

Contributions of Edmodo Social Learning Network to Iranian EFL Learners' Writing Accuracy

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Abstract

The present study intended to explore the contribution of Edmodo Social Learning Network (ESLN) to Iranian EFL learners' writing accuracy. The participants were 63 male and female Iranian EFL learners chosen from a pool of 78 learners based on their performance on an Oxford Placement Test. The 63 selected learners were divided into two groups consisting of 33 and 30 learners in the experimental and control group, respectively. Prior to treatment, both groups were given a writing pretest to measure their writing accuracy. Next, the participants in the experimental group practiced writing via Edmodo while the learners in the control group received the conventional instruction of writing. After ten sessions of treatment, both groups were given the writing posttest. Moreover, 15 participants in the experimental group were interviewed to explore their perceptions of the efficacy of Edmodo in improving their writing accuracy. The results of ANCOVA indicated that Edmodo led to significant improvement of writing accuracy. The results of the content analysis revealed that learners held positive attitudes towards the use of Edmodo. In particular, learners perceived that Edmodo was a useful platform in enhancing their writing accuracy as this platform promoted collaboration, motivation, and engagement.

Keywords: Writing accuracy, writing, Edmodo, blended learning, EFL learners' perceptions

Introduction

Writing is an important language skill that serves as a medium for conveying feelings, thoughts, desires, and plans (Akkaya & Kirmiz, 2013). In fact, writing provides individuals with a framework for interpersonal communication, utilizing different forms of language. Therefore, writing is a useful tool in our professional and personal lives (Jalaludin, 2011). Furthermore, writing is used as an important criterion for measuring academic success. That is why L2 learners strive to enhance this skill (Hamed, 2012). Since writing is an important language skill, numerous studies (e.g., Karimian Shirejini & Derakhshan, 2020) have recently focused on it. As Karimian Shirejini and Derakhshan (2020) state, learning and teaching English as a Foreign Language (EFL) are challenging tasks in the Iranian context of EFL as English serves a very limited purpose in this country.

Karimian Shirejini and Derakhshan (2020) further maintain that writing is one of the most demanding skills EFL students need to master because it is marginalized in the educational settings and has a challenging nature. In Iran, recent research findings (e.g., Ketabi & Torabi, 2015; Mohammadi, 2016) paint a disappointing picture concerning writing instruction. One particular aspect of writing proficiency is writing accuracy.

Writing accuracy is defined as the degree to which a written product sticks to the target language norms (Foster & Skehan, 1996). Skehan (1996) describes accuracy as a feature associated with a learner's capacity to deal with the current level of inter-language complexity s/he has achieved. Yuan and Ellis (2003) characterize writing accuracy as the number of error-free clauses, including the errors related to syntax, morphology, and lexical choice. In their operational definition, Foster and Skehan (1996) describe writing accuracy as the percentage of error-free clauses divided by the overall number of independent clauses, sub-clausal units, and subordinate clauses multiplied by 100. Since writing is a challenging task and improving writing accuracy is important, one of the approaches which are likely to enhance writing accuracy is the use of technology in general (Kioumarsis et al., 2018; Marandi & Seyyedrezaie, 2017; Vijaya Kumar, & Shahin Sultana, 2017; Yu, 2018) and blended learning in particular (e.g., Hosseinpour et al., 2019; Ma'azi & Janfeshan, 2018).

Blended learning is an outcome of the application of technology to teaching (Clark & Mayer, 2011), aimed at improving knowledge and performance (Rosenberg, 2001). Multiple studies have shown the advantages of blended learning. For example, this method allows the learners to enhance their time management skills (Spika, 2002) as they become more autonomous and flexible in choosing time and place outside the classroom. Moreover, blended learning enables students to work with technology, to improve their learning. Furthermore, technology pushes the learners to be more active and focused on the lessons (Wesson et al., 2015). As pointed out by Fakhir (2015), this mode of instruction also allows teachers to be more effective in using technology.

