Research Paper

Effect of Problem- Based Learning on Iranian EFL Learners 'Argumentative Writing Performance

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Abstract

Teaching and development of writing skill in foreign language education is very important, but it has been regarded as a challenging task for some teachers especially in the context of teaching English as a Foreign Language. In this respect, different teaching approaches, including Problem-Based Learning (PBL) have been developed to help learners improve their writing skills. This study sought to investigate the effect of problem-based learning on Iranian EFL learners' argumentative writing performance. To fulfill the above purpose 46 EFL upper intermediate female learners within the age range of 16-18 were selected through a convenience sampling design, out of a population of 73 learners, based on their performance on a First Certificate in English test (FCE). Then, they were randomly assigned into two groups of problem-based and traditional product- based group. Both groups took a pretest at the beginning of the study to measure the amount of pre-existing knowledge on argumentative writing performance including its components of (Generic features, syntactical language, and spelling) and a post-test in the end to check the effectiveness of the treatment applied. PBL group benefitted from PBL method and the control group received traditional writing instruction method. The results of the study, based on the analysis of covariance, indicated that PBL group outperformed the control group in writing performance, including its component of generic features, syntactical language, and spelling. Teachers, EFL learners, material developers, and syllabus designers can be the beneficiaries of this inquiry's outcomes.

INTRODUCTION

Research on writing and attempts to improve second and foreign language writing instruction have been remarkably increased. This may be because of the fact that writing skill has an important role in language learning and development (Merkel, 2018; Muller & Gregoric, 2017; Steinlen, 2018). Writing in a foreign language is seen as the most difficult skill to be taught among other three language skills (Jabali, 2018; Su Ping, Verezub, Adi Badiozaman & Chen, 2019; Timothy Kolade, 2012). Many language teachers and learners have difficulty in making progress in writing by leaps and bounds due to insufficient sub skills in writing (Wolf, 2000, as cited in Topuz, 2004). In fact, learners in EFL contexts are more concerned with writing as a supportive technique to reinforce handwriting, grammar and vocabulary and EFL teachers find it difficult to achieve multiple characteristics of writing and thus highlight the linguistic component.

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Therefore, they don't succeed in developing a communicative command of this productive skill. One important type of writing which is needed in school and higher education to write various writing tasks is argumentative writing (Alarcon & Morales, 2011). In language learning contexts, success or failure of learning depends on the quality of students' argumentation skills (Andrews, Ferretti, and Lewis, 2004). Research evidence from different language learning settings shows that an argumentative writing essay is the most difficult genre for both ESL and EFL students (El-Henawy, Dadour, Salem, & El-Bassuony, 2012; Felton, Crowell, & Liu, 2015). Students have difficulties in using argumentative writing strategies and adapting them to the communicative circumstances (Liu & Stapleton, 2014). According to Amogne (2013), the most obvious problem is students' inability in criticizing and presenting well-mannered declarative statements and giving convening support, because they are not accustomed to work with this type of writing and also, they don't have enough knowledge to support their argumentation obviously. Similarly, some research show that students' problems arise from grammar and lexis (Chanie, 2013).

With many conflicting theories about writing, the teaching of writing has changed dramatically over the last quarter century. Focusing on formal features of the language and ignoring the meaning in writing and evaluation of writing reveals the traditional product-oriented approach that dominated the all levels of many educational systems. Recent years, however, have witnessed the paradigm change from traditional learning environment and assessing the end product toward the student-centered learning environment and evaluating learning process and performance during the constructivist post method period (McNamara, 2000). In an EFL context where the importance of involving learners in the writing process has been widely acknowledged, the training pendulum began to fluctuate slowly and gradually shifted from the product to the process of constructing meaning and culminated in a more balanced learner-oriented pedagogy. The reformist process-oriented approach is in line with Progressive Educational Philosophy (PEP) (Clarke, 1987)

and extricate learners from the oppression of teachers by training them how to manage the process of writing and how to evaluate their performance. A new student-centered method of learning and teaching is required to promote the students' communication skills, team working, problem solving and responsibility for their own learning (Kohonen, Kaikkonen & Lehtovaara, 2014).

