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Exploring the Effects of Pair-Interaction Model on Improving Indonesian Adult Learners' English Proficiency

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Abstract

The phenomenon of poor English language proficiency among Indonesian students suggests revisiting the instructional methods that have long been commonly used in English as a foreign language (EFL) classrooms. This long-lasting problem makes it essential for English practitioners to seek alternative approaches paving the ground for the EFL learners to reach more promising achievements. One of the approaches that may fill in this lacuna is Pair-Interaction Model (PIM). Therefore, the present study was an attempt to disclose the effects of PIM on fostering Indonesian EFL learners' proficiency compared to the Grammar-Translation Method (GTM). For this purpose, a total of 90 first-year English students from

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three renowned universities in South Sulawesi, i.e. Hasanuddin University, Indonesian Moslem University situated in Makassar, and the Muhammadiyah University of Pare-Pare, were selected using a purposive sampling technique. The participants went through a pre-test, an intervention, and a post-test procedures. Findings revealed that the English proficiency of the participants who received instructions based on the principles and procedures of PIM significantly improved at the end of the interventions. This improvement was particularly seen in the participants' grammar knowledge and speaking skills. The findings offered strong evidence that PIM can be implemented in the Indonesian classes to foster EFL learners' proficiency. The study concludes by offering some implications for relevant stakeholders and opening up some avenues for further research.

Keywords: English-language media discourse, functional potential, innovation, multiculturalism, sustainable development.

1. INTRODUCTION

A wide range of publications, including unpublished research reports, theses, and dissertations, has revealed that the English proficiency of Indonesian learners, particularly college and university students, is not promising. Yassi (2009) found that the average level of English proficiency of first-year students of the Cultural Science Faculty at the University of Hasanuddin, majoring in English linguistics and English literature was at a lower intermediate level. Such low levels of proficiency were not adequate for the learners to perform the classroom tasks in English. Consequently, communication in classrooms was mainly carried out in bilingual mode, mixing English and Indonesian. A far worse case was disclosed by Suhartina (2012), who conducted a study on revisiting the effectiveness of “Yassi’s Pair Interaction Model” on the English proficiency of 120 first-year English language students from four universities in Makassar. The findings demonstrated that the English proficiency of the participants was mostly elementary (44.43%). Similarly, Hanafiah (2011) uncovered that, on average, the English proficiency of students at the English Department of the University of Dayanu Ikhsanuddin, Baubau was elementary (44.42%). Additionally, Zaid (2012) examined eight secondary public and private schools in Makassar City and Gowa and found that on average the English proficiency levels of the students were lower than the intermediate.

The low levels of English proficiency of the Indonesian graduates have adversely significantly affected their abilities to get success in international affairs. The British Council (2006), in one of their surveys, asserted that the Indonesian graduates did not absorb 67% of the overseas scholarships provided by the various foreign foundations due to their failure on English tests such as TOEFL and IELTS. Similarly, Novera (2004) reported that most Indonesian graduates could not win a foreign scholarship to pursue their postgraduate study abroad due to their low levels of English proficiency. Thus, it can be concluded that English language education in Indonesia has not achieved the educational objectives. A possible reason for this can be attributed to the teaching approaches implemented in the classroom. Observational evidence asserts

that the prevalent teaching approach is Grammar-Translation Method (GTM). Thus, it is essential to explore if the implementation of new teaching approaches such as the Pair-Interaction Model (PIM) results in substantial improvement in the English proficiency of Indonesian EFL learners. However, to the best knowledge of the researchers, to date, no studies have investigated the effects of PIM on fostering Indonesian EFL learners' proficiency. In response to this gap, the present study is an attempt to examine the effects of PIM on fostering Indonesian EFL learners' proficiency in the higher education context. It is hoped that the results of this study can further the understanding of Indonesian EFL teachers and learners to consider PIM as a good alternative teaching approach to make the way for more efficient learning.

