Asynchronous Online Discussion Forum: A Key to Enhancing Students’ Writing Ability and Attitudes in Iran

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Abstract
This paper focuses on the impact of an asynchronous online discussion forum on the development of students’ ability in and attitudes toward writing in English. Two groups of third-year students (N = 60) majoring in English were assigned to two treatment and control groups, each receiving different types of feedback. Students in the treatment group were required to participate in an online learning environment and exchange feedback with their peers, whereas students in the control group received the traditional face-to-face feedback provided by the teacher. The results of a pre-test, a post-test, and a survey revealed that students’ writing in the treatment group significantly improved, both semantically and syntactically, and they expressed more positive attitudes toward writing. The findings also indicated that as a result of engaging in the asynchronous online discussion forum and exchanging feedback with peers, students exhibited more control over their work, involved more effectively with the learning tasks, collaborated more with their classmates, and employed self-assessment strategies to independently revise or rewrite their work. The implications of the study offer guidelines to improve and facilitate writing skill in EFL contexts.

Keywords: Asynchronous online discussion forum; EFL teaching writing; L2 writing in Iran; Feedback provision

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1. Introduction
Technology has impacted every aspect of human life and education is not an exception. Advances in technology and technological tools, such as computer-mediated communication as well as the widespread use of the Internet have led to a profound paradigm shift in education (Loncar, Barrett, & Liu, 2014), and thereby the students’ change of priorities. The new generation of the students seems to be the “digital natives” and as such, is quite comfortable using technological devices and tools, especially when it comes to social networks, blogs, and wikis.

In this new trend, forums like the asynchronous online discussion environments provide interactive platforms for students to critically discuss topics and challenge each other in the interactive web-based communities (Gao, Zhang, & Franklin, 2013). Hewitt (2005) pointed out that forums are the consequences of the computer-supported collaborative learning (CSCL) that involves learners in developing the more extensive knowledge and social interaction for practical learning. These are often used in a format commonly referred to as threaded forums (Loncar et al., 2014). In a threaded forum, the user has a choice to reply to an existing topic or start a new topic for discussion, as all the posts in a forum thread are presented in a chronological order (Gao et al., 2013). The expanding use of forums and synchronous or asynchronous web-based discussion environment at different educational level offers valuable opportunities for students in tandem with formal teaching and learning process. In a study conducted by Andresen (2009) on the use of asynchronous online forums between 1999 to 2007, it was found that forums had been seen as the effective writing tools by focusing on a number of forum-related themes, such as student interaction in the forum, the role of the instructor in the forum, assessment issues in the use of forums, and the efficacy of instructional material in various forums. Moreover, Boelens, De Wever, and Voet (2017) stated that
forums can help both researchers and practitioners in integrating flexibility, encouraging interaction, expediting students' learning processes, and underpinning an affective learning climate. Other researchers, such as Delahunty, Jones, and Verenikina (2014), Yang (2016), Schuster and Glavas (2017), and Chen, Chang, Ouyang, and Zhou (2017) reported the potential fresh insights of forums and digital spaces for the learning behavior of learners.

Despite having ample infrastructures and valuable potentiality of forums and synchronous or asynchronous web-based discussion, technology use has not yet gotten to the point where it can make a real difference in the Iranian educational system at least at university courses. The main reason is the inadequacy of the current curriculum and pedagogy planning. Therefore, there is a need to identify and develop this type of environment that best supports the purposes of learning. For this reason, the study tries to open up a new horizon by creating a forum environment in the Iranian pedagogical system to expose the chief pedagogical organizers and language dealers, such as future researchers, curriculum developers, teachers, and students to the potential areas for teaching writing with the asynchronous online discussion forum in comparison to traditional face-to-face teaching writing.

2. Review of the Literature
The evolution of English as an international language and the emergence of the World Wide Web (Internet) as a fast communication instrument without any limitations are jointly expediting trends in an age of globalization. The Internet has made great changes to human communication and English language learning on a universal scale. Therefore, the bond of computers and communications has marked a promising avenue of learning and teaching which necessitates all language dealers to get familiar with this
bond’s influences on any educational challenges in the new global village (McLuhan, 1962).

2.1. Asynchronous online discussion forum

The asynchronous discussion forum as an online computer-mediated communication (CMC) system allows students to share thoughts, ask questions, and provide feedback supporting interaction and building communities in online learning environments (DeWert, Babinski, & Jones, 2006; Yang, Yeh, & Wong, 2010). The forum has received positive attention from the theory of social constructivism and computer-supported collaborative learning (So, 2009) as through reflection on computer texts, students convey their thought in writing and clarify misunderstanding, if any.

Based on social constructivist view (Vygotsky, 1978), individual development is socially oriented, knowledge is constructed through interaction with others, and the self-engagement of knowledge integrates it with individual mental structure. Therefore, students’ asynchronous online discussion engagement develops a discussion to occur, and creates a pedagogically effective learning experience for the learners as they must first write and post messages (Hew & Cheung, 2008).