Blended learning has benefitted from social network tools such as Whatsapp, Twitter, Twiducate, Facebook, and Edmodo (Brady et al., 2010; Mack et al., 2007; Roblyer et al., 2010). A well-balanced combination of classroom pedagogies with mobile learning services is claimed to reinforce both interactive and collaborative learning, as well as effective instruction (Motiwalla, 2007). Edmodo is a useful, secure, and free social platform available at www.edmodo.com (Duncan & Chandler, 2011). The layout of this social platform is very similar to that of Facebook (Kongchan, 2013) and can be provided and supported by any mobile device. Edmodo can contribute to the enhancement of English language skills (Al-Khathiri, 2015; Mokhta & Dzakiria, 2015). Robertson (2008), Al-Jarf (2005), and Tsai and Ernst (2009) have elaborated on how to provide learners with an English online communicative environment through Edmodo where they can practice language skills and improve their linguistic competencies. Moreover, there is consensus that using Edmodo can facilitate the learning process when the class time is limited. Consequently, this platform enables the learners to focus on L2 learning, to pose questions, to give responses, to correct peer errors, to comment, and even to share knowledge anywhere and anytime online (Chandler & Redman, 2013; Crowe & McDonald, 2013; Lara, 2013).

Some recent investigations have examined the efficacy of Edmodo in writing instruction (e.g., Abadi et al., 2015, Adas & Bakir, 2013; Karyawati, 2014). Most of these studies have concentrated on the application of Edmodo to improve secondary or high school students' writing skills (e.g., Al-Khathiri, 2015; Janpho et al., 2015; Noviana et al., 2015, Tsiakyroudi, 2018). Overall, the findings of previous studies indicated an improvement in writing performance after using Edmodo. The same findings were obtained by Purnawarman et al. (2016), showing that learners took on more active roles in learning by working well in the group with Edmodo which resulted in the improvement of their writing quality.

Ma'azi and Janfeshan (2018) investigated the effect of the ESLN on Iranian EFL learners' writing. They also sought to explore students' attitudes towards Edmodo. The results indicated that the ESLN had significant effects on Iranian EFL learners' writing. Moreover, it was found that students had positive attitudes towards the application. In a similar vein, Hosseinpour et al. (2019) examined the effects of blended learning through implementing the Edmodo mobile application on the academic writing proficiency and perceptions of Iranian intermediate EFL learners towards Edmodo. The results revealed that the use of Edmodo significantly improved EFL learners' writing proficiency. Furthermore, it was shown that the learners held positive attitudes towards the use of the application.

Along the same lines, some investigations (e.g., Alshawil & Alhomoud, 2016; Mokhta & Dzakiria, 2015; Tsiakyroudi, 2018; Yunkul & Cankaya, 2017) have sought to shed light on students' attitudes towards Edmodo-enhanced instruction. The application of this new technology has yielded a novel scenario which is an alternative to the traditional instruction, leading to positive perceptions towards Edmodo and MALL (Mobile Assisted Language Learning). This is because it paves the way for the enhancement of collaborative learning and learners' self-confidence (Yunkul & Cankaya, 2017). Moreover, it promotes the effectiveness of communication and L2 learning (Mokhta & Dzakiria, 2015). Furthermore, the application of Edmodo was found to influence the L2 learners' motivation towards L2 learning in general (Alshawil & Alhomoud, 2016), and writing skill in particular (Tsiakyroudi, 2018).

Notwithstanding the above-mentioned research findings, some studies have shown contradictory results. For example, some learners were found to have a negative experience using Edmodo (Sandu, 2015). They found the use of this platform unhelpful as they commented that the main function of the platform was the communication of instructions and announcements posted by teachers (Enriquez, 2014). The participants had been used to face-to-face instructions and did not find this platform very contributive to their learning. The following are some other negative responses related to the application of online learning media: the necessity of the Internet connection and computers, laptops, or mobile phones; many learners do not possess such devices (Almaini, 2013; Grosseck, 2009; Yusuf et al., 2018); there were also problems related to Internet bandwidth (Motiwalla, 2007; Stockwell, 2008); learners' confusion in using the application (Alebaikan & Troudi, 2010); and incompatibility of smartphone applications (Purnawarman et al., 2016).