2. LITERATURE REVIEW

2.1 Pair Interaction Model

Pair Interaction Model (PIM) was developed by Yassi in 2009. As such, it has long been designed and examined for its effectiveness for more than a decade. It is found that the teaching model has empirically proven to be relatively effective in improving not only the grammatical competence of the learners but also the four language skills (i.e., listening, speaking, reading, and writing) of the learners, especially the learners' communicative skills and speaking performance. Unfortunately, regardless of its crucial role in using English well, communication skills have largely been overlooked due to the implementation of Grammar-Translation Method (GTM) in the EFL classes in Indonesia (Yassi, 2009). GTM does well in terms of raising EFL learners' syntactic awareness, morphological awareness, etc., but it is proved to be less effective in facilitating EFL learners' communication skills (Yassi, 2008).

Furthermore, PIM has continuously been studied for its effectiveness in improving learners' English proficiency. Yassi (2012) tested the model for its efficacy in improving EFL learners' English ability in different situations and contexts and a much more comprehensive research site against the conventional teaching method. The findings revealed that PIM was more efficient than the conventional approaches such as GTM. Also, in 2013, PIM was studied for its effectiveness in improving English proficiency against the other interactive-based grammar teaching model employing various small groups. The findings documented that the students who used interactions to complete a task gained more promising results. A similar study was conducted by Yassi (2020), indicating that when EFL learners interacted in pair group activities, they could achieve better results. Likewise, Yassi (2014) examined whether the PIM model could be applied in deductive teaching or inductive teaching approaches. The findings revealed that it was effective for both deductive and inductive teaching approaches. However, it was found that when delivered in deductive mode, PIM was more effective for younger learners. While it was applied in an inductive form, PIM was more effective for adult learners.

2.2 The Nature of the Pair Interaction Model

As an interactive-based model of learning, Pair Interaction Model (PIM) is more oriented toward 'integrated skills' or 'whole language approach' (An & Thomas, 2021). Though the activities are not presented explicitly and structured, the development of four language skills (i.e. listening, speaking, reading, and writing) is viewed as a by-product of the learning outcomes of PIM. This point has become one of the merits of PIM in comparison to other models of teaching English which largely ignore language skills (An et al., 2021). Furthermore, PIM is similar to Task-based Teaching (TBT) in regards to enabling EFL learners to communicate in real situations (Joe & Lee, 2013). However, unlike TBT that designs interactions in a group of 4-5 students, the PIM groups the learners in pairs (two students). This is intended to avoid silence among the other group members that sometimes occurs in the interaction of groups of more than two students (Chin, 2006). One of the common phenomena in the EFL classroom is that the passive and introverted learners tend to remain silent because their mistakes make them less confident in front of their classmates (Lo & Macaro, 2012). Generally, this phenomenon occurs in many English classes in Asia, including in Indonesia (Namaziandost et al., 2021; Tomlinson, 1990). A major part of this problem may be ascribed to the weakness of teaching approaches such as GTM where EFL learners have to interact with the teachers in front of other classmates.

Regarding the focus of learning, PIM emphasizes the internalization of the rules of the English language. Although the focus of education is on the understanding and internalizing of English grammar rules, in its implementation, the grammatical items are in a dialogic form rather than in a narrative one. Thus, such a dialogic grammar teaching material allows the learners to practice speaking skills, including listening skills course while learning the grammatical rules when they perform the given task with their peers in pair work. This aspect is considered as an outstanding merit of the PIM compared to GTM. Moreover, the role simulation is performed alternately by group members and is done repeatedly until the optimal results are achieved. Thus, PIM provides the learners with a high opportunity to practice speaking and listen to spoken English in the classroom. As a result, such a high intensity of practicing speaking in English and comprehending it could improve their speaking performance and listening skills. Concerning the other two skills, writing and reading, they would be automatically enhanced along with their grammatical competence and knowledge (see Kyriacou & Zhou, 2008; Namaziandost & Çakmak, 2020; Yassi, 2014). These studies empirically proved that grammar knowledge correlates positively to writing and reading competencies.