Despite the popularity of the threaded forums, it is argued that they “might not be the best technology to support the interactive and collaborative processes essential to a conventional model of learning” (Thomas, 2002, p. 364). Some problems have also been stated by researchers regarding the students’ participation in threaded forums’ such as lack of focus (Knowlton, 2001), lack of meaningful interaction (Hara, Bonk, & Angeli, 2000; Larson & Keiper, 2002), and lack of in-depth analysis of discussions (Gunawardena, Lowe, & Anderson, 1997). It was also reported
that students post their own ideas without attending or responding to their peers. To tackle these problems, researchers provided different instructional approaches. For example, Chen et al. (2017) devised an analytics toolkit that turns discussion forum data into information for students to reflect upon. The students reported their increased participation in and reflection on peer responses. Hewett and Martini (2018) investigated the personality and needs of online writing instructors and their professional training to check the learners’ engagement and to find potential patterns for their participation in the class. Additionally, Hew and Cheung (2008, p. 1113) noted that “factors associated with instructor facilitator roles, such as keeping the discussion on track, giving encouragement, helping students overcome technical difficulties, and using problem-centric, curiosity-arousing wordings when initiating a discussion” lead to positive student participation in online discussions. On the other hand, other researchers recommended alternatives to the design and structure of the threaded forums which resulted in a new threaded forum. For example, Boelens et al. (2017) designed blended learning environments to stimulate two-way communication and Gao et al. (2013) designed a productive online discussion model that obliges participants to embrace the following four interrelated dispositions on learning: discuss to comprehend, discuss to critique, discuss to construct knowledge, and discuss to share.

2.2. Teaching writing

Writing is central to our personal experience, professional careers, and social identities, yet while we are often evaluated by our control of it, its multifaceted nature constantly evades adequate descriptions (Manchon, 2011). This skill develops language acquisition, improves critical thinking, and supports learners to express freely their own idea. Consequently, broad
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research attention has been devoted to teaching writing. Hyland (2011) stated that it is a kind of activating schemata, genre awareness, grammar proofing, and responsiveness to a particular audience.

As stated before, technology has created a new learning context and consequently new contextual variables. According to Ellis (2010), the contextual factors need to be considered as significant in teaching trends. He enumerated three different contexts in this regard: foreign language, second language, and immersion language context. Regarding the technological development, another context can be added to Ellis’ category, web-based virtual context, where teachers and learners can participate in and engage with language anytime and anywhere. At its early stages, the web-based context was mainly used for information retrieval and use of software limited to information exchange and the interaction among learners; however, since then numerous attempts have been made to foster learners’ collaboration and more recently, social web applications have created online contents in a collaborative way (Kuteeva, 2011). This context embraces and overlaps all Ellis’s aforementioned contexts. Like other contexts, the web-based virtual context has its specific features and is not exceptional.

The main effect of technology is triggering creativity and innovation, as well as changing the traditional roles of teachers and students. This trend transforms the teacher-centered class into student-centered one and contributes more dynamic roles to students so that they can now become more self-directed, autonomous, and active in their learning processes within a collaborative, supportive, and interactive environment which meets the qualification of new roles and demands of teachers and students in the classrooms. Yeh, Lo, and Chu (2014) conducted a study to see the efficacy of a web-based error correction practice mechanism which was attached to an online annotation system for EFL writing instruction. The results showed...
that the system was effective in improving students' written accuracy and error correction performance in the peer feedback process.

In a comparison between traditional face-to-face and asynchronous online discussion forum classes, it can be stated that students in traditional face-to-face classrooms are limited and have less interactive opportunities for their developing proficiency in the English language in general, and English writing in particular. In fact, teachers control the floor and do most of the talking during classroom discussions and students have only a small chance of being allocated to any given response turn by the teacher. As a result, there tended to be very few spoken language interactions between these two sides. In many cases, it was seen that students received no feedback on language form in face-to-face communication with teachers. Due to the low satisfaction of traditional pedagogy and poor performance of students, researchers tried to open new horizons for instruction. That is why researchers (e.g. Al-Jarrah & Al-Ahmad, 2013; Cimasko & Reichelt, 2011; Reichelt, 1999, 2005; Tarnopolsky, 2000; You, 2004) have described and analyzed English writing instruction in different contexts to throw light on the contextual forces and factors that interact to affect the status of English writing in the curriculum and the quality of writing instruction in each specific context (Naghdipour, 2016). Moreover, as stated by Murray and Moore (2006, p.3), no amount of theorizing and intellectualizing of writing is going to make more successful writing patterns unless accompanied by an undertaking to engage in practical strategies and to plan effective writing tactics. In line with this, the studied case is Iran as an EFL context that puts a high value on traditional pedagogies of teaching writing (Casanave, 2009; Lee & Coniam, 2013; Naghdipour & Koç, 2015). Presenting the demerits of such approaches and pedagogies could stimulate educational policymakers, English language teachers, and every language decision makers to be more
realistic in deploying more applied instructional approaches to meet the qualification and requirements of students in L2 writing classes.

