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PROMOTING ACADEMIC WRITING PROFICIENCY OF IRANIAN EFL LEARNERS THROUGH BLENDED LEARNING

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ABSTRACT

Blended learning is a combination of traditional and technology-enhanced learning. Social networks services can be used in blended learning settings as they support collaboration, resource sharing, and socialization. Edmodo is an educational social network which can facilitate the development of second or foreign language skills. This study intended to investigate the effects of blended learning through implementing Edmodo mobile application on the academic writing proficiency and perceptions of Iranian intermediate EFL learners in higher education. This quasi-experimental research followed a mixed method design. The results indicated that it was possible to integrate Edmodo mobile application into essay writing class successfully since the experimental group who practiced collaborative essay writing through Edmodo mobile application outperformed the control group regarding writing proficiency in general as well as such aspects as organization, vocabulary, and mechanics of writing. The qualitative analysis of follow-up interviews revealed that majority of students had positive opinions and perceived it as an innovative, engaging and helpful activity. Blended Language Learning is a promising area in the field of TEFL, and as such it is crucial for teachers to keep their teaching methodologies and techniques compliant with the technology developments of 21st century.

Keywords: Blended learning, academic writing proficiency, writing aspects, Edmodo mobile application.

INTRODUCTION

It is crucial for teachers to keep themselves updated in this information age and to make rapid changes in the curriculum to meet the needs of learners and complex classroom conditions. However, integrating technology to classroom learning may be considered as challenging (Erben, Ban, & Castaneda, 2009). Therefore, teachers should take into account the principles of applying technology in classrooms. In this regard, a number of criteria should be considered to provide students with meaningful learning context (Bersin, 2004). Much of the benefit of new technologies such as Computer Mediated Communication (CMC) and Web 2.0 tools is inherent in the increased opportunities for interaction and communication they provide for the learners (Conole & Dyke, 2004), but the use of new technologies alone cannot ensure

learning without a strong pedagogical rationale and appropriate integration with the course (Kirkwood & Price, 2005). Activities that take place using new technologies need to be integrated (Biggs, 1999) with the rest of the course and not presented as optional; otherwise, learners might not give them much attention (Al-Rahmi & Othman, 2013; Ekici & Kiyici, 2012; Forkosh-Baruch & Hershkovitz, 2012; Grosseck, Bran, & Tiru, 2011; Hung & Yuen, 2010; Junco, Kabilan et al., 2010; Kirkwood, 2008; Lawson, Kleinholz, & Bodle, 2011; Mazer, Murphy, & Simonds, 2007, 2009; Wodzicki, Schwämmlein, & Moskaliuk, 2012).

Blended Learning

Blended learning or also called hybridization (Jacob, 2011) combines face-to-face learning with online learning (Bonk & Graham, 2005). Blended learning occurs when technology is utilized in the process of learning (Clark & Mayer, 2011; Bates, 2005) and intended to enhance knowledge and performance (Rosenberg, 2001). A number of authors have pointed to the multiple advantages of blended learning in the classroom. First, this method can help students to develop time management skill (Spika, 2002) because they are given the autonomy and flexibility to choose time and place outside the classroom to complete their work. Second, it provides opportunities for students to experience technology to enhance their learning and this technology motivates them to be more active and engaged in the lessons they are learning (Bahce & Taslaci, 2009; Isiguzel, 2014; Vernadakis, Giannousi, Tsitskari, Antoniou & Kioumourtzoglou, 2012; Wesson, McKenzie & Bangay, 2015). Finally, it helps teachers to be more effective in using technology (Fakhir, 2015; Masalela, 2009).

Some social networks tools have been implemented for blended learning such as Twitter, Twiducate, Facebook, Edmodo, and Ning (Roblyer et al., 2010; Brady et al., 2010; Mack et al., 2007). Social networks services support collaboration, resource sharing, and socialization of common interest groups (Kocak-Usluel & Mazman, 2009; Newman & Park 2003). They are proven to enhance students' learning experience and to create many advantages in informal learning (Potter, 2006). Some usages of social networks in higher education are library uses, faculty uses, and administrative uses for content generating, sharing, interacting, and socializing (Roblyer et al., 2010).

On the other hand, it is believed that the use of a well-balanced combination of classroom pedagogies with mobile learning services would support both interactive and collaborative learning and effective instruction of the content (Motiwalla, 2007). One of the most useful of these technologies is Edmodo. It is a social platform available at www.edmodo.com which provides a free and secure learning platform for teachers and students (Duncan & Chandler, 2011). It is similar to Facebook in layout, (Kongchan, 2013). This service is accessible through any mobile device with Internet capabilities.