Furthermore, in the interaction, learners perform the given dialogic tasks based on the prescribed role. This clearly shows that PIM utilizes the two language skills, namely speaking and listening, as the primary medium of the interaction. There is a consensus that the effective language learning-teaching process transforms the real world into the classrooms as the learning process or activities of this method are more authentic (Yassi, 2020). Thus, the learners are more interested in and enthusiastic about performing all the given tasks (see, for example, Senior, 2002).

2.3 Grammar-Translation Method

For more than 2,500 years, issues related to grammar teaching were always identified with the teaching of foreign languages (Rutherford & Smith, 1985). This asserts that teaching grammar plays a crucial part in the teaching of foreign languages. Teaching grammar is very likely to have the oldest language teaching history as it dates back to Renaissance (Celce-Murcia, 2001). In those days, classical languages such as Latin were taught using a 'Grammar-Translation Method', which first became known in America as the 'Prussian Method' (Richards & Rodgers, 2014). With the analysis of the detailed rules of grammar as its typicality, this method emphasized the aspects of the study of literature, followed by exercises in the form of sentences to be translated into the target language or vice versa (Ellis, 1997; Celce-Murcia, 2001; Richards & Rodgers, 2014).

Although the application of this method continues to this day and is even used extensively against the teaching of contemporary language, it remains unclear whether this method is representative of a theory as no literature is found to give rationalization or justification regarding this method (Richards & Rodgers, 2014). The most crucial disadvantage of this method is that it does not leave any room for communication of the target language; in this regard, as it is very important for Indonesian learners to communicate in English, Grammar-Translation Method cannot satisfy their needs (Sugiharto, 2006).

2.4 Theoretical Foundations

The theoretical foundations of the study were drawn from the Constructivism Learning Theory (Bada & Olusegun, 2015). According to this theory, humans acquire knowledge from experiences (Amineh & Asl, 2015). Spivey (1997) enriches the theoretical concepts of Constructivism in terms of learner involvement in an interactive discourse, cooperative learning groups, activities rich in context, and social experiences. Moreover, the theory plays a significant part in the establishment of Dell Hymes's Communication Theory (Hymes, 1972), commonly called 'student-centered learning', and Michael Long's Interaction Theory (Long, 1990) that emphasizes the role of input and output in second language (L2) development. Other approaches such as the theory of Zone of Proximal Development (ZPD) of Vygotsky stresses the aspects of a discrepancy between the actual learner's level of development and the level of their potentialities, that is the learners' achievement is improved with support from partners or classmates who are more competent (Vygotsky, 1986). In other words, the environment and peers could significantly enhance the learning process (Poehner & Wang, 2021). Thus, the role of social interactions in the development of learners' cognition is very substantial.

Another theory that derives from the development of Constructivism Learning Theory is the Readiness Approach of Piaget (1981). This theory stresses the need for learners to participate in the process of learning actively. The learning process will likely be more successful if learners are allowed to experiment with their knowledge. Thus, as Arlin (1981) notes, the role of teachers should be reoriented to be no longer the central and dominating figure in a teaching process but instead acts as a facilitator who guides and stimulates learners in carrying out their learning activities. Both of the theories amalgamated to give birth to a learning theory, commonly called Cooperative

Learning Theory (Slavin, 1985). On this theory is the design of PIM based. Vygotsky's approach emphasizes the social aspect of learning, while Piaget's theory emphasizes active learning. Both elements are of paramount importance for designing such an interactive-based English teaching model, PIM (An et al., 2021).

Regarding the methodology, the communicative approach in foreign language learning proposed by Krashen (1982) makes communicative abilities the ultimate goal of learning by developing the four language skills (i.e. speaking, writing, listening, and reading). Meanwhile, Littlewood (1983) claimed that both functional and structural aspects of a language should go hand in hand in communication. While Krashen (1982) stressed the language function, Littlewood (1983) emphasized the understanding of structures in the context of guided exercises to the natural communication activities. In an interaction, language skills cannot be separated. When someone is speaking, other persons must be listening and even making and reading the notes that they have made to check the truth. This phenomenon proves that in using a language, all four language skills are always integrated. At least, we use two skills at once, for example, speaking and listening. This is in line with Harmer (1994) affirming that it is impossible to talk without listening, reading, or writing. Therefore, Brown (2007) confirmed that full integration of the four language skills is the most reliable interactive communication design in English learning.