In reference to the poor performance of EFL learners in writing skill especially argumentative writing, L2 practitioners investigated alternative approaches to teach writing skill (Bryant & Timmins, 2002). It is believed that process writing approach enhances the learners' writing skill. Some studies reported that the process writing approach was found useful in helping learners to generate ideas confidently (Arslan & Kizil, 2010; Arici & Kaldirin, 2015; Timothy Kolade, 2012). Moreover, according to Jones (2007), writing can be best learnt by learners via student-centered teaching approaches. All these call for problem-based learning which is learner centered and process-oriented approach.

Learner-centered teaching methods involve active learning, cooperative learning and inductive teaching and learning. Inductive methods consist of inquiry-based learning, case-based instruction, project-based learning, discovery learning, and problem-based learning (Prince & Felder, 2006). Problem-based learning (PBL) is an educational approach, rooted in constructivist views of learning and aimed at preparing students for real world circumstances (Hung, 2013). It increases students' learning consequences by solving problem, practicing higher order thinking and thinking about their own learning (Hmelo-Silver, 2013; Hung, 2013; Ceker & Ozdemli, 2016). The educational importance of PBL is that it enables learners to do research, incorporate theory and practice and employ knowledge to develop a applicable solution to a defined problem (Savery, 2006). Wosinski, Belcherb, Durrenbergera, Allina, Stormacqa and Gersonb (2018) define the PBL method as the learning process that starts with the presentation of an authentic problem to learners as a stimulus for active learning. Students attempt to solve problems by using their prior knowledge and the knowledge received after

research. To find the best solution to the problem, students develop their critical thinking skills and make selections based on their evaluation of the choices they have found (Alfaro-Lefevre, 2017).

Zepke and Leach (2010), refer to the compliance of the principles of PBL with all needs created in higher education to increase students' academic achievement. Stentoft (2017) understands PBL as an experiential pedagogy that helps learners to move beyond the passive recipient of knowledge and turn them into engaged learners who enthusiastically engage in meaningful activities in order to build knowledge for themselves by relying on their previous knowledge. Researchers like Hmelo-Silver, Duncan and Chinn (2007) and Strobel and Van Barneveld (2009) believe that unlike traditional methods, PBL provides extensive scaffolding which is considered a required fact in educational settings and supplies scaffolding to facilitate meaningful learning which is not often found in traditional lecture-based classes (Simon & Kelin, 2007).

To examine the effectiveness of problem-based learning, researchers conducted different investigations, each with a particular focus. For instance, study conducted by (Lin, 2015) indicated that PBL approach had an important influence on the students' writing skill. Furthermore, study by Suyoga- Dharma, Marhani, Budasi (2014) showed that PBL had positive effect on development of students' reading and writing skills. The effect of problem-based learning on writing competency and self-regulated learning by EFL learners was the focus of study by Dharma and Adiwijaya (2018). The findings of their study indicated that PBL had an important impact on learners' writing competency and self-regulated learning. Jumariati and Sulistyo (2017) conducted study to investigate the effect of Problem-Based writing instruction on argumentative writing performance including its components of content, organization, vocabulary, grammar, and mechanics. The findings of their study indicated that PBL group outperformed the control group those taught using guided writing in writing performance. In an Iranian EFL context, Hashemi, Behrooznia and Mohaghegh Mahjoobi (2014) investigated the

relationship between critical thinking ability and argumentative writing performance of Iranian EFL learners. The results showed that these two variables are correlated significantly and positively.

