Designing a Problem-Based Model of Writing Development for Iranian EFL Learners

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Abstract

This study aimed at designing a problem-based model of writing development for Iranian EFL learners. To this end, a qualitative content analysis method was used. The participants included EFL teachers (N=10) and learners (N=15) with teaching and learning experience in writing courses at different language institutes of Iran. They were selected through purposive sampling. To collect the data, a semi-structured interview was used. More particularly, initially, the respondents in this study were interviewed to find out what their views about PBL is. The researchers began the qualitative data collection procedure and continued until data was saturated. The semi-structured questions administered to the respondents dealt with various aspects of PBL including: searching for answers, collaborative learning, cognitive thinking, learner-centered learning, diminished rule of the teacher, feedback dynamics in PBL, synthesis of data, and application of findings. By using the views of participants with regards to PBL, a new PBL model for the writing skill were designed. The findings can have implications for EFL teachers, learners, and curriculum planners.

Keywords: problem-based learning, argumentative writing style, cause and effect writing style, compare and contrast writing style

1. Introduction

As writing is a cognitive task (Frear & Bitchener, 2015), one possible approach to enhance the learners' writing skill is to turn into inquiry-based approaches to learning such as problem-based learning (PBL), which have a high cognitive demand and usually result in high retention of knowledge (Hmelo-Silver, 2004). Theoretical assumptions of PBL, which is an interdisciplinary and collaborative approach to leaning (Hayashi et al., 2013), advocate its effect on writing. PBL accords its focus on practical aspects of knowledge rather than theoretical accumulation of knowledge, and writing is a productive language skill that manifest the authors' skill in practicum. PBL, as stated by Johnson and Johnson (2009), is a form of collaborative learning that is replete with discussions and negotiations, while group dynamics such as cooperation and mutual engagement also occur in classes. On the other hand, recent studies by Nassaji and Tian (2010) and Storch (2005) have revealed that features such as collaboration can foster learning to write. They concluded that completing the tasks collaboratively (in pairs) leads to greater accuracy of task completion than completing them individually. In addition, PBL provides the learners with the opportunity to use language to learn instead of learning the language to use (Larsson, 2001).

It, indeed, may solve one of the long-lasting problems of students in EFL contexts- using language in the context. Moreover, a number of studies by Deane et al. (2008), and Martínez-Fernández et al. (2016) support the positive effect of making use of students' cognition in writing instruction and assessment. In the same vein, PBL provides the students with the opportunity to truly use their cognitive and metacognitive abilities, as problem-solving is the most dominant skill used by the students in PBL approach (Savery, 2006).

The major problem that this study aims to solve is Iranian EFL learners' writing problems, as recent research shows inadequate progress in Iranian EFL learners' writing in the last decade. For example, Ketabi and Torabi (2015) considered the writing skill a disregarded language skill in Iran, as it is often the last skill to deal with in the classes. On the other hand, although communication is the overall aim of most language classes in Iran, Koosha and Yakhabi (2012) posited that the learning outcome of the communicative language teaching method to teach the writing skill has turned out not to be successful in Iran. Borjian (2013) notes that focus in the public sector in Iran is accorded to the reading skill and communicative skills such as the speaking and the writing are completely neglected. As a result of this insufficiency in writing and as concluded by Mohammadi (2016), many EFL students in Iran gain low scores on academic writing tests such as IELTS, and the overall satisfaction with the results is very low. Many students have a negative perception of their writing skill and do not consider themselves real learners in terms of writing.

Furthermore, one of the shortcomings of many recent studies on writing (e.g., Askarzadeh et al., 2012; Kalali & Pishkar, 2015; Malmir & Khosravi, 2018; Taghizadeh et al., 2013; Zarei & Rahimi, 2014), to name a few, is that their focus is on the product of writing approaches and not the processes. Research dealing with learners' voice with regard to academic writing is very scant.

This, in turn, hampers a critical look at the problem of academic writing, as a result, proper action may not be taken. Eslami (2010) posits that in the Iranian EFL context, attention is not given to the learners and teachers' voice in preparing the curriculum and the learning materials. She specifically points out to English for Academic purposes (EAP) and notes that curriculum design should be in accordance to the perceptions of the teachers and the learners. However, very little attention is accorded to this aspect of learning in Iran. This can question the validity of the courses used in the EFL context of Iran and urge the need for a learner-based approach to learning.

Finally, although some aspects of PBL such as collaboration, the effect of cognition on writing, and learner-based writing approaches have already been investigated, most of these studies have taken a quantitative approach and have not considered designing a problem-based writing model for Iranian EFL learners. To this end, the researchers aimed at designing a problem-based writing model for Iranian EFL learners. In so doing, the following research questions were formulated.