The learning model that integrates the four language skills is known as the Whole Language Approach (Goodman, 1989). It has been attracting experts in language teaching methodology over the last decade (Mirhosseini & Sharif, 2022). There are various models of learning by using this approach, among others are Content-Based Teaching (CBT) (Lyster, 2017), Theme-Based Teaching (ThBT) (Dirkx & Prenger, 1997), and Task-Based Teaching (TaBT) (Nunan, 2004). The model of CBT is a model that integrates language learning with other sciences, such as biology, history, physics, and the like. It is a learning model that uses the principle of automatic, meaningful, with intrinsic motivation and communicative competence. TaBT is a learning model that focuses on class activities. Nunan (1991) mentions five typical features of a TaBT as follows: (1) the need to communicate in the target language, (2) the use of authentic materials, (3) the provision of learning opportunities as many as possible for the learners, (4) the use of the learners' experience in the learning process, and (5) the creation of a learning atmosphere in the classroom to be just like a natural interaction in a community. Similarly, Richard-Amato (1988) introduced 'Cooperative Learning' (CL) as a technique for effective learning because learners can help other learners in a group of 4-5 people to achieve the group's learning objectives.

Considering these robust theoretical foundations of PIM, it is essential to explore its effectiveness in the improvement of EFL learners' English proficiency. However, the available literature reveals that PIM effectiveness in the improvement of the English proficiency of university students has remained largely unexplored. Thus, the present study purported to explore the effectiveness of PIM in the improvement of Indonesian EFL learners' proficiency. To meet this objective, the research was set to answer the research question "Does PIM lead to improving Indonesian EFL learners' English proficiency compared to Grammar-Translation Method?"

3. RESEARCH METHOD

3.1 Research Design

The present study used a quasi-experimental design. According to [Riazi \(2016\)](#), a quasi-experimental design is used to create a cause-and-effect relationship between variables where participants are assigned to groups based on non-random criteria. Therefore, to conduct this study, two intact classes were selected and randomly assigned into an experimental group and a control group in each university. Afterward, they went through pre-test, treatment, and post-test procedures. Overall, the researchers employed a quasi-experimental design to disclose the effects of PIM on improving EFL learners' proficiency.

3.2 Research Participants

To meet the objectives of the current study, a total of 90 EFL learners were selected through a purposive sampling at two private universities in South Sulawesi, Indonesian Muslim University (UMI) of Makassar and Muhammadiyah University of Parepare (UMPAR), and one state university, the University of Hasanuddin (UNHAS) of Makassar. As a form of non-probability sampling, the researchers used a purposive sampling technique to choose participants from a population based on their own judgment ([Riazi, 2016](#)). The underlying reason for selecting the participants was their easy availability to the researchers. The participants included both males ($N = 41$) and females ($N = 49$) and aged from 21 to 35 years old. They had been learning English as a foreign language and did not have opportunities to speak English outside of their universities. Thus, this study used three replications, namely, learners of UNHAS (replication 1), learners of UMI (replication 2), and learners of UMPAR (replication 3), comprising 30 students from each of the three universities for both the control ($N = 30$) and experimental groups ($N = 30$). Of particular note is that the participants expressed their consent to participate in the study by signing a written consent form (in Indonesian). The researchers ensured the participants' performances during the study would remain confidential, and they would be kept informed about the final findings. It should be stressed that the researchers recruited a well-experienced EFL teacher to run the classes.

3.3 Instruments

The researchers used some instruments to collect the required data. The first instrument entailed two English proficiency tests, including two International English Language Testing System (IELTS) tests ([Crosthwaite et al., 2017](#)) and the grammar part of two Test of English as a Foreign Language (TOEFL) ([Gear & Gear, 2002](#)). They were implemented as a pre-test and a post-test to measure the participants' English proficiency prior to and after the interventions. The researchers recruited two well-experienced EFL teachers to select two samples of the IELTS tests. The IELTS tests measure the language proficiency of non-native English language speakers in terms of gains in listening, speaking, reading, and writing skills. Additionally, to measure the participant's grammar competence, the EFL teachers selected two samples of the grammar part of the Test of English as a Foreign Language (TOEFL).