2.3. The importance of English writing in Iran

Teaching English writing in Iran seems to be following the traditional face-to-face pedagogy and is slow to adopt technological applications in this regard (Asoodar, Atai, Vaezi, & Marandi, 2013). A snapshot of the status of English instruction in Iran better clarifies the issue. Generally, three different contexts can be envisaged for teaching English in Iran. The first context is secondary school in which most of the contents of the English books include different types of paragraphs and essays. However, these books do not have any process-based and genre-based activities, such as pre-writing and brainstorming, multi-drafting and revising collaborative writing, and reading-to-write tasks. Moreover, some concerns have also been raised in this regard in relation to insufficient time allocated for teaching English at schools, heavy workload of teachers, students’ low English proficiency, and their lack of experience in English writing. The second context is the university context, where non-English major students often take a few English courses, a deficiency English course (usually Basic English grammar), a general English course, and one or two ESP courses. The General English course aims at increasing students’ general vocabulary, reading ability, and comprehension of general texts and the ESP courses cover the students’ technical knowledge in their field of study. The third context is the private language institutes in which their textbooks contain one or two writing tasks at the end of each unit. These institutes lack trained teachers and tailor-made instructional materials. As stated by Naghdipour (2016, p.85) teachers in these language schools follow “traditional pedagogical approaches in their classes. In particular, incorporating
formative assessment tools, collaborative tasks, portfolio writing, and another “process- and genre-based strategies are among activities absent from the majority of writing classes”. Therefore, exploration of teaching writing in the Iranian context seems to be a worthwhile task.

2.4. Feedback provisions

The main focus of L2 writing research has been whether and how corrective feedback helps students to become competent and independent writers (Chandler, 2003; Ferris, 2006). The question regarding the efficacy of written corrective feedback in terms of accuracy improvement is still an ongoing debate despite a growing trend of research throughout the last decades. In this regard, Truscott (2007), and Bitchener and Knoch (2008) argued that there is no significant difference between the effect of different types of feedback, such as direct corrective feedback and metalinguistic explanations on writing improvement. Three reasons have been enumerated by Terrell (1982) for the inappropriateness of direct feedback provision: (1) it does not lead to a correct language usage in the future, (2) it may cause negative affective feelings, and (3) it may invite students to focus on form rather than meaning and communication. On the other hand, there is a belief that feedback provision is beneficial for the students as it enables students to acquire grammatical features that would otherwise be lost due to the lack of frequent access to learning principles (Ellis, 2008). The factor which should be considered carefully in this regard is the type of error feedback provision. Researchers have differentiated between explicit (grammatical explanation) and implicit (recast, clarification) feedback provision. The former is the provision of a direct corrective form of a language by the teacher, while the latter encourages self-reflection and self-editing by students (Lalande, 1982).
Following the widespread use of computer technologies in language classrooms in recent years, the electronic feedback emerges as an evolution of the traditional teacher feedback. For instance, Liang and Tsai (2010) investigated writing skill of 43 biology students. Within three rounds of peer assessment, each student submitted a biology writing report to an online system. The writings were graded by the students themselves, their peers, and an expert student. The comparison of the grades indicated that self-assessment grades were different from those of expert's scores, but there was an adequate validity between the peer assessment scores and the expert's evaluation. Also, the increase of peer assessment rounds was emphasized because of its positive effects on the validity of scores and writing ability. In addition, the content analysis revealed that students' writing progressively developed with significantly better reporting, richness, and structure resulting from the online peer assessment activity. Further, Xie, Yu, and Bradshaw (2014) investigated the impact of role assignment and participation in asynchronous discussions in online classes. They claimed that online classes can increase importantly students' participation, group interaction, and also their quantity and diversity of interactive attractiveness. Moreover, in another study by Cheng, Liang, and Tsai (2015) on the role of feedback messages on online peer assessment feedback of 47 students, the results indicated the priority of cognitive feedback over effective and metacognitive feedback. Furthermore, Limbu and Markauskaite (2015) reported three different views of learners about online or web-based writing environment: (a) as a directed space prearranged by teachers, (b) as a scaffolded and interactively guided space, and (c) as an open space co-created by learners. Their students perceived that online collaborative writing tasks were widely attracted although some students considered scaffolding and active teacher support to be essential regardless of their conceptions of online collaborative writing. These studies show that
the role of web-based application is still of much interest and needs to be 
explored especially in the Iranian context. Therefore, this study aimed to 
investigate the impact of an asynchronous online discussion forum on 
writing ability and attitudes of Iranian EFL students. The following research 
question guided this study:

Is there any difference between the impact of asynchronous online 
discussion forum class and traditional face-to-face class on improving 
writing ability and attitude of the Iranian EFL students?