Despite the fact that a wide range of studies have delved into EFL learners' PBL (Ansarian, Adlipour, Saber & Shafiei, 2016; Aryyanti & Artini, 2017; Azman &Shin, 2012; Bashith & Amin, 2017; Dharma, Marhaeni, & Budasi, 2014; Jumariati & Sulistyo, 2017; Kumar & Refaei, 2017; Lin 2017a; Lin, 2017b; Othman & Ahamad Shah, 2013), there is still lack of sufficient empirical evidence to support superiority of PBL particularly in Asian EFL context (Lin, 2015). Based on the literature review, many studies have emphasized on how to try on learners' structural features of argumentative writing (Hirose, 2003; Kobayashi & Rinnert, 2008; Uysal, 2008; Qin & Karabacak, 2010). Little research has been done to indicate the potential roles of different approaches in the field of teaching argumentative writing in an EFL context. To the best knowledge of the researchers, there have been any studies on the effect of PBL on learners' argumentative writing performance, including its component of (Generic features, syntactical language, and spelling) in the Iranian EFL context. For these reasons, this study intended to investigate the effect of PBL on learners' argumentative writing performance in an Iranian EFL context.

Accordingly, the following research question was proposed:

RQ. Does the PBL have significant effect on writing performance of EFL learners?

LITERATURE REVIEW
Argumentative writing
Writing skill is difficult for students since they need to use several linguistic and cognitive skills before, while, and after composing their writing (Selvaraj & Abdul Aziz, 2019). It is complex because there are various modes of writing. Accordingly, Richards and Schmidt (2010) introduce four types of writing modes such as descriptive, narrative, expository, and argumentative writing. Argumentative writing

refers to a type of writing that includes discussions, realities, evidences, reasons, explanations which support the side in question (Crossley & Wilson, 1979).

Four features of argumentative writing which are specific to this genre according to Connor (1990) are superstructure, quality of logical reasoning, persuasive appeal, and audience awareness. Superstructure refers to the organizational plan and linear development of any text. The quality of logical reasoning is evaluated by analyzing the interrelationships of authors' claims and the related support or data provided to corroborate those claims. Persuasive appeal includes affective appeal and establishment of writer credibility. Audience awareness is one of the important features of successful argumentative writing. The author must be aware of the reader's point of view by dealing implicitly or explicitly with possible reciprocal arguments.

Richards and Sandy (2015) suggest an important style for the argumentative essay which consists of introduction of the problem and the thesis statement, the opponent perspective and the writer's thought and conclusion. However, according to Bacha (2010), argumentative essay composed of five parts which can be included into a five-paragraph essay, a paragraph for introduction, three paragraphs of body and a paragraph for conclusion. The first part is the subject on which the author argues. Then a review of the opposing statements is required. The third part is the refuting of the opposing view, and the last part is presenting the author's statements.

Problem-based learning
Traditional educational contexts are teacher oriented and follow the lecture-practice-test process (Al-Zu be, 2013). Learning is characterized by memorization, imitation and modeling (Jalania & stern, 2015). The variety of problems that learners solve in traditional classes are exercises rather than real problems. Paper and pencil tests are also relevant in such model of learning (Gorghuiua, Draghicescu, Cristea, Petrescu & Gorghiu, 2015). The knowledge produced in teacher-centered method is so inert that the learners do not have the ability to actively

apply such knowledge in new real-life environment (Lin, 2015). In today's technology driven universe, a new student-centered method of teaching and learning is needed to advance the students' communicating skills, group working, problem solving and responsibility for their own learning (Gorghiua et al, 2015; Sangestani & Khatiban, 2013). As Tan (2003) indicates, what is important is a change toward a teaching method based on more real-world problems around which learners can attain learning results through actively working on instructed problems. According to Carriger (2016) a good learning method results in creation of the problem-solving, the persuasion of self-directed learning, and fostering a collaborative learning context. All this calls for a problem-based learning method to cultivate change in traditional learning contexts.

Problem Based Learning (PBL) is an approach to teaching which was introduced in medical pedagogy in the mid 1950' by Barrows (1980) and later spread to other fields, particularly business and social studies (Barrows &Tamblyn, 1980; Boud & Feletti, 1998). Problem-Based Learning (PBL) is a student-centered teaching method which is characterized by the creation of student learning in the context of solving a real problem (Marra, Jonassen, Palmer & Luft, 2014, p.221). It begins with a real problem related to the learners' real-life experiences and emphasizes the main concept to be taught (Barrows &Tamblyn, 1980).