Q1: What are the components of a problem-based writing model?

Q2: What is a problem-based writing model for Iranian EFL learners?

2. Literature Review

Before presenting the extant literature on the topic of the paper, it is worth noting that there is research scarcity on PBL as related to EFL learning in general. In this research paucity, few studies have touched PBL in the area of writing skill.

The advent of problem-based learning in the area of language education is rather new and most studies dealing with PBLL have been conducted between 2007 and 2020. Ansarian (2019) presented a comprehensive model on PBLL and claimed that the model can be used in language classes; especially with regards to the speaking skill. The model was based on Hmelo-Silver's (2004) and Hung's (2006) PBL model. Ansarian and Shir (2018) conducted a meta-analysis on the studies on PBLL. They claimed that the 29 studies discussed in their meta-analysis cover most studies conducted on problem-based language learning. Some studies have been conducted on PBLL in recent months. Lin (2017) measured the effects of PBLL on reading Comprehension through a web-based English course of sixty Taiwanese students. A reading test and an Instructional questionnaire were used in a Mixed-Methods study. The findings revealed that the participants enjoyed their active role in learning and that PBL synthesized their cognitive processing. Aliyu (2017) worked on Writing and metacognition. He benefited from 18 Nigerian undergraduate learners and adopted a PBL questionnaire from Tan (2004) on metacognitive thinking. He collected Writing samples, Audio-video recording, Semi-structured interview, and reflective journals in a mixed-methods study. He found out that PBL has positive effects on writing and metacognition of ESL learners in Nigeria. Fonseca- Martínez (2017) studied the effects of PBL in a basic-level language class. The focus of her study was on talking time. Using forty-seven students

in Peru and by benefiting from an independent group design (control vs. experimental), it was found that PBL can positively affect language learners' talking-time. In another study, Mohammadi (2017) delved into vocabulary learning by sixty Iranian EFL leaners in a pretest and posttest experimental design and found that PBL can positively affect both recall and retention of vocabulary. One of the considerations in conducting this study was to only focus on the vocabulary items that were unknown to the participants. Ansarian et al. (2016) conducted a study in the EFL context of Iran and attempted to see the effects on PBLL on Speaking Proficiency of ninety-five Iran IELTS test takers. Using a Quasi-Experimental design and by taking IELTS speaking test part 2 and 3 as pretest and posttest before and after a PBLL has a positive effect on pronunciation, vocabulary learning and use of grammatical structures among EFL English speakers. In the same year, Bejaran et al. (2016) Used PBL to teach Social Values (disrespect) and tried to see the impact of PBL on Vocabulary learning of twenty Colombian students using observation field notes. The findings of this mixed-methods study revealed that both social values and vocabulary items could be taught using PBL.

Concerning PBL and writing skill, one of the gaps in the field of PBL is a model to implement problem-based learning in writing classes. However, before such a research, there is a need for understanding the background of PBL and its effect on written communication in other disciplines. This critical look can not only set the scene for the current research, but also theoretically support the use of PBL concept for writing classes. In general, the consensus among the researchers who directly or indirectly dealt with the written communication through PBLL is that written communication is positively affected by PBL (Alves et al., 2016; Birjandi & Malmir, 2009; Groves et al., 2003). For example, Groves et al. (2003) posit that medical students' communicative skills in written examinations were enhanced as a result of using PBL as a dominant form of medical education. They link this to increasing power of reasoning among the medical students. Ribeiro and Mizukami (2005) also mention that PBL affects both written and oral communication among the learners, as the learners make use of accumulated knowledge which is formed in the PBL groups. The authors also believe that in case written communication is the focus of a study, feedbacks should be given in the written form. Kolber (2011) believes that students' satisfaction with their communicative skills is an index of their improvement as a result of PBL. Although the focus of Kolber's (2011) study was on biology, she mentions that both written and oral communication of the students were affected positively and the students' satisfaction was increased.

As it can be seen in the reviewed studies, no problem-based writing model for Iranian EFL learners has been designed by the previous scholars in the field. This study aimed to bridge this gap.

3. Method

3.1. Design

In line with the stated objectives, this study used a qualitative content analysis method. This method is appropriate for extracting the recurrent themes and patterns in the data (Ary et al., 2010).

3.2. Participants

In this study, fifteen (eight females and seven males) EFL learners and ten (six females and four males) EFL teachers took part in the study. As is the case in the qualitative investigations, data saturation determined the size of the sample. These language teachers have been involved in teaching writing courses and the students were those who have taken the writing classes; thus, the sampling method was considered purposive. Language learners were selected from different language institutes in Tehran. Their education degrees were diploma, B.A, and M.A in different fields of studies. Language teachers were Ph.D. and M.A holders of TEFL, with more than five years of teaching experience in teaching writing at different language institutes in Tehran.