Edmodo is one of the most common educational social networks which is similar to Facebook in layout, but is much more private and safe for a learning environment because it allows only teachers to create and manage accounts, and only the students, who receive a group code and register in the group, can access and join the group (Kongchan, 2013). By means of Edmodo, teachers can send out quizzes and assignments, give feedback, receive completed assignments, assign grades, store and share content in the form of files and links, maintain a class calendar, conduct polls, as well as send notes and text (SMS) alerts to individual students or to the entire class. It was established in 2008, and has currently reached more than 80 million users worldwide ("About Edmodo", n.d.). One of the influential factors of such spread of Edmodo is the fact that its premier features are free of charge (Delacruz, 2013). Other factors include user-friendliness (Kongchan, 2012; Thongmak, 2013); security, innovation, and creativity (Kongchan, 2012, 2013; Wijayani & Weny, 2017); and communication facilities (Delacruz, 2013; Paulsen, 2003). Several studies have been conducted on the use of Edmodo in educational environments and the number of these studies is gradually increasing in line with the rapid development of Edmodo.

Implementation of Edmodo in Language Teaching and Learning

Edmodo can facilitate the development of English language skills (Al-Kathiri, 2015; Mokhta & Dzakiria, 2015). The notion of providing students with an English online communicative environment to practice language skills and to develop their linguistic competences has already been mentioned by Robertson (2008),

Al-Jarf (2005) and Tsai and Ernst (2009). Furthermore, it is agreed that using Edmodo can extend learning process and discussion out of class when time-in-class is limited. Therefore, it allows learners to be connected to their language education, ask questions, provide responses, perform peer corrections, give comments, and even share knowledge anywhere and anytime online (Chandler & Redman, 2013; Crowe & McDonald, 2013; Lara, 2013). In so doing, it fosters interaction and cooperation among students, course engagement, and students-teacher interactions which can be difficult to achieve in a physical classroom (Bozanta & Mardikyan, 2017; Sandu, 2015). However, it seems that a combination of traditional in-class instruction and online sessions via Edmodo is considered to be an effective factor in generating more positive attitudes towards learning English (Alseweed, 2009; Bersin, 2004).

Recently, some studies have investigated the effectiveness of Edmodo in teaching the writing skill (Abadi, Ahmadi & Mehrdad, 2015, Adas & Bakir, 2013; Karyawati, 2014). The majority of such research focused on the application of Edmodo in improving the writing skill of secondary or high school students (Al-Kathiri, 2014; Janpho, Chaeturat, Multa, Harnburut & Kwangsawad, 2014; Noviana, Rufinus & Bunau, 2015, Tsiakyroudi, 2018), the results of which showed improvement of the students' writing skills after using this technology. Similar results were also found by Purnawarman, Susilawati, and Sudayana (2016) who stated that the students became more active in learning, individuals were able to work equally well in the group, and their writing quality improved. However, they concluded that it is a challenge for teachers to implement Edmodo in teaching writing collaboratively (group works) since the students apparently rely on each other to upload the writing drafts; therefore, trying out individual works in Edmodo was suggested.

Regarding the five aspects of writing, the experimentaYusuf et al., (2018) investigated the effects of using Edmodo on five aspects of writing including content, organization, grammar, vocabulary, and mechanics in narrative texts. The results not only indicated improvement in all aspects of writing from pre-test to post-test, but also the largest increase was related to the content and grammar aspects.

Students' Perceptions of Edmodo

Multiple studies have focused on university students' perceptions of Edmodo-enhanced instruction. The use of this new technology, has introduced an innovative scenario to the traditional instruction which resulted in positive perceptions towards Edmodo and MALL since it facilitates collaborative learning and students' self-confidence (Bozanta &Mardikyan, 2017; Yunkul & Cankaya, 2017). It also increases effectiveness of communication and language learning (Al-Said, 2015; Al-Shammari, 2007; Mokhta & Dzakiria, 2015; Sandu, 2015; Thongmak, 2013). Moreover, it is stated that implementation of Edmodo projects had a positive effect on students' motivation towards language learning in general (Alshawil & Alhomoud, 2016; Hariri & Bahanshal, 2015), and writing skill in particular (Tsiakyroudi, 2018) as it increased students' participation and engagement in the writing tasks.

However, there were a number of studies with contradictory results as it was reported that some students had unpleasant experiences using Edmodo when learning English (Ali, 2015; Sandu, 2015). They believed that it was pointless to use this platform as its main function was to obtain instructions and announcements posted by teachers (Enriquez's, 2014) since they had already obtained face-to-face instructions from their teachers. Other negative responses towards the use of this online learning media were due to the necessity of the Internet connection and computers, laptops or mobile phones. All students do not have the privilege of possessing such devises and the Internet quota can also be costly (Almaini, 2013; Grosseck, 2009; Stafford et al., 2004, Wang, Sun & Haridakis, 2009, Yusuf et al., 2018). Other challenges in using Edmodo were related to problems with Internet bandwidth (Bates, 2006; Bersin, 2004, Motiwalla, 2007; Stockwell, 2008), students' confusion in using the application (Alebaikan & Troudi, 2010; Erben et al., 2009), and incompatibility of smartphone applications (Purnawarman et. al., 2016).