It should be noted that the EFL teachers confirmed the validity of the IELTS and TOEFL tests. In doing so, they went through the test and examined if they had an acceptable level of face, content, and construct validities. However, to measure their reliability, the researchers piloted the tests on 20 EFL students who were similar in terms of English language proficiency to the participants of the main study. The results of Cronbach alpha yielded 0.88 and 0.78, respectively for the pre-test and the post-test which were found to be acceptable for the purposes of the current study.

Another instrument included the first four units of the American English File (Intermediate Level) (Latham-Koenig et al., 2020). As its content was a little higher than the participants' language proficiency, it was adopted to meet the purposes of the present study. This instrument was used to instruct the two groups through the two different teaching approaches. The reason for using the coursebook was that it gives a clear focus on grammar, vocabulary, and pronunciation and covers the four language skills fully. It embeds interesting topics and texts that pave the way for EFL learners to foster communicative competence in English substantially.

The third instrument was a rubric adapted from the IELTS test (see Table 1) (Shabani & Panahi, 2020). The rationale for the adaptation from the IELTS rubric to the current rubric was that it could measure the participants' proficiency appropriately. It should be noted that the researchers adapted the rubric using the 0-100 scale because it was a normal scoring practice in the classroom in the Indonesian context. The researchers used it to measure the participants' English proficiency before and after the treatments.

Table 1. The rubric of English proficiency level.

Band Score	Category	Descriptor
≥ 81	Good User (G.U.)	The student possesses a highly effective mastery of the language, even though he occasionally misunderstands messages and gets them wrongly in some situations. Overall, the student can work with complex expressions well.
61-80	Competent User (CU)	Even though the student has some unintelligible forms and misreading, they generally have adequate mastery of the language. The student can work with reasonably complex language, especially in familiar contexts.
41-60	Modest User (MU)	The student has mastery of the language partly. Although the student could perform lots of mistakes, they can work with meaning in various contexts. The student could communicate reasonably well in a familiar context.
21-40	Limited User (LU)	The language mastery is limited to familiar contexts. Hence, the student frequently has problems understanding an expression. The student could not work out well with complex language.
< 21	Extremely Limited User (ELU)	The student could work out well with only the general meaning in very familiar contexts. Thus, communication breakdowns frequently occur.

3.4 Data Collection Procedures

The researchers took some steps to conduct the present study. In the first step, they selected the target participants and obtained their consent by signing a written consent form. In the second step, they ran the pilot study to measure the reliability and

validity of the pre-test and the post-test. In the third step, they administered the pre-test to measure the participants' English proficiency prior to the treatments. In the fourth step, the treatments were delivered on two times a week by the instructors which lasted 20 weeks.

Concerning the experimental group, the teacher taught the class in line with the principles and procedures of PIM. In the first session, the same instructor teaching in the three universities learned the participants' names and experiences with English and determined their communication skills by asking some questions orally. In doing so, the participants were invited to demonstrate their communication skills by interacting with the instructor. Then, she created a welcoming and friendly learning environment to help the participants feel comfortable and relaxed in the classroom. Afterward, she displayed how interactions could be used to facilitate English learning process in front of the classroom. To be exact, she clearly showed when the participants were engaged with interactions they could receive input and generate output, which are two crucial things for learning an L2. She encouraged the participants to join interactions and shape positive attitudes toward interactions. After presenting the new learning materials from the American English File, the instructor asked the learners to join their pairs and complete the given tasks to consolidate their learning through interactions with their peers. In actual fact, the learners had to interact together to jointly perform the target tasks. During the completion of the tasks, for example speaking tasks, they had to interact with each other to accomplish them or provide feedback on their peers' performances. In simple terms, the instructors went through the pre-task, while-task, and post-task procedures to accomplish the target tasks. In the pre-tasks, the participants' background knowledge was activated by playing short clips or showing some relevant pictures, and the key chunks and structures were illuminated by presenting them in simple sentences.