3.3 Instrument

The following instrument was used to collect the data:

3.3.1 Semi-structured Interview

A semi-structured interview was conducted with the respondents to seek their views of both language teachers and language learners about problem-based language learning in a writing course. To do so, the interview questions were designed based on the main features of PBL. The main features were extracted from Hmelo-Silver's (2004) model, and Hung's (2006) 3C3R model. These features were used in designing a problem-based language learning model by Ansarian and Teoh (2018). Thus, the model by Ansarian and Teoh (2018) was also used. The questions were open-ended, but as the researcher probed the views of the respondents, more detailed questions were asked. In line with Ansarian (2020), to validate interview questions, the interview questions along with an evaluation form were sent to three experts in the field of problem-based learning and their feedback was acquired. Based on their feedback, the questions were amended and used as interview questions. Member checking was used to confirm the reliability of interview data.

3.4. Procedure

To collect the data, first, the consent of the participants was taken to comply with rules of ethical research, and the anonymity of their identities was ensured. Then, a briefing session was run for the participants to familiarize them with PBLL tutorship. Next, the participants were interviewed and the main themes in their speech were extracted after manual thematic analysis by the researchers. More specifically, the interviews were exposed to thematic analysis manually. This was done by the researchers in four steps. In the first step, the researchers tried to be familiar with the data through taking notes or looking through the data. In the second step, the data was coded. It involved making some phrases and sentences of the text bold and coming up with some codes which represented the content of the bold parts. In the third step, the codes were looked over to identify the recurrent patterns in them. In the fourth step, the extracted themes were reviewed to ensure about their accuracy. In the next stage, based on the themes extracted from the respondents' speech, the main components of the problem-based writing model were identified. The main components were then used to design a problem-based writing model.

4. Results

The answer to the first research question 'What are the components of a problem-based writing model?', both the views of the teacher participants and the learner participants were sought. After interviewing the language teachers in Persian, the audio files were transcribed. The main themes from the teacher respondents were extracted through the four steps explained above.

As can be seen in Table 2, through interviewing the teacher participants, 21 different themes were extracted. These themes were asked by asking 6 different semi-structured questions. Each theme is shown with a sample quotation from the teacher participants in Table 1.

Table 1

Themes Extracted from the Teacher Respondents

Question	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5
1: Comparing PBL to other methods	More Engaging for Students	Planned and Well-Structured	Similar to Real Life Learning	Collaborative and Effective	Analytical and Not Imitative
2: The Role of the Teacher	Requires Artistry and experience	Requires Knowledgeable Teachers	Teachers should not be Judgmental	A Guide Rather Than A Lecturer	Teachers should have a subordinate role to the learners
3: Topics used in PBLL Tutorship	Close to Real-Life Issues	Harder than Ordinary Topics	Require more thinking and analyzing time	Mostly scenario-based	
4: Collaborative Learning in PBLL	Collaboration should be well planned	Organized Based on Hierarchies in a Group- each group has a senior	Longer than Usual Classes	More Engaging	Collaboration has two levels: within group and within class
5: The Role of Technology in PBLL	Pivotal Rather than Supplementary	Selected by the Students	Has More Variety	Learners should use English to search thus English is a tool and objective	
6: Challenges for Teachers and Students	Unknown Questions and Challenges	Requires Extensive Vocabulary Knowledge	Change in the Students' perception About the Role of the Teacher		

The student respondents were also interviewed through seven semi-structured interview questions. This led to extraction of 30 different themes in seven categories. The extracted themes, along with a sample quotation relevant to each theme are shown in Table 2.

Table 2

Themes Extracted from the Student Respondents

N	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5
1: Are The Topics Interesting?	affecting fluency	relevance to real-life	vocabulary knowledge	difference from previous topics	Easiness
2: Are the Topics at Your Level?	level of writing vs. level of the topic	The quality of one's writing	More thinking was required	Different from ordinary topics	
3: What Do you Think of the Collaboration in PBLL?	more engagement	Hierarchal order in the group	easier collaboration	personal preferences	shared knowledge
4: What Do You Think About the Role of the Teacher?	the supplementary role of the teacher	teacher as a guide	learning from groupmates vs. the teacher	giving more learning chances to the learners	More passive teachers
5: What Do You Think About Finding Information in This Method?	Time requirement	different levels of difficulty	limited access to websites	sharing useful information	
6: Is This Method a Suitable Substitute For Other Methods That You Know?	More engagement	being learner-centered	More joyful classes	Less support from the teacher	
7: How Did You Find the Use of Mobile Phones and Other Devices in This Method?	sufficient equipment	suitable type of technology	need for the internet	Success in using technology	

To answer the second research question 'What is a problem-based writing model for Iranian EFL learners?', the components extracted in the first research question were used. The following model was developed through merging these components. Figure 1 shows the PBLL model for writing.