PURPOSE OF THE STUDY

Generally speaking, Edmodo was considered as an effective learning tool for blended learning and teaching of writing skill since it increased students' motivation, and engagement in online learning activities (Manowong, 2016). However, further research is necessary in order to explore the efficiency of this application in different

educational settings with more exact methodological considerations such as controlling the effects of General English proficiency (GEP) as an intervening or mediating variable and grouping structure of students. Moreover, in order to increase the generalizability and validity of the results, it is necessary to design a study including both the experimental and the control groups. This is of great importance as most of the previous experimental studies compared students' performances before and after using the application (Purnawarman et al., 2015; Tsiakyroudi, 2018; Yusuf et al., 2018) in one experimental group. Hence, the results could be partially influenced by mastery effect not merely the implementation of BL techniques. On the other hand, in most of the studies on writing proficiency (Abadi, Ahmadi & Mehrdad, 2015; Adas & Bakir, 2013; Karyawati, 2014), this skill was evaluated holistically and the aspects of the writing skill were not focused on.

Considering the methodological pitfalls of the previous studies as well as the limited number of Iranian research on the pedagogical utility of hybridization in improving writing proficiency of EFL learners (see Abadi, Ahmadi & Mehrdad, 2015; Ghahari & Ameri-Golestan, 2013), this study intended to investigate the effects of blended learning through implementing Edmodo mobile application on the academic writing proficiency and perceptions of Iranian intermediate EFL learners in higher education. The research questions which guided the study were:

1. Does blended learning through Edmodo-enhanced collaborative writing practice improve the academic writing proficiency of Iranian intermediate EFL learners?
2. Does blended learning through Edmodo-enhanced collaborative writing practice improve all aspects of academic writing proficiency of Iranian intermediate EFL learners in the same way?
3. What are the students' perceptions of blended learning through Edmodo-enhanced collaborative writing practice?

METHODOLOGY

Research Design

This quasi-experimental research followed a mixed method design. Quasi-experimental research is common in social science studies (Cohen, Manion & Morrison, 2007) where it is not possible to randomly assign learners to experimental and control groups. The quantitative data related to research questions one and two were collected through pre-test and post-test essays written by the participants. In addition, qualitative data related to the third research question were gathered through a structured interview with 14 students in the experimental group after the post-test.

Participants

Based on convenience sampling procedure, two intact classes of Academic Writing course, in Islamic Azad University, Isfahan, Iran, were chosen to participate in this study. There were 60 senior students of Translation Studies in both classes. Their first language was Persian and their age ranged from 20 to 35. Based on the results of Oxford Placement Test (2001), fifty three of them were at intermediate level of General English Proficiency (GEP), while the other seven students were either at the post or pre-intermediate levels of GEP. The class that was assigned to be the experimental group included 27 intermediate students, and the other one which was the control group had 26 intermediate learners.

The other participants of this study were two female university instructors and also two raters. All of them were non-native teachers of English as a Foreign Language (EFL) with at least 10 years of teaching experience. Their age ranged from 39 to 42. A four-hour Edmodo workshop was held for the teacher of the experimental group by one of the researchers, and she was taught how to make an account, create a class, divide the class into subgroups, and send posts, assignments and grades to the students. The raters took part in the process of writing evaluation throughout the study. They assessed pre-test and post-test samples as well as all the writing assignments done by the students during the study.

Instruments and Materials

Oxford Placement Test (2001) and the analytic writing assessment rubric by Hedgcock and Leftkowitz (1992) were applied to assess GEP level and writing proficiency of the participants. The implemented writing rubric defines the following 5 components on a 0-100 point scale and there are four specified levels for each component (very poor, poor to fair, average to good, very good to excellent): Content (30 points), Organization (20 points), Grammar (25 points), Vocabulary (20 points), and Mechanics of writing (5 points). The instructional material for teaching five types of essay was 'Writing with Readings' (Bailey & Powell, 2008). Moreover, Edmodo mobile application for android (version 9.9.3) and iOS (version 6.2.7) was used for collaborative essay writing practices in the experimental group and also for collecting pre-test and post-test samples. Furthermore, two samples of 5-paragraph-essay were written by the students in the experimental and control groups for pre-test (n=53) and post-test (n=53) which yielded in a total of 106 essays. The topic of both tests was 'improving writing proficiency'. Finally, a structured interview was developed by the researchers consisting of three questions:

1. Does blended learning through Edmodo-enhanced collaborative writing practice help you improve your academic writing proficiency? Why?
2. What were the positive aspects of blended learning through Edmodo-enhanced collaborative writing practice?
3. What were the negative aspects of blended learning through Edmodo-enhanced collaborative writing practice?

Procedures

This study was carried out in two intact classes of Academic Writing course. This course is one of the requirements of BA program for Translation Studies. The procedures of treatment and data collection were based on Flow Model (Bersin, 2004) which is a combination of physical meetings and e-learning sessions.