The teacher in PBL is a facilitator of student learning, and his or her guidance will decrease when the students are cognitively prepared to use the target language, especially in an applicable manner, i.e. solving a real problem. With this in mind, Hmelo-Silver and Barrows (2006) state that the teacher in PBL acts as the facilitator who uses questioning strategies to scaffold student learning. The teacher's scaffolding is based on a hypothesis that when facilitators support the learning and collaboration processes, students can better build flexible knowledge (Hmelo-Silver, 2004).

As Hung (2009) states PBL is an educational model that employs problem as the stimulus for learning. The preparation stage for its application is selection and design of problems

and the learning process starts after requiring students to solve a problem that has been taken from everyday life (Shamir, Zion, & Levi, 2008). Problems in problem-based learning are semi-structured which are similar to problems that we face in everyday life (Şendağ & Oda-başı, 2009). Students attempt to solve problems by using their prior knowledge and the knowledge acquired after research (Sockalingam, Rotgans, & Schmidt, 2011). According to Hmelo-Silver and Barrows (2006), it is essential that teachers select the problem cautiously because problem has an important role in PBL.

Problem based learning practice is performed in small groups of 6-8 students through discussion, problem solving, and studying with peers (Hmelo-Silver, 2004, Abou-Elhamd, Rashad, & Al-Sultan, 2011). Therefore, one of the significant aspects in the strength of the problem-based learning method is students' cooperative working skills (Tarmizi, Tarmizi, Lojinin, & Mokhtar, 2010). As Savery (2006) indicates collaboration is necessary in effective learning in PBL. To address collaborative learning, a PBL curriculum places primary focus on group work.

METHOD
Participants
The study was conducted at Melal language institute in Miandoab. The initial population of this study were 73 female upper intermediate EFL learners who have studied English for at least four years. The participants were all native speakers of Turkish with their age range between 16 and 18. The participants were at the upper intermediate level, but in order to ensure the homogeneity of the participants, First Certificate in English test (FCE) was administered to all of the population and from among them 46 students were selected as the final sample. Then they were randomly assigned into two groups, i.e. experimental group including 22 participants and a control group including 24 participants. Experimental group received problem-based instruction and control group received a traditional method, product based instruction.

Instruments
First Certificate in English test (FCE)
First Certificate in English test (FCE) was used

in the experimental and control groups to test students' level of homogeneity in proficiency level. This proficiency test is a Cambridge English test consisting of the five sections of writing, listening, speaking, reading and use of language. This test is suitable for upper intermediate level English learners. Due to practicality problems in this research, the listening and speaking sections were not utilized and only the reading and writing and language use sections were implemented. The reading and use of English parts consist of seven parts with 52 questions. Questions 1-24 and 43-52 worth one point. Questions 25 – 30 worth up to two points and questions 31 – 42 worth two points. The writing part consists of two parts with four questions and each question carries equal marks.

Pre- and Post-tests
At the beginning and end of the study, learners' writing performance ability, including its components of Generic features, syntactical language, and spelling was measured by pre- and posttests. The test consisted of one part (writing one essay) suitable for participants' level and background knowledge. The participants were required to write one argumentative essay. The time of the argumentative writing test lasted 90 minutes. Two experts in teaching and assessing essays validated the writing test. The researchers asked the participants to write three paragraphs about the given topic for pre-test. After instructional sessions, the participants were required to write post-test which was similar but not identical with pre-test topics to avoid the effect of pre-test. The topics were selected from FCE test.