One of the main features of Edmodo which possesses the potential to contribute to writing accuracy is the convenience that the platform offers for peer and teacher feedback. The main reason for such convenience is the easy provision of internet links which can be provided in groups and sub-groups. Learners can easily check the history of online resources pertinent to a particular grammatical point and edit their written products and repost them conveniently. Likewise, teachers can also easily post relevant supporting materials to the groups and sub-groups and provide feedback on learners' written assignments. Thus, teachers can provide direct and indirect feedback in terms of grammar along with supporting materials that are likely to bring students' attention to their errors and assist learners in reducing their grammatical errors. The difference between the teacher feedback on Edmodo and conventional feedback is thus the provision of supportive materials that can contribute to learners' writing accuracy.

Although Edmodo possesses the potential to enhance writing accuracy, the review of the previous literature indicates that none of the previous investigations (e.g., Hosseinpour et al., 2019; Ma'azi & Janfeshan, 2018; Purnawarman et al., 2016), to the researchers' best knowledge have examined the effect of Edmodo on writing accuracy. Moreover, the research findings from the previous studies have yielded contradictory results in terms of learners' perceptions towards the use of Edmodo. Thus, the present study attempted to address the gap in the literature by exploring the impact of Edmodo on writing accuracy. Furthermore, the present study attempted to address the previous conflicting results by examining learners' perceptions towards the efficacy of ESLN in improving their writing accuracy. In line with the objectives of the study, the following research questions were formulated:

RQ1: Does the use of ESLN significantly improve Iranian EFL learners' writing accuracy?

RQ2: What are Iranian EFL learners' perceptions towards the efficacy of ESLN in improving their writing accuracy?

Method

Participants

The initial number of the participants in the present study was 78 (38 male and 40 female) Iranian adult university students studying Bachelor of Arts (BA) in English Translation. These learners were attending a paragraph writing course as part of their BA program at Karaj Islamic Azad University. They were in the age range of 18 to 30. The initial 78 learners were given an Oxford Placement Test (OPT) and those who scored within the range of 28 to 36 as lower-intermediate learners were selected. The researcher did not determine any pre-specified level for the participants. The reason for the selection of lower-intermediate learners was that after administering the OPT, it was found that the majority of the participants were at this level. Out of the 78 learners, seven learners scored higher than 36 and eight learners scored lower than 28 and were excluded. Thus, the final number of the participants in this study was 63. The selected 63 (31 male and 32 female)

learners were divided into two groups. The experimental group consisted of 33 learners and the control group contained 30 learners. The participants were selected based on convenience sampling since simple random sampling was not feasible. Moreover, the learners were divided into two groups non-randomly. However, the assignment of the two groups to control and experimental was random.

Instruments

Oxford Placement Test (OPT). To select a homogeneous sample of participants, OPT was administered. The OPT used in this study (Syndicate, 2001) consisted of 60 items that tested vocabulary, reading, and grammar. The test measures learners' language proficiency based on the following cut-score criteria:

1-17 Beginner , 18-27 Elementary, 28-36 Lower-intermediate, 37-47 Upper-intermediate 48-55 Advanced, 56-60 Very advanced.

Writing Pretest and Posttest. To measure the participants' writing performance, a writing pretest and a writing posttest were given to the two groups. To select the two writing topics, initially, 10 topics were suggested by three EFL teachers with at least 10 years of teaching experience and were Ph.D. holders at the Islamic Azad University. Then, the three teachers gave each topic a number on a Likert scale from 0 to 5 (0= the least appropriate topic, 5= the most appropriate topic). The numbers for each topic were then added up and the two topics with the highest scores were selected as the topics for pretest and posttest. The learners were asked to write a paragraph consisting of at least 100 words for each topic.