Kickoff Event

According to Bersin (2004, p. 59), in the content flow programs, the 'kickoff event' is a physical or online meeting in which the manager or instructor explains the program goals. It is an important step because it informs the learners about the course schedule and whatever they need for budgeting time. Hence, at the first session, the syllabus of the course, teaching materials, collaborative writing technique (i.e. Turn Model), and also evaluation rubric were elaborated for the students in both classes. Then, the GEP of all students were evaluated through OPT (2001). The results indicated that majority of the students (i.e. 53 out of 60) were at intermediate level. Therefore, in order to control the intervening effect of GEP, the remaining seven students, who were not at intermediate level, were placed in pseudo groups and then excluded from further data analysis. Next, the students in both classes were assigned to small groups including three or four members. One of the classes was assigned as the experimental group which was supposed to experience collaborative writing through Edmodo mobile application. They were asked to use their own smart phones or tablets to perform the writing tasks. The other class was assumed to be the control group and was going to practice collaborative writing in a traditional pen and paper setting.

Then, the students in the experimental group were taught how to make an Edmodo account, join a class, and send messages, posts and assignments. They were asked to download the latest version of Edmodo free mobile application on their smart phones or tablets. The necessary Internet quota was provided freely by the university via Wi-Fi. Next, the teacher created a class on Edmodo and sent the code to the students in order to join the class. They were divided into small groups of three or four and they were allowed just to participate in their subgroups' discussions by sending posts through the Note menu and commenting or replying to the posts by others members. However, they were not allowed to send posts or share anything on the class homepage which was shared by all the students. The supplemented materials were uploaded to the Library menu of Edmodo for the learners in the experimental group while they were printed and distributed to the students in the control group.

Initial Learning Activity

The general structure of a 5-paragrapgh-essay was taught to the students in both classes in an offline session. It is noteworthy that the instructional sessions were held offline for both classes as physical meeting is one of the important choices, especially in initial activities (Bersin, 2004) of blended learning.

Check-in Event

After the initial learning activity, the students in both classes were asked to collaboratively write a 5-paragraph-essay in 60 minutes. The topic of essay was 'improving writing proficiency'. Based on the Turn Model (Ritchie & Rigano, 2007) of collaborative writing, the students wrote introduction and conclusion paragraphs in group, while each member was responsible to write a central paragraph independently. This model was chosen to ensure active participation of all members in a group. This collaborative task was performed offline in the control group. Students were supposed to deliver the final draft to their teacher in paper format. However, the experimental group performed the task through Edmodo mobile application. First, the students discussed and agreed on the points to be included in the first and last paragraphs. Second, they wrote and posted the central paragraphs which were written individually in Note menu in their small groups. Third, their group members commented and gave feedback regarding the five aspects of writings through the Reply section in the Note menu. Finally, they were required to post the final draft through the Assignment menu to the teacher. The collected data was considered to be the pre-test.

Treatment

Based on the Flow Model (Bersin, 2004), it is possible to multiply the learning activities and the corresponding check-in events based on the requirements of the program. Consequently, the treatment procedure took five sessions during which both classes were taught in offline sessions how to organize and write five essay types including classification, process, comparison-contrast, problem-solution, and cause-effect. After presenting the instructional content, in the corresponding check-in events, the students were asked to cooperatively write a 5-paragraph-essay of at least 250 words in 60 minutes. The topics of the related assignments were given to the students in both classes in the first session or the kick-off event.

In order to control the effect of teacher's corrective feedback, essays were assessed by two raters based on the analytic rubric and the students received scores related to the five aspects of writing including content, organization, grammar, vocabulary, and mechanics of writing.

Final Assessment

The final assessment is an event that brings the program to a close and assesses the learners (Bersin, 2004). Finally, on the seventh session, post-test was conducted and students were asked again to write a 5-paragraph-essay in group, the topic of which was 'improving writing proficiency'.

Feedback

In the last session, the students were informed of their writing proficiency improvement from pre-test to post-test. Then, a follow-up interview was performed in the experimental group to assess the students' perceptions of their blended learning course.

Data Analysis

Pre-test and post-test samples were evaluated by two raters. At first, raters evaluated 10 essays, none of which were related to pre-test or post-test and discussed the evaluation rubric and points of disagreement which yielded an inter-rater reliability of .78 for pre-test and .80 for post-test based on correlation coefficient measurement. In order to answer the first and second research questions, scores on pre-test and post-test were compared through t-tests. SPSS 20 was used for performing all the statistical analyses. For answering

the third research question, 14 students in the experimental group were interviewed. The interviews, which lasted about 10 minutes per person, were audio-recorded and then transcribed for further analyses. The content of follow-up interviews was qualitatively analyzed. The qualitative analysis involved processes that Strauss and Corbin (1990) describe as open coding, axial coding and selective coding. Throughout the process of perusing the data, an interpretive method was adopted (Walsham, 1993). Accordingly, core themes and significant concepts emerged that helped to illuminate the facilitative features of Edmodo. Finally, in order to establish stronger validity and reliability of the results, the emergent themes were cross-checked by asking the participants to inspect if the interpretations reflected their perceived views on the subject matter.