Scoring rubric of writing
The essays were rated according to the scoring rubric of writing by Knapp and Watkins (2005). The rubric includes four different sections, each of which focuses on an area of learners' writings. The first section gives criteria for evaluating the Generic features of writings (genre, theme, structure, rhetorical strategies, linguistic features, Vocabulary). The second section introduces criteria for scoring the writing assignments based on their textual features

(connectives, reference, tense, sentence structure). The third section has some criteria for the assessment of the writings' syntactical features (clause pattern, agreement, verb form, preposition, articles, plural, and punctuation). The last part represents products to evaluate the learners' writings based on the spelling. Learners' writing performance, in terms of Generic features, syntactical language, and spelling were scored in pre-test

Data Collection Procedure

This study was conducted in two phases: the pilot study and the main study. In this study, before the main stage of the study, the researchers validated the data collection instruments in a pilot study. Due to the validity of the instruments, the researchers first asked two other experienced English teachers to review the content of the pre-test and post-test and make suggestions. Then, they asked 20 upper-intermediate Iranian EFL learners similar to the main population to see whether the argumentative texts and videos used for treatment are readable and suitable for the participants. The participants seemed to be responsive to them and did not report any particular problem in their understanding.

After checking the learners' homogeneity at the beginning of the main study, the researchers randomly divided the two classes into two experimental and control groups: problem- based group and traditional product- based group. Then, pretest was administered to the experimental and control groups to measure the amount of pre-existing knowledge on argumentative writing performance including its components of (Generic features, syntactical language, and spelling). The treatment and administering tests lasted 14 sessions (two sessions for administering FCE, homogeneity purposes, and for administering pretest of writing performance; one session for modeling and explaining PBL method and for introducing the assessment rubric for writing; one more session after the last session of the treatment for administering the posttest; 10 sessions left for the main treatment). Every session was lasted 90 minutes. The instructor and the length of the instruction for these two groups were the same.

The instruction in problem-based group was developed by using the stages of PBL proposed by Boud and Felleti (1997) which includes introduction to problem, discussion and posing a question, setting the priority and explore and integrate new knowledge. As treatment, the participants were divided into some groups and went through following phases. At the beginning of the program, the researcher asked the participants about current problem faced in the society and asked them if they have any idea about solution of that problem. Following the introduction of the program the rest of the program was main activity. Teacher, first, played video about topic (problem) and ask participants what the video is about. Then she asked the participants in groups to discuss about the possible solutions of the problem and make a list of it. Participants were given an argumentative text which was about topic (problem) and solution of the problem and asked them to find a solution in the text. Participants were supposed to identify the text by looking at linguistic feature of the text and point some part of the text which show linguistic features of argumentative text. They discussed within their group to make their own argumentative paragraph based on the solution that they have listed before. Then they exchanged their writing to the other groups and asked them to give feedback. They revised their group's writing based on the feedback. After that, the result of the group work was reported by one student from every group in a class conference. Teacher gave feedback by focusing on Generic features, syntactical language, and spelling. According to teacher's feedback students revised the draft. Finally, they wrote the argumentative essay draft individually as an assignment for the next session (application stage).

In the product-based group (control group), there were no instruction concerning processes involved in writing an essay. Tangpermpoon (2008) states that there are different activities in product-based writing approach to increase EFL participants' awareness in foreign language writing. These activities are model paragraphs, sentence combining, and rhetorical pattern exercises. At the current study, the researchers used model paragraph. To do product-based

approach for control group, the instructor used argumentative texts as models. Every session, the participants were asked to write an essay which they should follow the model.

At the end of the instruction, the post-test which was similar not identical to pretest was given to experimental and control groups to measure the participants' progress. In order to ensure inter-rater reliability, the participants' compositions (pre and post test scores) were rated by two capable raters based on specific rating criteria. The raters were trained to use the rating scale. The training session was approximately, 60 minutes. First, the researchers explicated the purpose of the study and the nature of the instruments to the raters. Then, they were instructed to follow the rating scale while rating the essays. The criteria include Generic features, syntactical language, and spelling. The scoring was done based on scoring rubric of writing by Knapp and Watkins, (2005). It focuses on the writing components namely, (Generic features, syntactical language, and spelling). The inter-rater reliability for pre-tests and post-tests were

0.89 and 0.92, which show a high inter-rater reliability between raters.