3. Method

3.1. Participants

The purpose of this study was to examine in detail the impact of 
asynchronous online discussion forum through feedback provision on 
students’ writing ability and attitude over a 12-week period in comparison to 
the dominant traditional face-to-face pedagogical teaching writing in Iran. 
After obtaining the necessary permission from the university and their 
related departments, the students were asked to take part in the research and 
were told that they could drop out of the research anytime they wanted. All 
students willingly consented to take part in the research. The participants 
were 60 (22 male and 38 female students) third-year university students. 
They were majoring in English language teaching ranging in age from 20 to 
24 years. All the participants were Persian speakers from a state university. 
Thirty students, based on mean scores of their performance on Oxford 
Quick Placement Test (version 1, 2001), were assigned randomly to each 
group. For a comprehensive and more reliable evaluation, a writing task 
from IELTS examination of the previous years was also added to the test.
3.2. Instrument
Initially, in the implementation stage, a project meeting in the students’ L1, Persian, was held for the treatment group to discuss the instructional design of the asynchronous online discussion forum. The researcher taught students how to prepare an expository writing style for their academic purposes. They had already passed a course on writing and they were familiar with the basic principles of paragraph writing. Also, a particular asynchronous online discussion forum environment for writing task was designed (www.eltmoodledu.com). In this environment, students were expected to register for the course at first. After the confirmation made by the researcher, they could have access to the content of the course anywhere anytime. By the selection of the item "Forums", they could see the box "Comments". Within this box, students posted their first drafts on the subject discussed in the class and provided three main challenging questions on the subject. In the next phase, they were required to "Reply" to their classmate’s questions and based on a feedback sheet developed by Yang, Badger, and Yu (2006, Appendix A) provided feedback for their classmates (on content, organization, grammar and vocabulary, and mechanism). The feedback sheet has been used in earlier studies by Paulus (1999) and Bitchener, Young, and Cameron (2005). One of the researchers played the role of a facilitator by encouraging students’ participation and ensuring smooth use of the program through continual presence by doing the following activities: a reasonably prompt and rapid subsequent response to the students’ contribution, direct responses to individual students rather than groups, helping students overcome technical problems, and helping them in providing appropriate feedback to their classmates based on the feedback sheet guidelines (Hew & Cheung, 2008). Moreover, there was no limitation for interaction among students. Finally, students revised their drafts and posted it in the "Comments" section.
The procedure for the control group was that of the traditional method. Similarly, the writing was taught with the main focus on expository writing style and during the whole sessions, students were expected to do the assignments and submit their essays. After that, the researcher wrote feedback, commented on the scripts, and provided the students with oral feedback as well. Finally, students revised their writing following the received feedback and submitted their final drafts. The students’ final drafts were printed for research purposes.

A post-test was administered to both groups two weeks after the treatment. The topic for the post-test was related to the discussed subjects in the classrooms. For instance, the topic was “Do parents have the right to punish their children? Which view do you agree with? This topic was selected by the researcher since students had been working on the theme of “Authoritarian Parental Control”. For assessing the possible difference between pre-test and post-test, Zhu’s (2001, Appendix B) analytical scoring guide was applied. The scale used rated students on six levels as impressive, clearly competent, satisfactory, unsatisfactory, weak, and severely limited. Each level was weighed differently; for example, level six was dedicated to the content with strong organization, persuasive reasoning, sophisticated vocabulary, etc. In addition, to avoid researcher bias, an independent second rater, an experienced English teacher, was asked to score the students’ post-tests as well. Then, to determine the students’ attitudes toward the use of asynchronous online discussion forum, an attitude questionnaire (Appendix C. & C.1) was adapted from Zhang (1995), Jacobs, Curtis, Braine, and Huang (1998), Hyland (1998), and Yang et al. (2006) by making the necessary modifications. For example, the item ‘teacher feedback class’ was replaced by ‘traditional face-to-face class’, one question extracted (item number 4) from Hyland (1998), which described the utilization of feedback or comments by the learners and also the item ‘peer feedback’ was replaced.
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by ‘an asynchronous online discussion forum’. It should be noted here that questions were mainly about students’ perception of different types of methods, feedback, revisions, ideal feedback, and self-assessment as an English learner and writer.

Figure 1. A screenshot of the website

Figure 2. Topics for discussion
Figure 3. Students writing sample with three questions

Students’ feedback provision: numbers are based on items in the feedback sheet.

Figure 4. Students’ feedback provision and their replies to the questions

Students reply to their peers’ questions & comments (interaction).
4. Data analysis

The study explored the impact of asynchronous online discussion forum on the Iranian EFL students’ writing development and attitudes in comparison to the dominant traditional face-to-face teaching writing class. The data obtained through the pre and posttests as well as the questionnaires were analyzed. One-way ANCOVA was run to evaluate the efficacy.

4.1. Data sets

Three data sets were collected from the groups:

1. Oxford quick placement test (version, 1, 2001), as general language proficiency test
2. Pretest and posttest essay writing
3. A partially modified questionnaire survey conducted during the last session. Learners were given fifteen minutes to fill in the questionnaires (Appendix C. & C.1). The section on students’ feedback utilization (Hyland, 1998), included the following items:
   a. Feedback follow-up: this section was related to the response of a learner to the feedback he or she received from his teacher or peer.
   b. Initial stimulus: a teacher, peer feedback, or suggestions influence a whole sentence or a number of sentences in which a learner has to change the whole sentence.
   c. Avoidance: deleting the problematic feature without substituting anything else by the learner based on the received feedback from his or her peer or teacher.

Figure 5 shows scatterplot that displays the relationship between pretest (covariate) and the outcome (posttest) for each of the two groups. The lines are the regression slopes for each group; they summarize the relationship between pretest and posttest. As it is clear, there is a positive relationship (the regression line slopes upwards from left to right) in both groups. In fact,
the slopes of the lines are very similar which demonstrates the similarity of these two groups; therefore, it verifies the homogeneity of regression slopes.