In the while-task, the participants jointly interacted together to accomplish the intended tasks. In the post-task phase, the participants' performances were assessed to disclose their communication skills. In all the phases, the instructor moved around the class and monitored the learners to make sure that they were interacting together in English to accomplish the intended tasks. Afterward, she offered appropriate feedback on the learners' performances and interacted with them to gain a clear understanding of the problems with their performance. In relation to the control group, the classes were run using GTM wherein the instructor read out the parts of the textbook and translated them into the participants' mother tongue. The participants had to write down the translations beneath the sentences carefully. They did not have any interactions in English in completing the intended tasks.

In the last step, the researchers administered the post-test to gauge the participants' gains of English proficiency after the treatments. It is worth noting the pre-test and the post-test were administered by two professional IELTS examiners at the agreed time with the participants and the officials of the universities in comfortable places in the universities. It took two hours for the participants to complete the tests and they were administered in four sessions. After that, the grammar section of the TOEFL was administered, and the participants were allotted 30 minutes to complete the test.

3.5 Data Analysis Procedures

To analyze the collected data, the researchers used the SPSS software version 23. Firstly, the data were tabulated and classified based on their respective groups. Secondly, the researchers performed an analysis employing the rubric of English competence levels adapted from IELTS to measure the participants' English proficiency prior to and after the treatments. Next, they calculated the discrepancy between the learners' mean scores in the pre-test and post-test. Finally, they concluded the effectiveness of PIM in improving the learners' English proficiency compared to the GTM method.

4. RESULTS

4.1 The Learners' English Proficiency before the Treatments

As reported in Figure 1, before the treatment, the students' English proficiency in the groups for all three sites, namely UNHAS, UMI, and UMPAR, was about the same, that is, Modest User (MU). Of particular note is that the scores were given by two raters and their average is reported here. The average score for the students of UNHAS was 49.5, 44.2 for the students of UMI, and 40.8 for the students of UMPAR. This figure is substantial in the aspect of reliability of the data as far as the same start for the students' English proficiency is concerned.

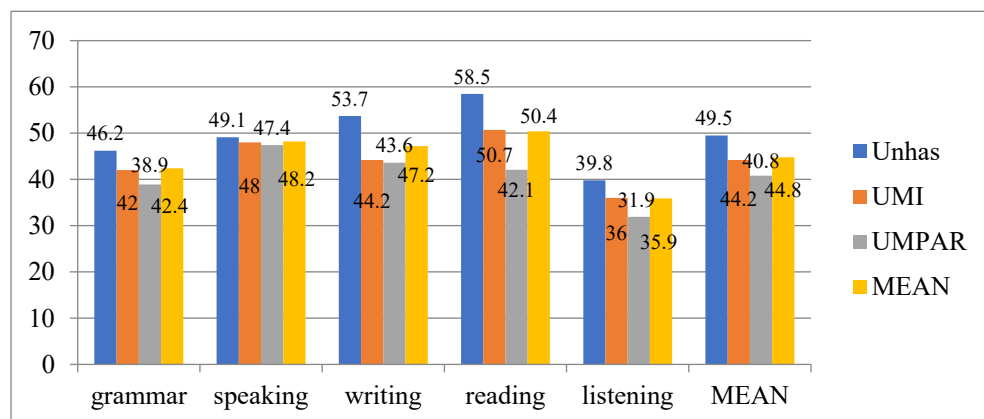


Figure 1. The average scores of the students' initial English proficiency for the control group.

Similarly, Figure 2 presents the average scores of the initial students' English proficiency for the experimental group. They were all in Modest User (MU) level. The average score for the students of UNHAS was 45.6; for the students of UMI, 42.4; and for the students of UMPAR, 40.1. As such, the groups had the same level of English proficiency prior to the treatment.