RESULTS

As previously mentioned, the purpose of this study was to investigate the effect of problem-based learning (PBL) on EFL learners' writing performance. For this purpose, one research question and one hypothesis were formulated. In this part, the research hypothesis was tested, the related data was analyzed, and the results and discussion section were indicated. Firstly, to test the reliability of the participants' written performance scores, the Pearson correlation coefficient test was used. Then, the data obtained from the sample groups were described by the statistical table and the related information was presented. In the inferential section, the research question was analyzed and the results were interpreted. Firstly, to identify the normal distribution of the variables, the Kolmogorov-Smirnov test and to check the effect of problem-based instruction on writing performance of EFL learners the ANCOVA test was used.

Table1

Mean and Standard Deviation of participants' written performance scores in the PBL and control groups in pre-and post-test

Variables	Group		N	Mean	Std. Deviation
Writing Scores	Problem- based	Pre	22	12.52	3.24
		post	22	16.21	2.47
	Control	Pre	20	12.28	3.77
		post	20	13.22	3.43

Table 1 shows the mean and standard deviation of participants' written performance scores in the PBL (M= 12.52; SD= 3.24) and control groups (M= 12.28; SD= 3.77 in pre-test

and also it indicates the mean and standard deviation of participants' written performance scores in the PBL (M= 16.21; SD= 2.47) and control group (M= 13.22; SD= 3.43) in the post-test.

Table 2

Smirnov-Kolmogorov test to detect normal distribution of variables

Variables	Group		N	Z	Sig
Writing Scores	Problem- based	Pre	22	0.58	0.88
		post	22	0.87	0.43
	Control	Pre	20	0.65	0.78
		post	20	062	0.82

As Table 2 indicates, according to the results of Kolmogorov-Smirnov test the significance level for all variables in both groups in pre- and

post-test was more than 0.05 and normal. Therefore, the parametric tests used for the variables considered in this study are appropriate.

Table 3

Levon's test of Equality of Error variances

Variables	F	df1	df2	Sig
Writing Scores	0.59	1	40	0.44

According to Table 3, the results of Leven's test of Equality of Error variances indicate that as p>./.1, there is equality of Error variances of dependent variable. To answer the research question and to measure the effect PBL had on learners' writing performance ability, Analysis of Covariance was conducted (Table 4).

Table 4

Results of covariance analysis of the effect of problem-based instruction on improving the written performance of participants

Variables	Sum of squares	df	Mean square	F	Sig	Eta
Pre-test	284.74	1	284.74	191.47	0.000	0.83
Group	84.76	1	84.76	56.99	0.000	0.59
Error	57.99	39	1.48			

As Table 4 indicates, the results of the Analysis of Covariance yielded a significant and meaningful difference in learners' argumentative writing performance in PBL and control groups (p <0.05, F = 56.99, eta squared = 59), and it is possible to predict 59% improvement in students' written performance in PBL group. In this analysis, the pre-test scores were statistically controlled; i.e., the effect of the same variable scores on the written performance score of the two groups was removed and the groups were compared based on the residual variance.

Table 5

Mean and standard deviation of the written performance scores of the two groups of participants

Group	Mean	Std Error	95% confidence interval	
			Lower Bound	Upper Bound
Control	13.31	0.27	12.76	13.87
Problem- based	16.16	0.26	15.63	16.69