Figure 1

The PBLL Model for Writing
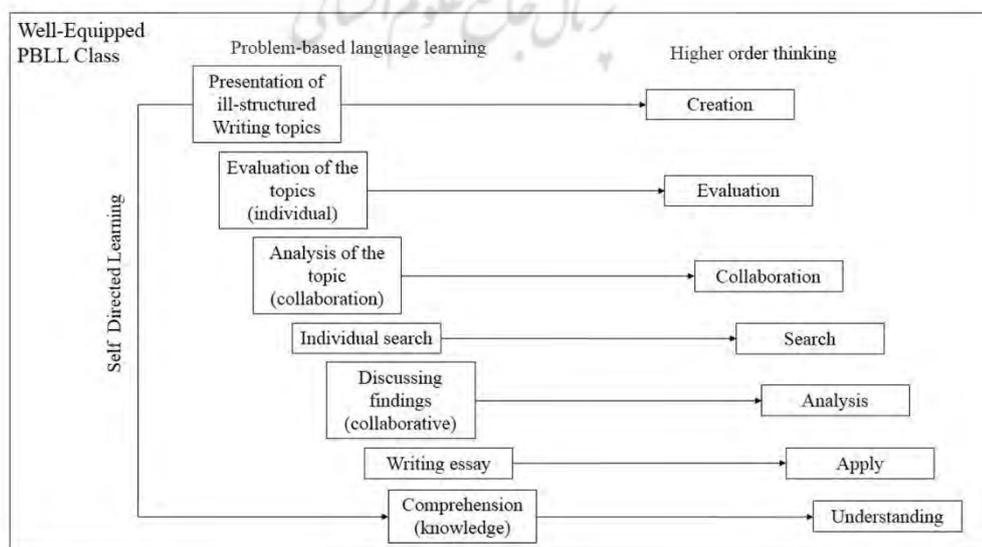
In explaining the model, the column on the left side of the model shows the pedagogical steps in a PBL writing class and the column on the right shows the corresponding steps based on higher order thinking theory. As 'suitable technology' was one of the themes extracted from the respondents' speech, The PBLL class was entitled 'well-equipped PBLL class'. The respondents also noted that the ill-structured problems were engaging and at their level. Thus, based on this theme and in line with the overall PBL methodology, Presentation of the ill-structured problem was suggested as the first step in the learning process. This is the only step which is expected from the course tutor to accomplish and is in line with the step 'creation' in higher-order thinking model.

The second row of the column was entitled 'evaluation of the topic (individual)'. The student-respondents stated that Problem-based topics require more thinking and are different from the ordinary topics. It was also stated by the teacher-respondents that learning through PBLL is similar to real-life learning. Real-life issues require thinking and evaluation. This step corresponds to the second step in higher order thinking, i.e., evaluation. After, the students analyze the ill-structured topics, they should discuss the topic collaboratively. Through this discussion, they identify what they know and what they need to know. This is in line with the ZPD theory by Vygotsky (1987) and was stated by the teacher-respondents where they posited that PBLL is an analytical approach rather than an imitative one. The student-respondents also mentioned that they learn from the classmates rather than the teacher and have more learning chances. They also pointed to sharing useful information as a significant learning tool. Therefore, this step was added to the model. This step is in congruence with ZPD theory which emphasizes learning from others.

'Individual search' was suggested as the next pedagogic step in PBLL model for writing. Search was emphasized by both teacher-respondents and the student-respondents as a significant learning tool. Student-respondents stated that sufficient equipment are required for conducting online search. In addition, they pointed to the suitable types of technology and internet connection. The teacher-respondents also posited that the learners should use English to search, thus English is a tool and objective. This increases the learners' chances for learning. The next pedagogical step mentioned in the PBLL model for writing is that of 'discussing findings (collaboratively)'. Discussing findings and deciding on how to write the essay is among the important steps, as many of the themes in the students' respondents and teacher-respondents' speech referred to this theme.

The student-respondents referred to 'easier collaboration', 'learning from group-mates vs. the teacher', 'joyful learning' all have associations with collaborative learning and were mentioned by the teacher-respondents. Discussing findings is in line with analysis step in the PBLL model. The students finally put their efforts in a practical form. Thus, writing the essay comes at the end of the learning model. Through this step, the learners decide on what information should be included in the essay. This step is in line with the level 'apply' in higher order thinking model. This form of learning should lead to comprehension (knowledge) and is a self-directed approach to learning.