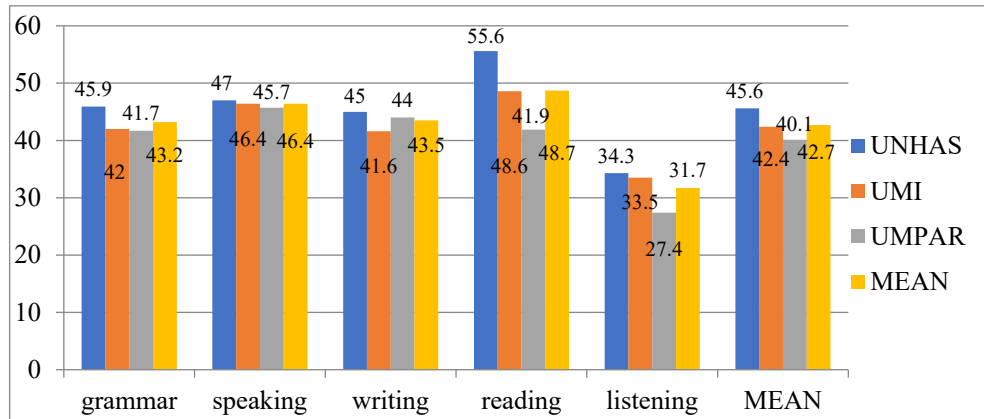


Figure 2. The average scores of the students' initial English proficiency for the experimental group.

Figure 3 reports the comparison between the initial English proficiency of the students between the control and experimental groups at the three universities. As can be seen, the initial English proficiency in both groups was at about the same level, and they were all in the Modest User category. Thus, the eligibility of this study as far as the same starting points for the two experimental groups was met.

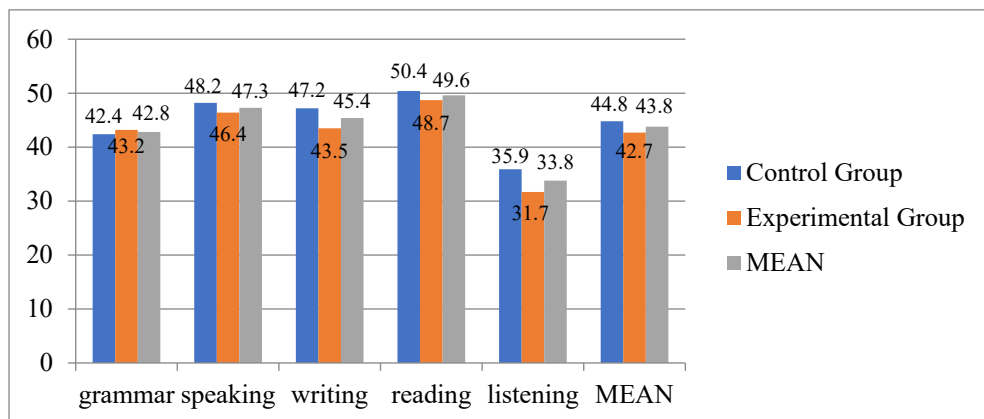


Figure 3. The mean score of initial students' English proficiency of the three universities for both the control and experimental groups.

4.2 The Learners' Types of English Proficiency after the Treatment for the Three Universities

Figure 4 reports the English proficiency of participants from UNHAS after the treatment. The two experimental groups show a positive trend after the treatment. However, the experimental group relatively underscoring the control group in all five English competencies. For grammar, the experimental group's progress reached up to 24.3 points while the control group reached only 9.0 points. For speaking, the experimental group's progress reached 33.4 points while the control group reached only 15.1 points. For writing, the experimental group reached up to 23 points while the control group reached up to 8.4 points. Finally, for reading, the experimental group reached up to 16.7 points while the control reached up to 8.4 points. About the listening comprehension section, the experimental group reached up to 10.6 points while the

control group reached up to only 4.0 points. This figure shows that the learners' progress in the experimental group steadily doubled that in the control group at UNHAS (Replication 1).