Accuracy Measurement. Writing accuracy was measured in line with Foster and Skehan (1996). As Foster and Skehan (1996) note, writing accuracy is the number of error-free clauses divided by the total number of independent clauses, sub-clausal units, and subordinate clauses multiplied by 100.

Semi-structured Interviews. To gain the required data for the participants' perceptions towards the efficacy of ESLN in improving their writing accuracy, 15 participants in the experimental group were individually interviewed using semi-structured face-to-face interviews. As Jamshed (2014) notes, the semi-structured interview method is carried out through the researcher's asking questions and listening, and respondents answering. In this method of interviewing, the process of interviewing is subject to change from highly-structured to highly unstructured since the interview questions are not asked in a fixed order and the participants are allowed to express their voices more flexibly (DeJonckheere, & Vaughn, 2019). Overall, there were three interview questions. The content of the questions was validated via an appeal to expert opinion. To do so, the initial draft of the interview questions was given to two Ph.D. holders in the field of TEFL and their comments were considered in revising and preparing the final draft of the questions. The semi-structured interviews were conducted in Persian which was the mother tongue of the learners. The interviews were all audio-recorded and subsequently transcribed for content analysis. The reported excerpts in this manuscript were translated by the researcher from Persian into English.

Procedure

Initially, 78 EFL learners were given an OPT and the results were used to select 63 learners. Following that, the learners were divided into two groups consisting of 33 learners in the experimental and 30 learners in the control group. The learners in both groups were then given a writing pretest and their writing performances were scored in line with Foster and Skehan's (1996) definition of writing accuracy. Then, the experimental group received writing instruction via Edmodo and the control group received conventional writing instruction. As for the experimental group, for one session, the teacher provided instructions to learners regarding how to use Edmodo. To do so, the teacher took her laptop to the class and gained access to Edmodo. Then, the learners were given information concerning different features of Edmodo, including where and how to write sentences and paragraphs, reply to a post, post their writing, and how to communicate with other members via the system. In this session, the teacher also created accounts for the learners and the learners received a group code to register in the platform. Next, in the second session, the teacher asked individual learners to work with Edmodo during the class time to make sure that they were on track and knew exactly how to use the features. In doing so, the teacher gave the learners a writing task and asked the learners to develop a short paragraph and post it in Edmodo. The rest of the group members were required to check the posted paragraphs and provide comments and feedback. During this session, the teacher walked around the class and provided help for those who needed more assistance in using the platform. After the two introductory sessions, Edmodo was used in the experimental group in a blended mode. To do so, paragraph writing was taught in class, and after each session, learners were asked to compose a paragraph on a given topic and post it via Edmodo. In other words, the students received instruction in the class but they were required to provide the assignments for the teacher and their peers via Edmodo. The learners were instructed to work collaboratively to develop their paragraphs before posting them. After that, the learners had to send their paragraphs to the teacher first. The teacher provided the initial comments on the writings. The teacher also provided some relevant links to different grammar websites and videos to give them extra information in terms of grammar and/or vocabulary to address the comments and feedback provided by the teacher. Then, the writings were posted in groups and the rest of the group members could see the previous comments and feedback provided by the teacher. They were required to provide new comments on the posted assignments under their peers' posts.

As for the control group, the learners followed the conventional instruction of paragraph writing, and no element of technology or Edmodo was used. In the control group, learners were taught paragraph writing in the class. Then, the learners were asked to write a paragraph on paper each session. The learners were provided with feedback and comments on their initial drafts by the teacher. Moreover, the learners in the control group were not required to work collaboratively to do their writing assignments. Neither were they required to provide peer feedback or group feedback on their peers' writings. The treatment lasted for 16 sessions and after the final session, the learners in both groups were given the writing posttest. To analyse the data regarding writing accuracy for addressing the first research question Analysis of Covariance (ANCOVA) was employed.

The researcher used ANCOVA as this statistical test is more robust compared to independent samples t-test because ANCOVA considers the pretest and posttest scores simultaneously. Moreover, ANCOVA also considers the pretest scores as Covariate, and thus the difference between the means on the pretest is also important in analysing the difference between the means on the posttest (Pallant, 2010).