5. Discussion and Conclusion

In an attempt to answer the first research question, the components of a problem-based writing model were sought from both the student-respondents and the teacher-respondents. The core themes in the teacher-respondents view about a PBLL model were engagement, similarity of the ill-structured problems to real-life issues, creativity, well-planned collaboration based on hierarchies, and using suitable technologies. Based on the student-respondents view, engagement, collaboration, personal preferences, sharing knowledge, novelty, less supportive teachers, joyful learning process, and use of adequate technologies were emphasized.

Although the above-mentioned features formed the main components of a problem-based model, some other themes were extracted that can affect learning through PBLL. These themes include time requirements, affecting vocabulary learning, changing students' perception about the learning process and the teachers' role. Each of these themes is discussed in this section in light of previous studies.

Engagement is a core concept in both language learning processes and problem-based learning. Bédard et al. (2012) notes that engagement and persistence are two interconnected concepts in problem-based learning. For this reason, as noted by Hmelo-Silver (2004) the learners should be given an appropriate learning space. The novelty of the PBLL learning space was well realized by both the teacher-respondents and the student-respondents in this study, as they noted that PBLL is different from the previous classes they know. As the same time, they welcomed this difference and pointed to being more engaged in PBLL classes.

Scholars in the field of problem-based learning believe that the ill-structured problems in PBLL classes play the main role in conducting effective classes (Aliyu et al., 2016; Ansarian & Mohammadi, 2018; Teoh et al., 2019). Indeed, one of the main differences between PBLL and task-based learning is determined through presentation of ill-structured problems (Ansarian & Mohammadi, 2018). Hmelo-Silver (2013) posits that the ill-structured problems link the learning content to the students' real-life, and in this way, they cause deeper learning.

The monotonous procedure of some language classes has always been a problem for the learners (Basal, 2015). Andujar et al. (2020) assert that the monotonous and mundane procedure of language classes is the main cause of designing some recent methods such as flipped classrooms. Cognitive psychologists such as Butler et al. (2020) assert that creativity has associations with higher-order thinking as opposed to lower-order thinking. The main reason as stated by Butler et al. (2020) and Lloyd (2020) is that starting the learning process through evaluation of the learning problems makes learning deeper and results in more creativity. The respondents in the current study also observed a higher level of creativity in a PBLL class. As PBLL makes an extensive use of higher order thinking theory, it can be assumed that the findings of the current study are in line with previous studies.

Handoyo et al. (2021) and Adamura (2021) link problem-based learning to creativity. They assert that the difficulty of understanding concepts in PBL classes is more than conventional classes, and this situation provokes critical and creative thinking. Tan (2021) notes that creativity is a tool in PBL without which solving the learning problems is impossible. Thus, the respondents view about creativity is in line with previous studies. It can also be stated that the problem-based model for writing which was designed in this study has resulted in creative thinking. Therefore, creativity has highlighted by the respondents in this study.

Collaboration was welcomed by the respondents in the current study. Collaboration is one of the main pillars in problem-based learning to the extent that a separated theory (ZPD) is used in this method to refer to collaboration. The previous models in PBLL and PBLL have not pointed to collaboration as a learning step but have all pointed to the significance of solving the learning problems in a collaborative manner. Shimizu et al. (2021) extensively discussed collaboration in PBL. They assert that meaning and experience are transferred in PBL classes through collaboration. This situation can cause social interdependence, which is helpful to grow the students.

In the current study, the respondents asserted that learning was facilitated through collaboration and their ideas could help build effective essays. Similar concepts have been noted by Shimizu et al. (2021) in PBL classes. They assert that 'academic inquisitio' and 'work efficiency' are the direct results of collaboration in PBL classes.

In general, concerning using suitable technologies, the previous studies which have focused on learning L2 through PBLL support the findings of the current study. For example, in a study by Fard and Vakili (2018), the effects of PBLL on vocabulary learning was well observed. They also stated that technology plays a pivotal role in this approach. In line with Fard and Vakili (2018) both vocabulary learning and suitability of technology were emphasized in this study by both the student-respondents and the teacher-respondents. In another study, Teoh et al. (2019) asserted that problem-based learning requires extensive use of mobile phones and similar search tools to find information. Thus, this approach fails without using appropriate technology. This issue was also emphasized by the respondents in the study, as they found technology highly significant. For example, the student-respondents pointed to the shortcomings of current language classes such as limited access to the internet, or limited access to some websites as a main searching problem.

Although the studies conducted by Fard and Vakili (2018) and Teoh et al. (2019) were both in the area of language learning, studies in other disciplines have also accorded focus to this problem. For example, Jin and Bridge (2016) who conducted a meta-analysis of PBL in medical education also noted the significance of technology.