RESULTS

Quantitative Analysis

Before putting the data into statistical analysis, normality of data distribution was investigated for pretest and post-test. The results of Kolmogorov-Smirnov test indicated that both pretest (p=.080) and post-test (p=.085) data were normally distributed at p<.05. Table 1 illustrates the descriptive statistics for the two classes on pretest in terms of their writing proficiency scores in general and also such aspects as content, organization, grammar, vocabulary, and mechanics of writing.

Table 1. Descriptive Statistics for Pre-test

Writing Aspects	Experimental Groups	N	$\overline{X}$	SD	SEM
Writing Proficiency	EG	27	75.78	5.109	.983
	CG	26	74.85	2.395	.470
Content	EG	27	22.63	1.757	.338
	CG	26	22.23	.992	.195
Organization	EG	27	15.41	1.047	.202
	CG	26	15.19	.749	.147
Grammar	EG	27	18.52	1.528	.294
	CG	26	18.92	.845	.166
Vocabulary	EG	27	15.70	1.514	.291
	CG	26	15.04	.916	.180
Mechanics of Writing	EG	27	3.52	.509	.098
	CG	26	3.46	.508	.100

Note: EG stands for Experimental Group and CG stands for Control Group

Comparing the mean scores of writing proficiency presented in Table 1 and the ranges of scores related to different levels of writing proficiency in the rating scale developed by Hedgcock & Lefkowitz (1992), it was revealed that both groups were at an *average* (*average* to *good* range: 70-90) level of writing proficiency. A closer look at the *average to good* ranges of scores for five aspects of writing including content (21-26), organization (14-17), grammar (18-21), vocabulary (14-17), and mechanics of writing (3-4) and the corresponding figures shown in Table 1, it was confirmed that the participants in both groups were at the average level. The results of independent sample t-tests for pretest are presented in Table 2.

Table 2. Independent t-test for Pre-test

Writing Aspects		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Writing Proficiency	Equal V. assumed	20.323	.000	.845	51	.402	.932	1.103
	Equal V. not assumed			.855	37.204	.398	.932	1.090
Content	Equal V. assumed	10.490	.002	1.012	51	.316	.399	.394
	Equal V. not assumed			1.022	41.352	.313	.399	.390
Organization	Equal V. assumed	6.023	.018	.857	51	.395	.215	.251
	Equal V. not assumed			.862	47.138	.393	.215	.249
Grammar	Equal V. assumed	6.195	.016	-1.186	51	.241	-.405	.341
	Equal V. not assumed			-1.198	40.841	.238	-.405	.338
Vocabulary	Equal V. assumed	23.222	.000	1.926	51	.060	.665	.345
	Equal V. not assumed			1.943	43.038	.059	.665	.342
Mechanics of Writing	Equal V. assumed	.073	.787	.408	51	.685	.057	.140
	Equal V. not assumed			.408	50.930	.685	.057	.140

As it is illustrated in Table 2, the results of Levene's test indicated that variances of scores in the experimental and control groups were not equal at p<.05 with regard to general writing proficiency (p= .000), and four writing aspects including content (p= .002), organization (p= .018), grammar (p=.016), and vocabulary (p= .000). Thus, the figures at the second raw (i.e. equal variances were not assumed) were taken into account. However, this was not the case with mechanics of writing (p= .787); so figures related to equal variances were considered (i.e. the first row). However, the results did not show any statistically significant differences between the two groups at p<.05 on pre-test.

In order to find out the differences between essays written through Edmodo mobile application and the ones done in traditional setting, a series of t-tests were carried out on post-test samples. Table 3 displays the descriptive statistics of the two groups on post-test.

Table 3. Descriptive Statistics for Post-test

Writing Aspects	Experimental Groups	N	$\overline{X}$	SD	SEM
Writing Proficiency	EG	27	82.19	3.175	.611
	CG	26	79.58	3.580	.702
Content	EG	27	24.26	1.457	.280
	CG	26	24.42	1.677	.329
Organization	EG	27	16.56	.641	.123
	CG	26	15.62	.804	.158
Grammar	EG	27	20.56	1.188	.229
	CG	26	20.23	1.070	.210
Vocabulary	EG	27	16.44	.801	.154
	CG	26	15.35	.846	.166
Mechanics of Writing	EG	27	4.37	.492	.095
	CG	26	3.96	.196	.038

Note: EG stands for Experimental Group and CG stands for Control Group

Taking a look at the mean scores presented in Table 3, it seemed that the writing proficiency of both groups improved in terms of their general scores on writing proficiency as well as five aspects of writing. Referring back to the specifications of scores on the rubric, developed by Hedgcock & Lefkowitz (1992), the mean scores were approaching the extreme *good* of *average to good* level (i.e. writing proficiency: 70-90, content: 21-26, organization: 14-17, grammar: 18-21, vocabulary: 14-17, and mechanics of writing: 3-4) and this increase was more apparent for the experimental group. Remarkably, the experimental group surpassed the *average to good* level considering mechanics of writing (M= 4.37). Another series of independent sample t-tests (see Table 4) were carried out to locate the exact differences between the two classes.