To address the second research question, 15 participants in the experimental group were interviewed to explore their perceptions of the efficacy of ESLN in improving their writing accuracy. The interview results were analyzed through content analysis procedures as stipulated by Auerbach and Silverstein (2003). Auerbach and Silverstein (2003) enumerate six stages for content analyses including:

- Getting familiar with data,
- Coming up with initial codes,
- Looking for themes among codes,
- Reviewing the themes,
- Defining and labeling the themes, and
- Producing the final report.

The six steps above were taken into consideration to analyze the qualitative data. Moreover, a colleague assisted the researcher to assure the reliability of the content analysis. The research assistant held a Ph.D. in TEFL and independently analyzed and codified the qualitative data. Following that, agreements and disagreements between the researcher and the research assistant were calculated by applying Holsti's (1969) coefficient of reliability which indicates the number of agreements per total number of coding decisions. The value turned out to be 0.87, which indicated a satisfactory agreement. This number showed that the research assistant's coding results were consistent with those of the researcher's.

Results

Addressing the First Research Question

As writing accuracy in the current study was measured via the number of error-free clauses divided by the total number of independent clauses, and sub-clausal units, it can be argued that the learners in one of the groups might have produced shorter or larger texts compared to the other group which can render the interpretation of the statistical results fallible. Thus, the means of word numbers, error-free clauses, independent clauses, and sub-clausal units for each group on the pretest and posttest of writing are presented in Table 1.

Table 1

The Means of Word Numbers, Error-Free Clauses, Independent Clauses, and Sub-Clausal Units for Each Group on the Pretest and Posttest

Groups	Mean word number	Mean error-free clauses	Mean independent clauses	Mean sub-clausal units	Mean subordinate clauses
Pretest Control	135	7	10	14	16
Posttest Control	136	7.5	12	13	15
Pretest Experimental	135	8	10	12	17
Posttest Experimental	137	12	15	10	15

The first research question of the present study sought to explore if the use of ESLN significantly improves Iranian EFL learners' writing accuracy. To address this research question, an ANCOVA was run on the writing accuracy pretest and posttest scores of the two groups. ANCOVA has a number of assumptions including normality, reliability of co-variates, multicollinearity, linearity, homogeneity of regression, and homogeneity of variance. As for the first assumption, Skewness and Kurtosis values were calculated. The respective results are presented in Table 2.

Table 2

Descriptive Statistics and Skewness and Kurtosis Values for the Writing Accuracy Pretest and Posttest Scores

	N	Minimum	Maximum	Std.		Skewness	Kurtosis			
				Mean	Deviation		Statistic	Std.		
				Statistic	Statistic		Statistic	Statistic		
Pre-accuracy Experimental	33	14.00	27.00	20.18	3.94853	15.591	.342	.409	-.831	.798
Pre-accuracy Control	30	11.00	23.00	17.16	2.80496	7.868	.438	.427	-.853	.833
Post-accuracy Experimental	33	22.00	29.00	26.39	2.07574	4.309	-.476	.409	-.714	.798
Post-accuracy Control	30	12.00	24.00	18.66	3.02100	9.126	-.427	.427	-.820	.833
Valid N (listwise)	30									

As seen in Table 2, the Skewness and Kurtosis ratios for the writing accuracy pretest and posttest scores fell within the range of +/- 1.96 indicating that the pretest and posttest scores for the two groups were normally distributed.

The second assumption i.e., reliability of co-variates, was assured by selecting a well-defined and reliable measure (Pallant, 2010) for calculating writing accuracy in line

with Foster and Skehan (1996). Multicollinearity assumption was already met because there was only one covariate. As for the linearity, scatterplot of the variables was checked.

Figure 1

Scatterplot of Writing Accuracy Pretest and Posttest Scores



As seen in Figure 1, the relationship between the dependent variable (writing accuracy posttest) and covariate (writing accuracy pretest) was in the form of a straight diagonal line which indicates that the relationships are linear. Thus, the assumption of linearity was met. To check the homogeneity of regression slopes, the table for Tests of Between-Subjects Effects was consulted. The results are presented in Table 3.