**Figure 5.** Scatterplot of posttest against pretest for each of the group

Table 1 gives the main summary of the ANCOVA. Look at the significance value of covariate (Pretest) by independent variable interaction (Method * Pretest), if this effect is significant, then the assumption of homogeneity of regression slopes has been broken. As it is shown, the effect here is not significant (p = .526); therefore, the assumption of the violation of homogeneity of regression slopes is rejected. This supports the earlier conclusion gained from an inspection of the scatterplots for each group. After finishing checking the assumptions, the researchers proceeded with the ANCOVA analysis to explore the differences between the groups.
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Table 1
Tests of between-subjects effects: Posttest dependent variable

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>5293.784</td>
<td>3</td>
<td>1764.595</td>
<td>33.216</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>2205.923</td>
<td>1</td>
<td>2205.923</td>
<td>41.524</td>
<td>.000</td>
</tr>
<tr>
<td>Method</td>
<td>117.272</td>
<td>1</td>
<td>117.272</td>
<td>2.208</td>
<td>.143</td>
</tr>
<tr>
<td>Pretest</td>
<td>4251.526</td>
<td>1</td>
<td>4251.526</td>
<td>80.030</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>2974.949</td>
<td>56</td>
<td>53.124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>255824.000</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>8268.733</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. a. R Squared = .640 (Adjusted R Squared = .621)

Table 2
Descriptive statistics

<table>
<thead>
<tr>
<th>Method</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>61.5667</td>
<td>12.88860</td>
<td>30</td>
</tr>
<tr>
<td>Asyns Online</td>
<td>66.9000</td>
<td>10.21274</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>64.2333</td>
<td>11.83841</td>
<td>60</td>
</tr>
</tbody>
</table>

As shown in Table 2, there is a significant difference between the mean of the traditional face-to-face and asynchronous online discussion forum groups. As a result, it can be concluded that students in asynchronous online discussion forum outperformed their traditional counterparts. Then the Levene’s Test of Equality of Error Variances was computed to see if the study violated the assumption of equality of variance. Table 3 shows that the difference between the means of experimental and control groups is higher than 0.05. This means the equality of variances is not violated.
Table 3
Levene’s test of equality of error variances \(^a\): Posttest dependent variable

<table>
<thead>
<tr>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.80</td>
<td>1</td>
<td>58</td>
<td>.778</td>
</tr>
</tbody>
</table>

Note. Tests the null hypothesis that the error variance of the dependent variable is equal across groups
\(^a\): Intercept +Pretest + Method

Furthermore, the main ANCOVA results are presented in Table 4, labelled ‘Test of Between Subjects Effects’. The researchers examined whether the groups were significantly different in terms of their scores on the dependent variable (e.g. posttest scores). They find the line which corresponds to the independent variable, i.e., Method (p=0.000). The Significance value is .000, which is lower than .05, hence the result is significant. In the next phase, the effect size was examined based on the corresponding Partial Eta Squared value. The value in this case is only .208 (a small effect size according to Cohen’s 1992 guidelines). This value also indicates how much of the variance in the dependent variable is explained by the independent variable. Convert the partial eta squared value to a percentage multiplying by 100 (shift the decimal point two places to the right) is only 20.8 percent of the variance.
Table 4  
Tests of between-subjects effects: Posttest dependent variable

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>5272.141^a</td>
<td>2</td>
<td>2636.070</td>
<td>50.142</td>
<td>.000</td>
<td>.638</td>
</tr>
<tr>
<td>Intercept</td>
<td>2247.107</td>
<td>1</td>
<td>2247.107</td>
<td>42.744</td>
<td>.000</td>
<td>.429</td>
</tr>
<tr>
<td>Pretest</td>
<td>4845.474</td>
<td>1</td>
<td>4845.474</td>
<td>92.169</td>
<td>.000</td>
<td>.618</td>
</tr>
<tr>
<td>Method</td>
<td>785.692</td>
<td>1</td>
<td>785.692</td>
<td>14.945</td>
<td>.000</td>
<td>.208</td>
</tr>
<tr>
<td>Error</td>
<td>2996.593</td>
<td>57</td>
<td>52.572</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>255824.000</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>8268.733</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. a. R Squared = .638 (Adjusted R Squared = .625)  
b. Computed using alpha = .05
Table 5 shows the individual test results for estimated marginal means of control and experimental groups.

Table 5  
Estimated marginal means of two groups: Posttest dependent variable

<table>
<thead>
<tr>
<th>Method</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower bound</th>
<th>Upper bound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>60.593^a</td>
<td>1.328</td>
<td></td>
<td>57.935</td>
<td>63.252</td>
</tr>
<tr>
<td>AsynsOnline</td>
<td>67.873^a</td>
<td>1.328</td>
<td></td>
<td>65.215</td>
<td>70.532</td>
</tr>
</tbody>
</table>

Note. a. Covariates appearing in the model are evaluated at the following values: Pretest = 44.6500.
It is worth mentioning that the difference between means in Estimates marginal means and the means in descriptive statistics (Table 1) is the result of the effect of covariate or pretest.

<table>
<thead>
<tr>
<th>(I) Method</th>
<th>(J) Method</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval for Difference</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>AsyOnline</td>
<td>-7.280*</td>
<td>1.883</td>
<td>.000</td>
<td>-11.050 -3.509</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AsyOnline</td>
<td>Traditional</td>
<td>7.280*</td>
<td>1.883</td>
<td>.000</td>
<td>3.509 11.050</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Based on estimated marginal means
*a*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Finally, the results of Pairwise Comparisons show the mean difference between the groups is -7.280. Since it is negative, it can be concluded that the students in the asynchronous online discussion forum outperform their counterparts in the traditional face-to-face class (Table 6).

