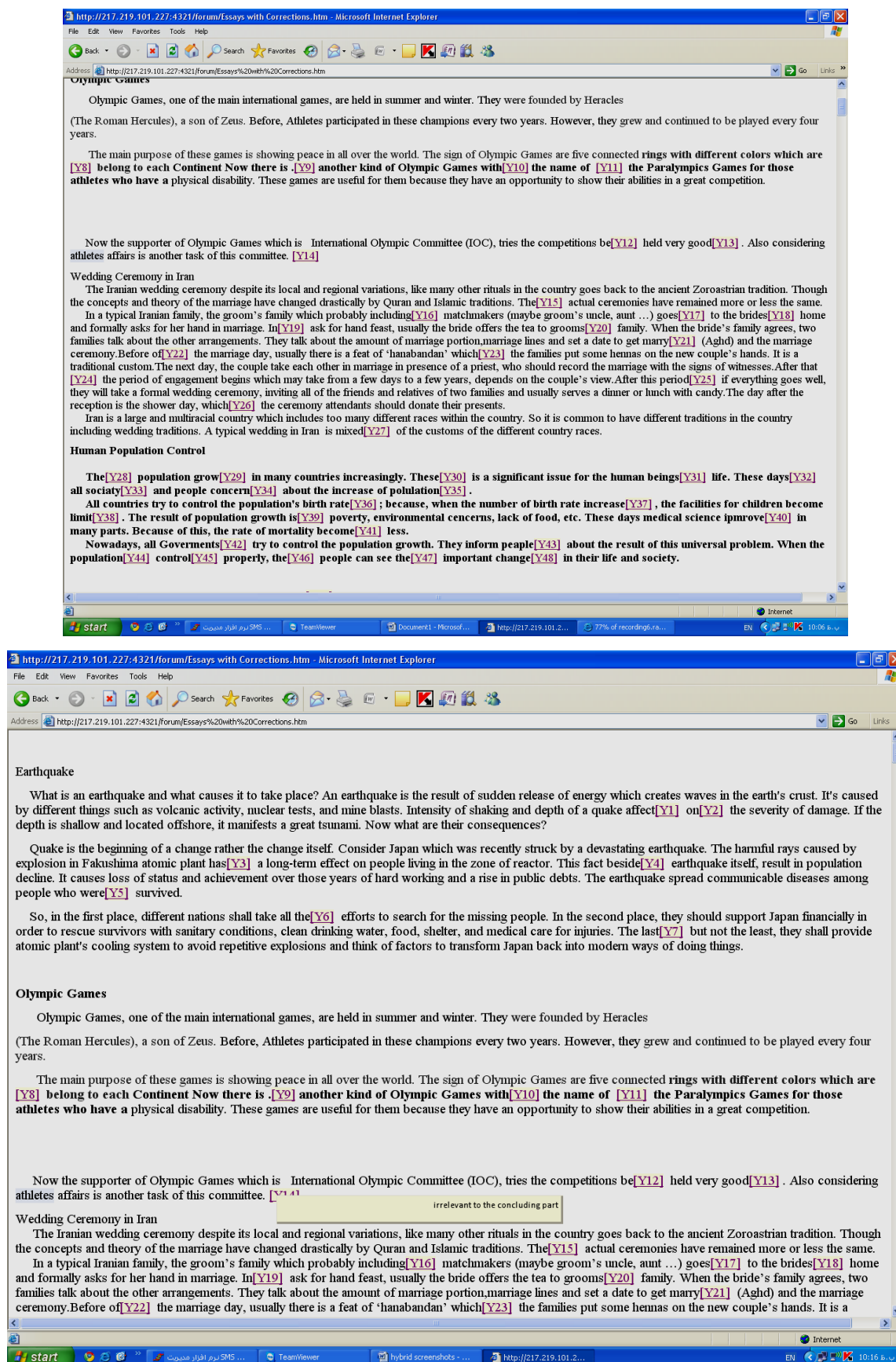


Figure 4. Teacher's Corrections in the Weblog for the Experimental Groups