Table 3

Tests of Between-Subjects Effects for Writing Accuracy Pretest and Posttest Scores

Tests of Between-Subjects Effects					
Dependent Variable: Writing Accuracy Posttest					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1163.664 ^a	3	387.888	129.155	.000
Intercept	371.035	1	371.035	123.543	.022
Groups	291.498	1	291.498	97.060	.000
PreAccuracy	148.730	1	148.730	49.523	.014
Groups * PreAccuracy	160.406	1	160.406	53.410	.098
Error	177.193	59	3.003		
Total	33845.000	63			
Corrected Total	1340.857	62			

a. R Squared = .868 (Adjusted R Squared = .861)

As evident in Table 3, the significant value corresponding to Groups * PreAccuracy is greater than 0.05 indicating that the assumption of the homogeneity of regression slopes was met. The last assumption was the homogeneity of variances that were checked using Levene's test of variances (see Table 4).

Table 4

Levene's Test of Equality of Error Variances for Writing Accuracy Pretest and Posttest scores

Levene's Test of Equality of Error Variances ^a			
Dependent Variable: Writing Accuracy Posttest			
F	df1	df2	Sig.
.615	1	61	.436

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + PreAccuracy + Groups

Based on the results of Levene's test, variances in the dependent and covariate variables were equal, hence the assumption of homogeneity of variances was met ($F=.615$, $P>.05$). After making sure that all of the assumptions were successfully met, the main ANCOVA output was examined. Table 5 displays the results of ANCOVA for the writing accuracy pretest and posttest scores.

Table 5

The Results of ANCOVA for the Writing Accuracy Pretest and Posttest Scores

Tests of Between-Subjects Effects						
Dependent Variable: Writing Accuracy Posttest						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1003.258 ^a	2	501.629	89.152	.000	.748
Intercept	579.715	1	579.715	103.030	.000	.632
PreAccuracy	64.946	1	64.946	11.543	.001	.161
Groups	611.977	1	611.977	108.764	.000	.644
Error	337.600	60	5.627			
Total	33845.000	63				
Corrected Total	1340.857	62				

a. R Squared = .748 (Adjusted R Squared = .740)

As seen in Table 5, the sig value corresponding to the groups turned out to be smaller than the critical value ($p=.000<.05$) indicating that there was a significant difference between the performance of the two groups. To determine which group had more progress, estimated marginal means were compared. Table 6 shows the estimated marginal means of the two groups.

Table 6*Estimated Marginal Means of the Two Groups for the writing Accuracy Scores*

Estimates				
Dependent Variable: Writing Accuracy Posttest				
Groups	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	25.965 ^a	.432	25.101	26.829
Control	19.139 ^a	.455	18.229	20.048

a. Covariates appearing in the model are evaluated at the following values: Writing Accuracy Pretest = 18.7460.

Based on the marginal means, the experimental group had a higher writing accuracy mean score ($M=25.96 > 19.13$) than that of the control group. Therefore, the null hypothesis of the study is rejected and it can be concluded that the use of ESLN significantly improved Iranian EFL learners' writing accuracy.

To present the magnitude of the reported effect of the independent variable (ESLN) on writing accuracy, the effect size was calculated. The effect size indicates the magnitude of the difference between the means and is computed through partial eta squared for ANCOVA (Pallant, 2010). As presented in Table 5, the partial eta squared corresponding to the group row is .644 which is a relatively large effect indicating that the difference between the means of the two groups is largely due to the effect of the independent variable that is ESLN.

Addressing the Second Research Question

The second research question of the present study sought to examine Iranian EFL learners' perceptions towards the efficacy of ESLN in improving their writing accuracy. To address this research question, 15 learners in the experimental group were interviewed and their responses were content analyzed. The results of the content analysis indicated that learners held an overall positive attitude towards Edmodo, as none of the learners mentioned any negative points concerning Edmodo. However, not all the learners mentioned all the themes revealed from the content analysis. Three themes including collaboration, motivation, and engagement were revealed from the content analysis. Table 7 shows a summary of the results of the content analysis.