In the next phase, the researcher attempted to investigate the students’ attitude towards teaching trend. As stated by Russell and Spada (2006), learner’s attitude influences the effectiveness of a specific methodology. So, for highlighting this efficacy, students’ perceptions and beliefs about the applied approaches, both the traditional face-to-face and asynchronous online discussion forum classes, were investigated through the questionnaires.
Table 7

Students’ perceptions or beliefs of different kinds of approaches

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th></th>
<th>Forum</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Not useful</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A little useful</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Useful</td>
<td>8</td>
<td>27</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Very useful</td>
<td>20</td>
<td>67</td>
<td>25</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 7 displays that 67% of the students found traditional face-to-face class “very useful”. They believed teacher as the dominant authority and more knowledgeable person to whom they could trust and ask their questions, while 84% of students favored asynchronous online discussion forum approach. Their views may indicate that the experience got by asynchronous online discussion forum had a positive effect on students’ perceptions. To assure the students’ views on the usefulness of these approaches, the researcher checked the self-perception of both English learners and writers. As Table 8 shows, five students in the asynchronous online discussion forum considered themselves as excellent learners and two students considered themselves as excellent writers in contrast to traditional face-to-face class, where no one was thought to be an excellent writer or learner. This can be attributed to the effect of forum class challenges and affordances since it enhanced students’ self-confidence and independence; moreover, the number of students who believed they could be a good learner or writer was more than that of the traditional class. Table 8 also presents the data on seven and nine students who considered
themselves as poor learners and writers respectively in traditional class, while no one in the forum class had this self-perception.

Table 8
Students' self-perception as English learners and English writers at the end of the course

<table>
<thead>
<tr>
<th>Self-perception</th>
<th>Traditional class</th>
<th>Forum class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English L*</td>
<td>Writer</td>
</tr>
<tr>
<td>Excellent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Good</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Fair</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Poor</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. *Learner

4.2. Feedback and revisions

For an in-depth analysis of students’ behavioral and effective engagement, the relationship between the written feedback and the revisions was examined carefully. For this reason, the researcher analyzed the added item from Hyland (1998) questionnaire, (item number 3), which described the utilization of different types of feedback. Table 9 displays the type of revisions made by the students in each group. The main findings of this table are the non-existence of an avoidance type feedback and that 51% of feedback was followed closely by teacher feedback in the traditional class. This did not occur in forum class. That is, about 14% of revisions were avoided by students in the class.
5. Discussion

The present study examined the effect of two instructional approaches, i.e. asynchronous online discussion forum and traditional face-to-face class on the writing practice and attitude of two groups of students in the Iranian context. The results revealed that the students in asynchronous online discussion forum outperformed those in the traditional face-to-face class in their posttest writing. Traditionally, in every teacher-centered class, the teacher tends to provide students’ writing which Santa (2008) viewed as a recalcitrant response to students’ errors in writing. This approach did not get students’ positive approval. However, the technological development opens up a new horizon through creating a context in which every individual can get engaged in language learning, interact purposefully, and provide feedback to their peers. As the end-product of learning a language is its interactive and communicative application, attempts were made to teach the language by the application of technology. Therefore, the asynchronous online discussion forum can establish such environment for learners to develop their writing ability in a challenging, collaborating, and constructive way. These results support the findings of the related research on a comparative analysis of forums and wikis as tools for online learning (Biasutti, 2017), where it was found that processes, such as inferencing,
evaluating, organizing, and supporting of discussing or sharing ideas were more evident during the forum discussions.

Another finding of this study was on the students’ attitude towards the asynchronous online discussion forum. The students’ responses to questionnaires indicated the students’ preference for asynchronous online discussion forum over traditional face-to-face class, which seems to be connected to accessibility to both teachers and peer feedback interactively at the same time without limitation. Moreover, the challenging nature of the asynchronous online discussion forum affected the self-perception of students in that they felt a sense of being confident and autonomous at the end of the study. Some of the students considered themselves as excellent and good writers and learners, while these attributions were absent among the students of the traditional face-to-face class to the point that even some of the students considered themselves as poor learners and writers in the traditional face-to-face class.

The findings also confirmed that providing the opportunity for the students to use language and its accompanied feedback interactively was helpful and effective in improving the writing ability. In addition, they were similar to Ferris, Sinha, and Senna’s (2013) three main findings regarding written corrective feedback, in which they claim: (a) focused written corrective feedback is more valuable than unfocused one, (b) Indirect written corrective feedback may be more valuable in the long term than the short term, and (c) Explicit written corrective feedback may be more valuable for some students than the implicit one. The similar results can be seen here in which approximately all these three claims were achieved, but in more comprehensive phase. In fact, by the use of forum platform, students tended to provide written corrective feedback both implicitly and explicitly since students knew that their writing or errors would be checked based on pre-determined error types and categorization which are defined in
the feedback sheet explicitly, so they were informed in advance which items would be addressed by their peers or the teacher. In another study which was conducted by Esfandiari and Meihami (2017), the provision of direct corrective feedback through e-portfolio as an online platform and getting language teachers familiar with such method alongside their traditional procedures were supported and emphasized.