To answer the second research question, a PBLL writing model was designed and developed in this study. Throughout this section, the model is compared to a previous PBL model proposed by Hmelo-Silver (2004). This model is among the most significant PBL models which has been used in educational settings for years. The model in the current study and the model designed by Hmelo-

Silver (2004) show both similarities and differences. The main similarities are as follows: Beginning the learning procedure through presentation of an ill-structured problem; following higher order thinking model, and being learner-centered.

These similarities confirm that the PBLL model designed for writing should contribute to the students' knowledge of writing. Not only Hmelo-Silver (2004) but also other scholars in the field of language learning such as Aker et al. (2018), Jumariati and Sulistyo (2017), Montafej et al. (2021), Zuhriyah (2017), emphasize beginning the problem-based language learning procedure through presentation of an ill-structured problem. Ansarian and Mohammadi (2018) posit that the main problem with many PBLL procedures is that they do not begin the learning process with a problem-based model. This can justify the first step in the PBLL model for writing which was designed through the current study.

The second step in the Hmelo-Silver (2004) model is entitled identifying facts. In order to identify facts about the learning problem, the students should evaluate the learning problem (Jasti & Pavani, 2021). Thus, it can be claimed that this step is equal to the step 'evaluating the writing topic' in the PBLL model for writing which was designed through this study. This can also confirm that the respondents' expectations in the current study are in line with Hmelo-Silver (2004).

Elsewhere, Kusumoriny and Sitepu (2021) who studied the use of problem-based learning to enhance speaking proficiency, assert that evaluation of the learning problem (topic) should occur after presentation of the topic. This shows that the findings of the current study are in line with Kusumoriny and Sitepu (2021). In the current study, a more detailed look at evaluation was suggested. As problem-based learning is a collaborative approach to language learning, it was suggested that after individual evaluation of the topic, the students should analyze the topic collaboratively. Thus, evaluation in the PBLL model for writing suggested in the current study occurs at two steps. As suggested by Hmelo-Silver (2004) evaluation and analysis of the learning problem (topic) leads to identifying knowledge deficiency. In simple words and as explained by Hung (2006) the students should realize what they know and what they need to know. This step is congruent with discussing finings in the model in the current study through which the students define knowledge deficiency and conduct an online search to find the missing data (vocabulary, grammar, writing structures). Finally, the essay is composed. Both models, i.e., Hmelo-Silver (2004) and the one in the current study refer to this step as application. Application is the most practical step in PBL, through which the final product is prepared (Teoh et al., 2019). The students are expected to compose their essay through this stage. In general, comparing the PBLL model for writing and the one by Hmelo-Silver (2004) shows corresponding steps. The consensus of both models is that PBL should begin with presentation of an ill-structured problem. Next, the learning process should include evaluation, analysis, and application steps.

Based on the findings of the study, it can be concluded that to implement problem-based writing in EFL settings, the following components should be taken into account: Engagement, similarity of the ill-structured problems to real-life issues, creativity, well-planned collaboration

based on hierarchies, using suitable technologies, personal preferences, sharing knowledge, novelty, less supportive teachers, joyful learning process, and use of adequate technologies. Moreover, since, to the best knowledge of the researchers, no previous study has developed a problem-based writing model for EFL contexts, this conclusion can be made that this model can be used to test the quality of the PBLL classes in the future.

Concerning the implications of the findings, the model designed in this study can be used by language teachers to enhance the writing skill of the learners. It can also be used by the learners as a self-study program, as PBL in not dependent on the teachers and is a learner-centered approach. Also, PBL gives the learners more chance and time to practice the writing skill, as the whole process has high engagement and requires writing essays. PBL is an often obsolete approach to language learning. This can be due to the learner-centered nature of this approach which makes its implementation difficult. However, it can be used in learning the writing skill. This issue can be taken seriously by educational policy makers to think about changing the current language teaching methods with PBL approach.

The main focus of the current study was to design a problem-based model for writing classes. However, the model was solely designed on a qualitative basis. These is a need for empirical studies to test the effectiveness of this model in language classes. Such studies can provide the teachers with pieces of evidence based on the effectiveness of the PBL approach in writing classes. Also, based on the results of empirical studies, the quality of the model can be increased.

References

Adamura, F. (2021). Problem-based learning in real number topic for practicing critical and creative thinking. *Journal of Physics: Conference Series*, *1742*(1), 120-138.

Aliyu, M. M. (2017). *Problem-based learning on metacognition and writing performance of Nigerian undergraduates* [Unpublished doctoral thesis], University Putra Malaysia, Malaysia.