Table 7*A Summary of the Results of Content Analysis*

Number	Theme	Number of Participants Mentioning The Theme	Percentage of the Participants Mentioning The Theme
1	Collaboration	14	93.33%
2	Motivation	13	86.58%
3	Engagement	13	86.58%

As indicated in Table 7, 14 out of 15 learners (93.33%) mentioned collaboration as one of the main characteristics of Edmodo which helped them improve their writing accuracy.

As one of the respondents noted:

The main aspect of Edmodo is that it really encouraged us to work together and get help from other students. I learnt about grammar this way and my classmates were all helpful. Edmodo made it very easy for us to work together and enjoy our time learning grammar.

Another interviewee mentioned that:

I really find it interesting and helpful to ask and answer questions about my writing especially for grammar. I think Edmodo helped me a lot to reduce my grammar mistakes because my friends and the teacher sent me useful links to study grammar.

As noticed in the above two excerpts, the students have pointed to one of the main features of Edmodo which is the capability and convenience it offers to promote collaboration. Moreover, both learners have mentioned the word grammar which can imply that collaborative learning activities via Edmodo has contributed to their writing accuracy.

As presented in Table 7, 13 out of 15 learners (86.58%) mentioned motivation as the second characteristic of Edmodo which assisted them in improving their writing accuracy.

As one of the interviewees maintained:

Edmodo really made me more interested in learning English. I am now more motivated to learn English. In the past, when there was a language problem for me, I was not very interested to check it but with Edmodo I was able to see different grammar points from the links that the teacher and learners shared.

Another interviewee mentioned that:

Learning English with Edmodo was really useful and interesting. After learning English with Edmodo, I have more energy to continue learning English. I really want to see my future teachers use this platform for teaching because learning grammar and vocabulary is really interesting with Edmodo.

As presented in the above two extracts, the students have mentioned that Edmodo has made learners more motivated particularly in terms of learning grammar. As further

noticed, it can be understood that learners have become more motivated to learn grammar because of the specific features Edmodo has offered. Thus, it can be inferred that learning activities via Edmodo have contributed to their writing accuracy by making learners more motivated to pay attention to grammar.

As noticed in Table 7, 13 out of 15 learners (86.58%) perceived engagement as the third characteristic of Edmodo which helped them in improving their writing accuracy.

One of the respondents noted that:

Learning English with Edmodo made me focus on learning English more and helped me stick to my writing until it was finished. Since we were obliged to post comments on our friends' posts and also receiving feedbacks from them it helped me to stay on track.

Another interviewee commented that:

Edmodo was very good because it helped me a lot to finish my writing and not losing my concentration. Because the net was available and teacher and learners guided me a lot, I was able to start and finish my writing on time. The teacher provides us with lots of websites and links which was really helpful in correcting my errors and also helped me to intensify what I have learned.

As it can be inferred from the above two excerpts, learners have pointed to the main feature of Edmodo that is its capability in offering teacher and peer feedback as one of the main characteristics of this SLN. The feedback provided by teachers and learners has maintained learners' engagement in writing which has, in turn, contributed to their writing accuracy.

Discussion

The present study aimed at investigating the contributions of ESLN to Iranian EFL learners' writing accuracy. Moreover, the study sought to explore learners' perceptions towards the efficacy of Edmodo in improving their writing accuracy. The results of ANCOVA indicated that Edmodo led to significant improvement in writing accuracy. The results of the content analysis revealed that learners held positive attitudes towards the use of Edmodo. In particular, learners perceived that it was a useful platform in enhancing their writing accuracy as this platform promoted their collaboration, motivation, and engagement.