In contrast to these views, there are also challenging views on delivering corrective feedback in writing. For instance, they are in contrast to Truscott’s (2007) conclusion that correction not only was useful, but also had a small harmful effect on students’ ability to write accurately based on Cohen’s $d$ formula for meta-analysis. However, it is clear that individual responds differently to any pedagogical treatment based on their language background, motivation, and external constraints.

Last but not least, another goal of this study was transferring the teachers’ duties to students’ own engagement in the asynchronous online discussion forum and scaffolding students’ self-regulated strategies and learning to grow them up independent and self-reliant in writing skill, so it was indicated that students’ writing improved as they started assessing their own and peers’ writing products by either accepting or avoiding feedback. Therefore, more objectives, namely the efficacy of technology in education, feedback provision, and interactive nature of teaching writing and shifting the teacher-centered class to student-centeredness class and educating trait autonomous learners were achieved successfully.

6. Conclusion

To sum up, based on the results of this study, the following conclusion and recommendations can be made. First, the chief duties of teachers in the present technological age are the integration of technology with
instructional activities like curriculum development and syllabus design. In this regard, one would recommend that teachers should carefully consider their goals and all the complexities of using technology in a learning environment, such as cultural, and infrastructural ones, and then use it according to the students’ needs. It is clear that the technology cannot take the place of teachers, but can be used to assist teachers with supplementary tools by offering valuable interactive opportunities in the target language. Having such projects is a good way of motivating students in language learning than what was ever possible in the traditional language classes. Moreover, the findings of the study establish virtual platform designed in collaborative environments, which support the need for further studies on the nature of such platforms. In this regard, the forums are the most widespread asynchronous and synchronous tools which could be thought-provoking for highlighting their features.

Second, a pre-determined feedback sheet can provide suitable clues for students to know which parts of the written products should be focused on, analyzed, and learned. In fact, they become self-assessed and self-regulated learners. Moreover, scaffolding and active teacher support can be seen as an extension of the natural collaboration which is essential for the development of the life-long learning and active involvement of students in their learning process, particularly in writing activities.

Third, this study can be seen as a model for changing traditional trend from teacher-centeredness to student-centeredness by fostering autonomy in a traditionally-oriented context. Students in asynchronous online discussion forum experienced improvement in their writing as they started to individually analyze their own and peer’s papers and accept or avoid any revision. They become familiar with extracting their passive language knowledge and transforming it into active knowledge. In fact, students may have enough knowledge about a particular grammatical item, such as
“Conditional sentences”, but do not use in their production. Instead by exercising writing procedure in asynchronous online discussion forum, students seemed to activate their prior knowledge, especially by using that knowledge in their drafts. In other words, it is a movement from declarative knowledge to procedural knowledge in which technology (forum) encourages students to take charge of their learning outcomes and to employ their own styles and strategies to achieve self-actualization in their work.

Although the present study has reached its aims, there were some inescapable limitations which should be considered carefully. The first limitation is the design of asynchronous online discussion forum which is not appropriate for involving the students in listening activities. This shortage should be accomplished by adding video chat or video conferencing supplementary application for the better development of such platform and establishing a blended oral and written learning environment. The second shortcoming is related to the participants’ field of study, those who were all majoring in English and were familiar with how to write, while participants of other fields of study may not be very familiar with writing skill. The third shortcoming to be taken into account is the small number of participants who took part in this study, meaning that the results have limited generalizability. This population should include more participants at different levels.

Acknowledgements
The authors would like to gratefully acknowledge the anonymous reviewers for their careful reviews and insightful feedbacks and additional thanks go to the Editor, Prof. Mahmood Reza Atai for his support and encouragement.
7. References


Appendix 1. Feedback sheet (Yang et al., 2006)

Draft written by------------- feedback provided by -------------
Composition topic----------------------------------------

Your purpose in answering these questions is to provide an honest response to your partner's or group member's draft. You should also suggest ways to make his/her writing better. Before beginning your review, be sure to read the composition carefully. After that, respond to following questions. BE SPECIFIC. BE CONSTRUCTIVE.

Content
1. What do you like the best or the worst about the idea in this essay? Be specific. You can chose a tick for the best one and a cross for the worst or given your own comments (vocabulary, cohesive/linked ideas, clear/easy to follow, convincing, effective reasoning, well-developed ideas, attention-grabbing introduction, strong conclusion, intriguing style, well-supported topic sentences, understandable transitions, etc.)

2. Of the proofs, reasons or arguments given to support the writer's opinion, which one/ones is/are irrelevant or illogical to the topic? Point it/ them out and explain your reasons and, if you can suggest improvements.

3. What part(s) should be developed more? Mark these with a letter D. Explain why you think this should be developed more and make some suggestions.

4. What part(s) are confusing? Mark these with a letter C. Explain why you think they are confusing and make some suggestions.

Organization
5. Does the first paragraph include an introduction expressing the writer's position statement of opinion? Yes□ No□  If yes underline
the sentence(s). If no should the writer explicitly express his/her topic in the revision? Yes ☐ No ☐

6. Does each paragraph have a topic sentence? Yes ☐ No ☐. Point out the paragraphs without topic sentence. Paragraphs ----, ----, ----, ----. Should topic sentences be added to these paragraphs? Yes ☐ No ☐

7. Is there a conclusion in the final draft? Yes ☐ No ☐. Is it effective? Yes ☐ No ☐

Grammar, Vocabulary & Mechanics

8. Use the following correction codes to point out the errors. Mark the codes in the draft.
### Asynchronous Online Discussion Forum: a Key to Enhancing...