Table 4. Independent t-test for Post-test

Writing Aspects		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Writing Proficiency	Equal V. assumed	.055	.815	2.809	51	.007	2.608	.929
	Equal V. not assumed			2.803	49.764	.007	2.608	.931
Content	Equal V. assumed	.763	.386	-.380	51	.706	-.164	.431
	Equal V. not assumed			-.379	49.431	.706	-.164	.432
Organization	Equal V. assumed	.892	.349	4.718	51	.000	.940	.199
	Equal V. not assumed			4.698	47.752	.000	.940	.200
Grammar	Equal V. assumed	.276	.601	1.045	51	.301	.325	.311
	Equal V. not assumed			1.047	50.781	.300	.325	.310
Vocabulary	Equal V. assumed	.000	.983	4.856	51	.000	1.098	.226
	Equal V. not assumed			4.851	50.560	.000	1.098	.226
Mechanics of Writing	Equal V. assumed	.724	.421	3.944	51	.000	.409	.104
	Equal V. not assumed			4.000	34.313	.000	.409	.102

The results of Levene's tests indicated that variances of scores on post-test were equal at p<.05. Thus, the figures of the first row (i.e. equal variances assumed) were taken into account. Independent sample t-tests revealed that writing proficiency of the experimental group (M=82.19, SD=3.175) was significantly different from the control group (M= 79.58, SD=3.580), t (51) = 2.809, p= .007. This was also the case with respect to three aspects of writing including organization t (51) = 4.718, p= .000, vocabulary t (51) = 4.856, p = .000, and mechanics of writing t (51) = 3.944, p = .000. However, it seemed that the two groups were not significantly different regarding such aspects as content (p=.706) and grammar (p=.301).

Qualitative Analysis

Two types of learners including high-users and low-users were interviewed in order to ensure that all voices were heard and to avoid any biased interpretations. The first interview question asked learners whether Edmodo-enhanced writing practice had helped them to improve their essay writing proficiency. Then, the respondents were asked to justify their answers. The following themes emerged from qualitative analyses.

Collaboration versus Inhibition

All Edmodo high users expressed that this mobile application helped them improve their writing proficiency since they could enjoy the benefits of group work and expand the learning activities beyond the classroom time. They used the application for sharing the information which resulted in generating new ideas for writing. They sent corrective feedback to each other and asked for help whenever it was necessary. They discussed about the content to be included in their joint essays and the organization of ideas to be presented. Some of them mentioned that their spelling improved remarkably since they had to type everything. The followings are some excerpts of interviews with high users.

> "Yes…. It saved my time because I was responsible for one paragraph and my friends in the team wrote their paragraphs and then we had a full essay. I think it was more difficult if I wanted to write all the paragraphs myself."
> Sara/Collaboration/Interview

> "Yes. It was helpful. In fact group writing was difficult at first, but we learned to help each other and correct the mistakes. My friends helped me by giving different ideas for writing.."
> Zahra/Collaboration/Interview

> "Yes…. I was very bad at spelling and typing the sentences helped me to write correctly and whenever I didn't know how to write a sentence, I asked my friends.."
> Ali/Collaboration/Interview

> "Yes…We discussed different points, then selected some of the ideas and ordered what we wanted to write…."
> Maryam/Collaboration/Interview

On the other hand, low users pointed that Edmodo did not help them to improve their writing proficiency since it was difficult for them to concentrate on many aspects at the same time. In fact, typing and reading was time-consuming for them, and synchronous chat with other group members was considered to be problematic as they could not keep up with others' pace. Some of them mentioned that they had preferred individual writing as they could have adjusted the task with their own capabilities. The other problem was disagreement among group members which prevented cooperation. The followings are some excerpts of interviews with low users.

> "No. It was very time-consuming for me to type all the words and sentences.…I needed more time. I was not ready for this type of activity. It is not usual in our country to use mobile application."
> Akram/Inhibition/Interview

"No. I did not like group writing. It was a waste of time. We had different ideas. I preferred to write by myself. My teammates were not good."

Saman/Inhibition/ Interview

"No. It was difficult for me to follow my teammates. They sent a lot of posts and files. I needed more time to read all of them. I could not write as well as them. I needed more time for writing."