The results of the present study concerning the significant effect of Edmodo on writing accuracy are in line with Ma'azi and Janfeshan's (2018) investigation. Ma'azi and Janfeshan (2018) found that the use of Edmodo had a significant effect on EFL learners' writing performance. Similarly, the results of the present study are in congruence with

the findings of Hosseinpour et al. (2019). They found that the use of Edmodo significantly improved EFL learners' writing proficiency. In a similar vein, Janpho, et al. (2015) found that Edmodo led to the improvement of writing skills.

The results of the current study concerning the positive attitudes of learners towards Edmodo are also in accordance with Ma'azi and Janfeshan (2018) and Hosseinpour et al. (2019), as they also found that learners held positive attitudes towards the use of Edmodo. In line with the findings of the present study, Alshawil and Alhomoud (2016) concluded that the application of Edmodo influenced L2 learners' motivation towards L2 learning in general. In another study, Chen et al. (2010) found that Web-based learning technology affects college student engagement. As Yunkul and Cankaya (2017) maintain, Edmodo enhances engagement as it paves the way for the enhancement of collaborative learning and learners' self-confidence.

The findings of this study can be explained based on the tenets of collaborative learning. Collaboration yields many psychological benefits, contributing to all aspects of learning, such as learning L2 writing. For example, taking part in collaborative tasks in-class activities enhance L2 learners' skills (e.g. their critical thinking, creativity, and social interaction). These outcomes are normally obtained by making the L2 learners more autonomous and preparing them for the improvement of both individual and group learning (Bolukabas et al., 2011). Collective problem solving and thinking can motivate L2 learners to take on more positive attitudes towards academic affairs. Consequently, L2 learners will feel relaxed through their participation in constructive collaboration and social interaction, playing a more positive role in the learning process. Due to these positive features, learning is improved due to collaboration, risk-taking, and creativity in the L2 learning process, in turn, improving self-esteem (Kohonen, 1992).

Henry et al. (2012) assert that collaborative work can enhance L2 learners' motivation, furthering their mentality of studying and learning. These positive outcomes provide learners with an opportunity to enhance their writing, leading to the development of more positive perceptions towards L2 learning. Moreover, the solid support provided through collaboration also has a role in mediating the positive impact of collaboration on the enhancement of L2 writing. In the view of Kohonen (1992), collaboration enables L2 learners to go beyond their linguistic comfort zone through widening their Zone of Proximal Development (ZPD). According to Vygotsky (1978), Zone of Proximal Development (ZPD) is concerned with the distance between the current developmental level indicated by independent problem solving and the level of potential development indicated by the ability to solve problems through adults' assistance.

Another justification for the findings of the present study can be the features of Edmodo including its function in providing feedback by both learners and the teacher via offering supportive links for the grammar points under instruction. The features of Edmodo including online feedback used along with supportive materials specifically geared to the point under instruction can enhance learners' motivation (e.g., Alshawil, & Alhomoud, 2016; Tsiakyroudi, 2018) which can consequently lead to more engagement with writing tasks (Yusuf et al., 2018) and contributed to writing accuracy.

Conclusion

The results of the present study indicated that the use of Edmodo significantly contributed to Iranian EFL learners' writing accuracy. The findings of the current study corroborate the results of previous investigations regarding the positive effect of Edmodo on writing performance. Based on the findings of the current study, EFL teachers are encouraged to use Edmodo when it comes to improving EFL learners' writing accuracy. Teacher trainers may also introduce Edmodo as a useful platform in their training courses to familiarize teacher trainees with this platform. As one of the main characteristics of Edmodo was revealed to be its potential to promote collaboration, EFL teachers are recommended to take this feature of Edmodo and make attempts to assist learners work as collaboratively as possible. The findings of the present study may not be considered conclusive and the replication of the current study in different contexts can provide a more comprehensive picture. Moreover, the same study can be carried out with participants from other proficiency levels to investigate if Edmodo is similarly contributive to writing accuracy across different proficiency levels. Researchers may also investigate the contributions of Edmodo to writing fluency, complexity, and speaking fluency, accuracy, and complexity.

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