<table>
<thead>
<tr>
<th>V</th>
<th>error in verb tense/verb form (active/passive voice, present/past participle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>spelling error</td>
</tr>
<tr>
<td>Art</td>
<td>article/other determiner missing or unnecessary or incorrectly used</td>
</tr>
<tr>
<td>Prep</td>
<td>preposition incorrectly used</td>
</tr>
<tr>
<td>Pron</td>
<td>pronoun</td>
</tr>
<tr>
<td>Conj</td>
<td>conjunction incorrectly used</td>
</tr>
<tr>
<td>NE</td>
<td>noun ending (plural or possessive) missing or unnecessary</td>
</tr>
<tr>
<td>WW</td>
<td>wrong word/wrong word form</td>
</tr>
<tr>
<td>WO</td>
<td>wrong word order</td>
</tr>
<tr>
<td>SV</td>
<td>subject and verb do not agree/ missing word/unnecessary word</td>
</tr>
<tr>
<td>SS</td>
<td>sentence structure: incorrect structures, sentence fragments</td>
</tr>
<tr>
<td>P</td>
<td>punctuation wrong</td>
</tr>
<tr>
<td>Cl</td>
<td>capital letter</td>
</tr>
</tbody>
</table>
Appendix 2. Composition/ Essay scoring guide (Zhu, 2001)

6 Impressive
- Strong organization of essay and paragraphs
- Persuasive reasoning through varied and detailed examples
- Demonstrates style through sophisticated and varied vocabulary, complex grammar and sentence structure, accurate spelling, and effective transitions and punctuation

5 Clearly competent
- Clear organization of essay and paragraphs
- Relevant, detailed examples
- Correct use of most vocabulary, grammar, sentence structure, transitions, spelling, and punctuation; minor errors do not interfere with communication

4 Satisfactory (sometimes only marginally)
- Organized essay and paragraphs
- Developed with adequate examples, but lacking detail
- Correct use of most vocabulary, grammar, sentence structure, transitions, spelling, and/or punctuation; occasional errors sometimes interfere with communication

3 Unsatisfactory
- Some evidence of organization of essay and/or paragraphs
- Little development
- Frequent errors in vocabulary, grammar, sentence structure, transitions, spelling, and/or punctuation sometimes interfere with communication

2 Weak
- Slight evidence of organization of essay and/or paragraphs, but ideas confused and/or disconnected
- Very little development, but simplistic
- Frequent and varied errors in vocabulary, grammar, sentence structure, transitions, spelling, and/or punctuation interfere with communication

1 **Severely limited**
- No evidence of organization
- No development
- Limited to basic words, phrases, and sentences often with errors
- May be off topic or merely a copy of the Essay Test Topic
Appendix 3. Questionnaires

Yang et al. (2006)

Feedback Questionnaire (For traditional face-to-face class)
The purpose of this questionnaire is to improve the teaching of composition.
The aim is NOT to evaluate professors. Please do not sign your name: all responses are anonymous. Recall what you did with the feedback from your teacher and answer as honestly as possible.

Male □ Female □

1. How many semester of English have you had?

2. Generally did you find the traditional face-to-face class useful in your writing improvement?

   Very useful □ Useful □ A little useful □ Not useful at all □

3. Generally did you find the teacher's feedback in traditional face-to-face class useful in your revision?

   Very useful □ Useful □ A little useful □ Not useful at all □

   Your explanation---------------------------------------------


   Followed by feedback □ Initial Stimulus □ Avoidance □

5. Check one statement that best expresses your opinion about receiving feedback on your paper.

   a) I prefer to receive only teacher feedback
   b) I prefer to receive only peer feedback
   c) I prefer to receive teacher and peer feedback
   d) I prefer to receive no feedback (and to revise on my own)
Appendix 3.1. Questionnaires

Feedback Questionnaire (For asynchronous online discussion forum class)
The purpose of this questionnaire is to improve the teaching of composition. The aim is NOT to evaluate professors. Please do not sign your name: all responses are anonymous. Recall what you did with the feedback from your peers and answer as honestly as possible.

Male □ Female □

1. How many semesters of English have you had? -------------------

2. Generally did you find the asynchronous on-line discussion forum useful in your writing improvement?
   Very useful □ Useful □ A little useful □ Not useful at all □

3. Generally did you find your asynchronous on-line discussion forum feedback useful in your revision?
   Very useful □ Useful □ A little useful □ Not useful at all □

Your explanation---------------------------------------------------------------

   Followed by feedback □ Initial Stimulus □ Avoidance □
5. Check one statement that best expresses your opinion about receiving feedback.
   a) I prefer to receive only teacher feedback
   b) I prefer to receive only peer feedback
   c) I prefer to receive asynchronous on-line discussion forum feedback
   d) I prefer to receive no feedback (and to revise on my own)

Your explanation

---

6. Rate yourself as an English learner? Excellent □    Good □  Fair □  Poor □

7. Rate your skills in writing English compositions? Excellent □    Good □  Fair □  Poor □

Notes on Contributors:

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