Tara/Inhibition/Interview

Motivation versus Frustration

The second and third research questions focused on the positive and negative aspects of the task. The answers to these two questions were dichotomous in that High users perceived the task positively but low users had a negative perception of the Edmodo-enhanced collaborative writing practice. For high users, group writing through Edmodo mobile application was motivating as it was found to be a modern, innovative, exciting and helpful experience which could facilitate their group interaction by the convenient layout of the application. Moreover, as they reported, they felt more confident as they could easily access the instructional materials sent by their teacher through the Backpack Menu. They were also more comfortable as they were supported by their group members. In this respect, Notification Menu made them aware of any new posts sent by the teacher or their groupmates. Finally, they learned time management skill since their group success depended on their timely pre-writing preparation and during-writing well-timed cooperation. What's Due Menu of the application was helpful in this regard as they could make a detailed schedule based on the deadlines defined by the teacher. It was concluded that the options provided by the application made them so motivated that they were engaged in learning activities even beyond the classroom time. The followings are some exemplar excerpts of the interviews.

Working with Edmodo was very exciting. It was very interesting. It was better than a real classroom. I could access the materials whenever and wherever I wanted. That was the best feature of Edmodo.

Fatemeh/Motivation/Interview

The positive aspect of the task was working with Edmodo that is an application for education[al purposes]. We could ask for help when we were in trouble. Your groupmates were always available to help you. So, I was relaxed and I was confident because I knew that there were some people to read my text and tell me about my mistakes before the teacher read my homework.

Naser/Motivation/Interview

At first, it was very difficult to practice group-writing because we disagreed with each other and time was very limited so we could not write well. But we learned to share the work and study about the topic before the class. Edmodo helped us to send posts and comments about the topic. We had to be prepared because class time was very limited for group work. So, we had to talk to each other before class and make plans. Edmodo was helpful because we had a group and we could chat in that group. I checked my Edmodo app many times because I did not want to miss anything.

Maryam/Motivation/Interview

On the contrary, low users were found to be frustrated about the collaborative writing task in general and Edmodo application in special. They expressed that they suffered from time restrictions and complained that they were not ready for such a group activity. Also, the layout of the application was confusing for them. Further inspection indicated that they were at low level of digital literacy. They did not know how to work efficiently with smart gadgets and they were not familiar even with other popular social networks such as Facebook. Hence, they did not have any prior experiences in this regard. Another problem was the small screen size of cell-phones.

"…It was confusing for me…I didn't know how to send my writing… I wish I could write on paper…I needed more time for writing. I could not do the task during the class time."
Tara/Frustration/Interview

" It was very difficult to read and type the texts through a small screen size. I think it was better to use laptop computer or tablet."
Akram/Frustration/Interview

Finally, there were also some negative points mentioned by all learners which reflected the practical problems that emerged during the task such as Internet connectivity problems and incompatibility of the devices. On the other hand, time constraint was also related to the speed and quality of the Internet service. Although the necessary Internet quota was provided by the university's high speed Wi-Fi service, the fact that a large number of students used the same service at the same time lead to high traffic which resulted in lower speed of the Net or frequent disconnections. Furthermore, students who used Edmodo application for iOS had problems with synchronization of data which might be due to the version of the application (i.e. version 6.2.7 for iOS) used at the time of research and also the iOS version of their iPhones or iPads.

DISCUSSION

The results indicated that it was possible to integrate Edmodo mobile application into essay writing class successfully based on Flow model (Bersin, 2004) of blended learning since the experimental group who practiced essay writing through Edmodo mobile application outperformed the control group regarding the overall writing proficiency. This was in line with the findings of Abadi et al., (2015), Adas and Bakir (2013), Al-Kathiri (2014), Janpho et al., (2014), Karyawati (2014), Lara (2013), Noviana et al., (2015), Purnawarman et al. (2016), Tsiakyroudi (2018), and Yusuf et al., (2018) who mentioned the effectiveness of Edmodo mobile application in teaching writing.

On the other hand, the findings were in contrast with Purnawarman et al. (2016), in that collaborative writing through Edmodo was not only practical but also had a positive effect on the writing proficiency of the learners. Moreover, most learners, especially Edmodo high users, had a positive perception of the collaborative writing as it could increase their level of motivation and self-confidence.

Regarding the five aspects of writing, the experimental group outperformed the control group concerning such aspects as organization, vocabulary, and mechanics of writing. However, there were no differences between the two groups regarding other aspects of writing including content and grammar. This finding was in contrast with the results of Yusuf et al., (2018) who stated that the largest increase in scores was related to the content and grammar aspects. A remarkable point is that there was no control group in their study so their results are not as valid as the ones in this study. On the other hand, these disparities in the findings may be due to the fact that all participants of this study were at intermediate level of GEP. More specifically, GEP was kept constant in order to be able to focus on mere effects of the blended learning on aspects of writing proficiency. Another effective reason seemed to be time restrictions as the qualitative analysis of interviews revealed that it was one of the problematic issues for the students in the experimental group. Since they had to type everything, they had less time than the control group. Moreover, the instability of the Internet connection wasted the necessary time for focusing on all aspects of essay writing. Therefore, the students were forced to concentrate on the writing aspects which seemed to be more manageable under time restriction including organization, vocabulary, and mechanics of writing.