According to Table 5, the written performance score of participants in the problem-based group with a mean of 16.16 is significantly higher than the written performance score of the participants in the control group with a mean of 13.31.
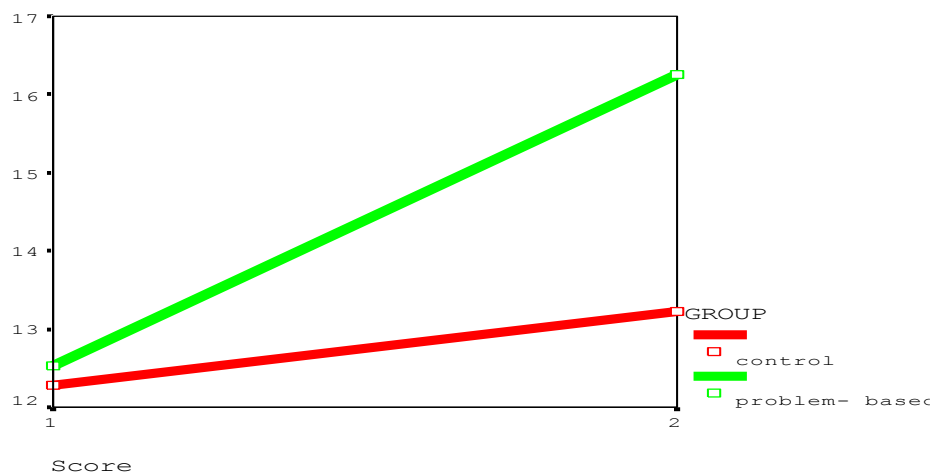

Figure 1.
Written Performance of participants in Problem-Based and Control Groups

DISCUSSION

The results of this research study verified the null hypothesis and indicated that participants in the PBL group outperformed the control group in argumentative writing performance. The results of the present study is supported by the theory of PBL proposed by Hung (2013) which states that PBL increases students' learning consequences by elevating their skills and abilities in solving problems, applying knowledge, practicing higher order thinking skills, self-directing and focusing on their own learning. Consistent with previous researches (Othman & Shah, 2013), the present study offers evidence that the PBL enhances students' writing performance. The findings of this study are also relevant with other results, which indicated that PBL enhances language learning in general and language skills in particular (Ansarian, et al, 2016., Aryanti & Artini,2017., Dharm & Adiwijaya, 2018., Jumariati & Sulistyo, 2017., Lin, 2015). Altogether, the findings of the present research support the results of previous studies which indicated that this method is very useful for improving students' argumentative writing (Jumariati & Sulistyo, 2017). We were clear that all these results were achieved partly due to the presence of lecturer who acts as a facilitator as suggested by Hmelo-Silver and Barrows (2006). Since one of the important goals of PBL is learning to solve problems, students will require to be guided during the investigating and solving process. Based on the literature review, this role was necessary in creating a bridge between the learners' prior passive-learning habits and active learning needed by PBL.

Group work applied in experimental group (PBL) which lies within the concept of social constructivist view is the first conducive factor of the important difference in the writing performance of students in the experimental group and those in the control group. The notion of social constructivist view is: "the distance between the actual development levels as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peer" (Vygotsky, 1978, p. 86). The idea is that individuals learn best when collaborating with others. As it is directly observed, students in the experimental group worked as a team to apprehend the problem, found the causes and the effects, explored information relevant to the problem, offered and determined the best solution to the problem. They also acquired to listen to others, negotiate opinions, and run any conflict due to disagreement on problem solutions. Therefore, according to Savery (2006) the procedures of PBL help learners to increase their skills in problem solving activities.

The second conducive factor to outperformance of the PBL group is the process writing approach which is incorporated into PBL. It is supported by empirical studies that process writing aids learners to make better their writing performance wherein students have the opportunity to review each other's draft (Arslan & Kizil, 2010; Arici & Kaldirin, 2015; Faraj, 2015). Process writing is an approach to writing and class activity which consolidate the writing stages such as planning, drafting, replying, correcting, editing, and sharing and help learners to write a piece of writing (Seow, 2002).

The act of scaffolding from both the teacher and the classmates is another contribution of PBL. The scaffolding from the teacher is based on a hypothesis that when teachers (facilitators) protect the learning and collaboration processes, students can better create flexible knowledge (Hmelo-Silver, 2004). According to Yang, Badger and Yu (2006), peer feedback activities are useful for development of greater autonomy in writing. In the current study, the teacher of the PBL group aids students by guiding them, using the questioning strategies, asking leading questions and providing feedback. On the contrary, the low learning outcome in the control group is due to the product-based methodology of instruction in which students don't provide scaffolding as the classmates' editing during the writing process. This study also proved that in a learning situation in which students make extensive use of their peers the consequence of the instruction outperform the context in which learners attempt to solve the problems lonely.