Aliyu, M. M., Fung, Y. M., Abdullah, M. H., & Hoon, T. B. (2016). Developing undergraduates' awareness of metacognitive knowledge in writing through problem-based learning. *International Journal of Applied Linguistics and English Literature*, *5*(7), 233-240.

Alves, A. C., Sousa, R. M., Fernandes, S., Cardoso, E., Carvalho, M. A., Figueiredo, J., & Pereira, R. M. (2016). Teacher's experiences in PBL: Implications for practice. *European Journal of Engineering Education*, *41*(2), 123-141.

Andujar, A., Salaberri-Ramiro, M. S., & Cruz Martínez, M. S. (2020). Integrating flipped foreign language learning through mobile devices: Technology acceptance and flipped learning experience. *Sustainability*, *12*(3), 111-130.

Ansarian, L., Adlipour, A. A., Saber, M. A., & Shafiei, E. (2016). The impact of problem-based learning on Iranian EFL learners' speaking proficiency. *Advances in Language and Literary Studies*, *7*(3), 84-94.

Ansarian, L., & Teoh, M.L. (2018). *Problem-based learning: An innovative approach to learn a new language*. Springer Nature.

Ary, D., Jacobs, L. C., & Sorensen, Ch. (2010). *Introduction to research in Education (8th ed.)*. Wadsworth Group.

Askarzadeh Torghabeh, R., & Yazdanmehr, E. (2012). EFL learner's evaluation of writing tasks in   Iran's TOEFL and IELTS preparation courses in light of the process-oriented approach. *Iranian Journal of Applied Language Studies*, *3*(1), 27-50.

Basal, A. (2015). The implementation of a flipped classroom in foreign language teaching. *Turkish Online Journal of Distance Education*, *16*(4), 28-37.

Birjandi, P., & Malmir, A. (2009). The effect of task-based approach on the Iranian advanced EFL learners' narrative vs. expository writing. *The Iranian Journal of Applied Language Studies (IJALS), 1*(2), 1–23.

Borjian, M. (2013). *English in post-revolutionary Iran: From indigenization to internationalization*. Short Run Press.

Butler, L. P., Ronfard, S., & Corriveau, K. H. (Eds.). (2020). *The questioning child: Insights from psychology and education*. Cambridge University Press.

Deane, P., Odendahl, N., Quinlan, T., Fowles, M., Welsh, C., & Bivens-Tatum, J. (2008). Cognitive models of writing: Writing proficiency as a complex integrated skill. *ETS Research Report Series*, *2008*(2), 1-36.

Eslami, Z. R. (2010). Teachers' voice vs. students' voice: A needs analysis approach to English for acadmic purposes (EAP) in Iran. *English Language Teaching*, *3*(1), 3-11.

Fard, E. E., & Vakili, A. (2018). The effect of problem-based learning on Iranian EFL learners' vocabulary learning. *Journal of Asia TEFL*, *15*(1), 208-217.

Frear, M. W., & Bitchener, J. (2015). The effects of cognitive task complexity on writing complexity. *Journal of Second Language Writing*, *30*, 45-57.

Graham, S., & Perin, D. (2007). What we know, what we still need to know: Teaching adolescents to write. *Scientific Studies of Reading*, *11*(4), 313-335.

Groves, M., O'rourke, P., & Alexander, H. (2003). The association between student characteristics and the development of clinical reasoning in a graduate-entry, PBL medical programme. *Medical Teacher*, *25*(6), 626-631.

Handoyo, R. F., Rosbiono, M., & Sopandi, W. (2021). Building students' creative thinking skills using problem-based learning in handling staple food waste. *Journal of Educational Sciences*, *5*(1), 89-103.

Hayashi, S., Tsunekawa, K., Inoue, C., & Fukuzawa, Y. (2013). Comparison of tutored group with tutorless group in problem-based mixed learning sessions: A randomized cross-matched study. *BMC Medical Education*, *13*(1), 158-179.

Hinkin, T. (1995). A review of scale development practices in the study of organizations. *Journal of Management, 21*(5), 967-988.

Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn?. *Educational Psychology Review*, *16*(3), 235-266.

Hung, W. (2006). The 3C3R model: A conceptual framework for designing problems in PBL. *Interdisciplinary Journal of Problem-based Learning*, *1*(1), 55-77.

Jasti, S. D., & Pavani, A. (2021). Employing problem based learning system in advancing communication skills proficiency in professional communication for engineering undergraduates. *Journal of Engineering Education Transformations*, *34*, 128-134.

Johnson, D. W., & Johnson, R. T. (2009). Energizing learning: The instructional power of conflict. *Educational Researcher*, *38*(1), 37-51.