The qualitative analysis of interviews revealed that Edmodo high users had positive opinions and perceived the task as an innovative, engaging and helpful activity which made writing more enjoyable and comfortable for them through cooperation and group work. These outcomes supported the results of Alseweed (2009), Al-Shammari (2007), Thongmak (2013), Bahce and Taslaci (2009), Isiguzel (2014) Vernadakis, et al., (2012); Wesson et al., (2015). Similar to the findings of Bozanta and Mardikyan (2017), Tsiakyroudi (2018) and also Yunkul and Cankaya (2017), the students in this study believed that their self-esteem and writing motivation were increased as they could overcome writing difficulties by sharing ideas and giving feedbacks on each other's work easily.

The ability to write under time restriction or time management skill is a very important requirement of academic writing proficiency. However, this appeared to be another challenging issue influencing the quality of writing through Edmodo. Although in-class time constraint was perceived as a negative aspect by the students, it could promote time management skill of some students, specially Edmodo high users, and extended the writing process and learning out of class as it was also reported in other studies (Spika, 2002; Chandler & Redman, 2013; Crowe & McDonald, 2013; Lara, 2013).

Furthermore, parallel to the findings of Alebaikan and Troudi (2010) as well as Erben et al., (2009), it seemed that multifaceted layout of the application was confusing for some students, specifically Edmodo low users. Although a four-hour Edmodo-tutorial-session was held prior to the study, working with this mobile application was still problematic especially for the students with low digital literacy or those who have not experienced other similar social networks such as Facebook. Hence, it is necessary to check the digital literacy of the learners before the administration of blended learning techniques in order to design more practical tutorials or preparation sessions.

Moreover, follow-up interviews revealed that participations and perceptions of the students were also influenced by their learning culture and learning styles or even their personality types as a number of them expressed their dislike towards collaborative writing and did not engage in group discussions or giving feedback to their teammates. In fact, they preferred individual tasks. This finding expanded the results of previous studies such as Purnawarman et al. (2016) and Karimi et al. (2014) which pointed to limited knowledge, technical problems, and low motivation in learning as the possible justifications for low users. Thus, further studies are necessary to check the relationship between such personal factors and the effectiveness of learning through social networks as socialization is one of the principal features of social media.

Finally, regarding practical considerations, there were some deficiencies in performing Edmodo-enhanced writing practices such as connectivity problems, and incompatibility of the devices which were also experienced in previous studies (Bates, 2006; Bersin, 2004, Motiwalla, 2007; Purnawarman et. al., 2016; Stockwell, 2008). Accordingly, it is crucial to manage the technical issues prior to the administration of such blended learning tasks. The most important pre-requisites are the provision of free high speed Internet service as well as appropriate devices which are compatible. As it was revealed, the iOS devices were more incompatible than the android ones at the time when the study was conducted. Moreover, the small screen size of cell phones frustrated some of the learners. On the other hand, the Edmodo mobile application does not provide full features that are available in its website. Thus, actual classes might benefit from using both the website and the mobile application of Edmodo. Practically speaking, in order to run blended learning programs through Edmodo, it is essential for educational institutions to equip the learners with the necessary requirements.

CONCLUSION

Generally speaking, the results of this study showed that Blended Learning improved academic writing proficiency of Iranian intermediate EFL learners through Edmodo mobile application. However, this technique did not promote all five aspects of the writing skill in the same manner. In other words, three aspects of writing namely organization, vocabulary, and mechanics were improved in the experimental group significantly different from the corresponding ones in the control group while there were no differences between the two groups regarding the other two aspects of writing including content and grammar. Therefore, it can be claimed that implementing blended learning techniques does not improve all aspects of academic writing proficiency similarly when leaners are at the same level of GEP and practice under timed-writing condition. This argument is of great importance in designing and administrating the relevant instructional modules.

Furthermore, blended learning through Edmodo-enhanced collaborative essay writing practice was perceived positively by the majority of students as it could help them overcome writing difficulties by increasing their writing motivation, and self-esteem. In other words, learners could effectively cooperate in pre-drafting processes such as generating and organizing ideas as well as post-drafting processes such as editing, revision and proofreading.

The findings of this study were limited to one level of GEP that was intermediate level. It is suggested to conduct further studies to consider the possible effects of mixed proficiency groups on language learning in blended learning context. Moreover, neither teacher-student nor peer interactions were investigated in this research. It is a good idea to study the influence of blended learning on the different types of classroom interactions and its overall effect on language learning.

In sum, blended Learning is a promising area in the field of TEFL which is need of more comprehensive research as it is crucial for teachers to keep their teaching methodologies and techniques compliant with the technology developments of 21st century.

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