In addition, Hmelo-Silver and Eberbach (2012) state that in PBL, problems which are identical to those in real life are used as the vehicle to promote student language learning. Presenting everyday problems to students to solve makes PBL interesting and enjoyable. The students in this study learned directly from everyday life in context. They could acquire to become more flexible and responsible for their own learning and knowledge independently, which promoted their self-reliance in learning (Hmelo-Silver 2004).

Students' active participation in learning can be considered as the other efficient factor in enhancing writing performance in the PBL group. According to Hallinger and Bridges (2016) most learning happens in the context of student-centered small groups rather than teacher-directed learning. Malik and Iqbal (2011) proved that the procedures of Problem-Based writing instruction help learners to be active in classroom teaching and increases their problem-solving skills. The reason for low outcome of learning in traditional methodologies is due to teacher-centered instruction (Duck-Worth, 2009; Geisli, 2009; Alrabai, 2016) and product-based method (Arici & Kaldirin, 2015; Faraj, 2015; Timothy Kolade, 2012). In this study, the learners in the control group followed the traditional method product-based instruction which was mostly based on paragraph model without any active participation of learners. This made learners tired and did not will to learn more. In the current study, the procedures of Problem-Based writing instruction in the experimental group (PBL) were designed carefully into the stages of introduction to problem, discussion and posing a question, setting the priority, explore and integrating new knowledge and application. Each of these stages helps the students in writing argumentative essay.

CONCLUSION

The findings of present study support executing PBL in EFL classes to improve learners' writing performance. This study is significant because due to the lack of enough empirical evidence especially in an Iranian EFL context, it explored effectiveness of PBL in English writing class and drew attention to enhancing knowledge in writing performance components, including, Generic features, syntactical language, and spelling.

The results of this study indicated that the null hypothesis (the difference between the experimental and control groups in writing performance due to the effect of PBL) was verified, indicating that there was high level of difference between the PBL and control groups in their writing performance ability. To put it clearly, the participants in the experimental group outperformed learners in the control group in writing performance including components of Generic features, syntactical language, and spelling. Therefore, it is recommended that Problem-Based writing instruction is an important method to teach writing skill.

It can be concluded through the consequences of the current study that the outperformance of the experimental group who received problem-based writing instruction over the control group who received the traditional product-based is due to the features that problem-based learning brought to the writing learning environment. These features are group work, pushing learners to be more autonomous in their learning, helping them to focus on their writing, and making the learners aware of the process of writing. These characteristics are fundamental prerequisites for developing one's L2 writing skills and they can be provided by the problem-based writing instruction.

A number of pedagogical implications can be derived and proposed based on the obtained results. First and foremost, the results of this research may be of benefit to EFL teachers. The results may change teachers' viewpoints who still believe in teacher centeredness in language teaching in favor of more learner-centeredness approaches. The results also benefit students. Learning writing skill through PBL would be more enjoyable and meaningful, because it enriches the learning process and help learners to learn what they want to learn not what they have taught and also it can enhance learning experience of the students in all educational settings. Syllabus designers can prepare material which make students think and analyze the subjects instead of memorizing them. Textbook writers can include peripheral

educational materials in teachers 'guides to help teachers act more effectively in their classes. The central aim of this study was to highlight the importance of implementing problem-based learning into EFL setting. The researchers hope that this study can add the importance of this issue, and language teachers apply what has been presented in this study into their own classes.

This study was subject to a number of limitations, which can create new avenues for further research. The most important limitation was the limited sample size. There were 22 participants in PBL group and 24 participants in control group after being homogenized in the study, so the results cannot be generalized to larger population. Therefore, the further research is needed to cover larger samples and to demonstrate the potential roles of PBL in training other three language skills so that more conclusive results on its roles can.

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