Jumariati, J., & Sulistyo, G. H. (2017). Problem-based writing instruction: Its effect on students' skills in argumentative writing. *Arab World English Journal (AWEJ), 8*, 110-125.

Kalali, N. N., & Pishkar, K. (2015). The effect of genre-based teaching on Iranian EFL learners' L2 reading comprehension. *Journal of Applied Linguistics and Language Research*, *2*(7), 123-137.

Ketabi, S., Torabi, R. (2015). Teaching academic writing in Iranian EFL classrooms: Teacher-initiated comments or peer-provided feedback?. *Iranian Journal of Research in English Language Teaching. 1*(2), 58-65.

Kolber, B. J. (2011). Extended problem-based learning improves scientific communication in senior biology students. *Journal of College Science Teaching*, *41*(1), 32-36.

Koosha, M., & Yakhabi, M. (2012). Problems associated with the use of communicative language teaching in EFL contexts and possible solutions. *International Journal of Foreign Language Teaching and Research*, *1*(2), 63-76.

Kusumoriny, L. A., & Sitepu, S. S. W. (2021). Implementing a problem based learning/PBL method to improve students' speaking skill in in-flight English class. *Proceedings of The 10th National Online Seminar on Linguistics, Language Teaching and Literature*, *1*(1), 85-100).

Larsson, J. (2001). *Problem-based learning: A possible approach to language education*.
https://www.nada.kth.se/~jla/docs/PBL.pdf

Lloyd, M. E. (2020). Sometimes a demo is not just a demo: When demonstrating cognitive psychology means confronting assumptions. *Scholarship of Teaching and Learning in Psychology*, 89-105.

Malmir, A., & Khosravi, F. (2018). The effect of argument mapping instruction on L2 writing achievement across writing tasks and writing components: A case of Iranian EFL learners. *Applied Research on English Language, 7*(4), 515–540.

Martínez-Fernández, J. R., Corcelles, M., Bañales, G., Castelló, M., & Gutiérrez-Braojos, C. (2016). Exploring conceptions about writing and learning: Undergraduates' patterns of beliefs and the quality of academic writing. *Electronic Journal of Research in Educational Psychology, 14*(38), 107-129.

McCarter, S. (2007). *IELTS reading tests.* New Age International Publication.

Mohammadi, L. (2016). *The effect of applying time constraints on IELTS candidates' writing error types and their attitudes* [Unpublished master's thesis]. Payame Noor University, Iran.

Montafej, J., Lotfi, A., & Chalak, A. (2021). Implementation of hybrid and pure problem-based learning in EFL context: The case of speaking skill and self-confidence of Iranian undergraduate participants. *International Journal of Foreign Language Teaching and Research, 9*(35), 81-94.

Nassaji, H., & Tian, J. (2010). Collaborative and individual output tasks and their effects on learning English phrasal verbs. *Language Teaching Research, 14*(4), 397-419.

Ribeiro, L. R. D. C., & Mizukami, M. D. G. (2005). An experiment with PBL in higher education as appraised by the teacher and students. *Interface-Comunicação, Saúde, Educação, 9*, 357-368.

Savery, J. R. (2006). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-based Learning, 1*(1), 3-20.

Shimizu, I., Matsuyama, Y., Duvivier, R., & van der Vleuten, C. (2021). Contextual attributes to promote positive social interdependence in problem-based learning: A focus group study. *BMC Med Educ, 21* (222), 130-56.

Stevenson, M. (2016). A critical interpretative synthesis: The integration of automated writing evaluation into classroom writing instruction. *Computers and Composition, 42*, 1-16.

Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. *Journal of Second Language Writing, 14*(3), 153-173.

Taghizadeh, M. E., Abidin, M. J. Z., Naseri, E., & Hosseini, M. (2013). In the importance of EFL learners' writing skill: Is there any relation between writing Skill and content score of English essay test?. *International Letters of Social and Humanistic Sciences, 6*, 1-12.

Tan, O. S. (2021). *Problem-based learning innovation: Using problems to power learning in the 21st century.* Gale Cengage Learning.

Teoh, M. L., Ansarian, L., Tik, O. L., & Nair, A. B. (2019). The effects of problem-based language learning on the listening comprehension skills of Malaysian undergraduate students. *Journal of Asia TEFL, 16*(3), 996.

Vygotsky, L. S. (1987). *The collected works of L.S. Vygotsky: Problems of general psychology.* Plenum Press.

Zarei, G. R., & Rahimi, A. (2014). Learning transfer in English for general academic purposes writing. *SAGE Open, 4*(1), 1-12.

Zuhriyah, M. (2017). Problem-based learning to improve students' grammar competence. *Register Journal, 10*(1), 48-61.