Figure 5 shows the English proficiency of learners at UMI (Replication 2) after the treatment. As shown in the figure, both groups demonstrated an increase in the learners' achievement regarding the gains of the five different parts of English proficiency. However, the learners' achievements in the experimental group were significantly higher than those in the control group. Significant improvements occurred in the grammar and speaking parts, in which they reached up 73.5 and 76.7 points, respectively. Thus, both parts increased from Modest User (MU) category to the Competent User (CU) one.

Although the points increased, the other parts remained somehow unchanged for the groups. Similar results were also reported for the participants in Replication 3 (UMPAR) (see Figure 6).

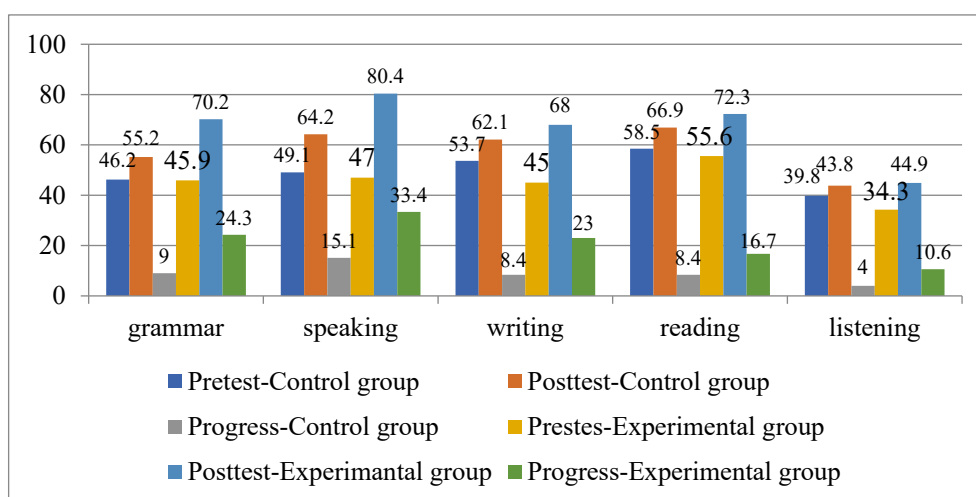


Figure 4. The learners' five types of English proficiency of UNHAS (replication 1) after the treatment.

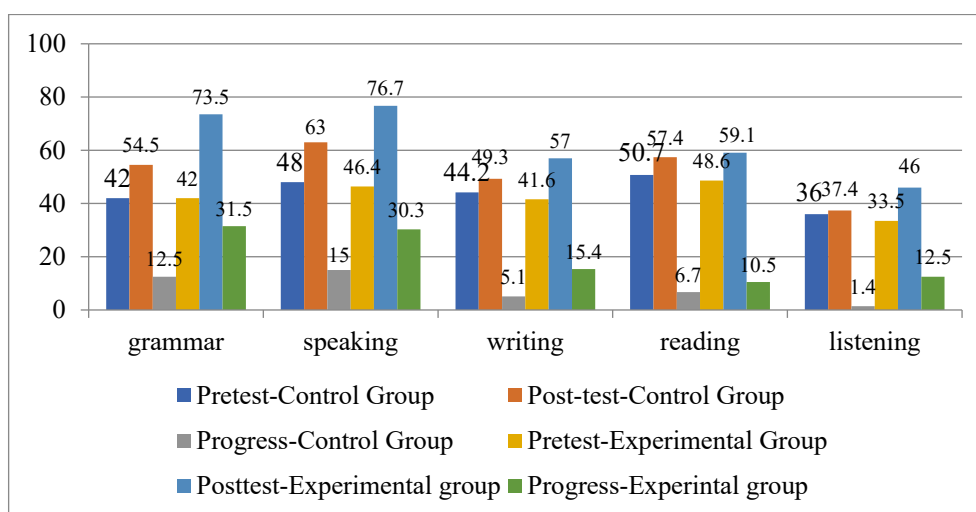


Figure 5. The learners' proficiency after the treatment for replication 2 (UMI).

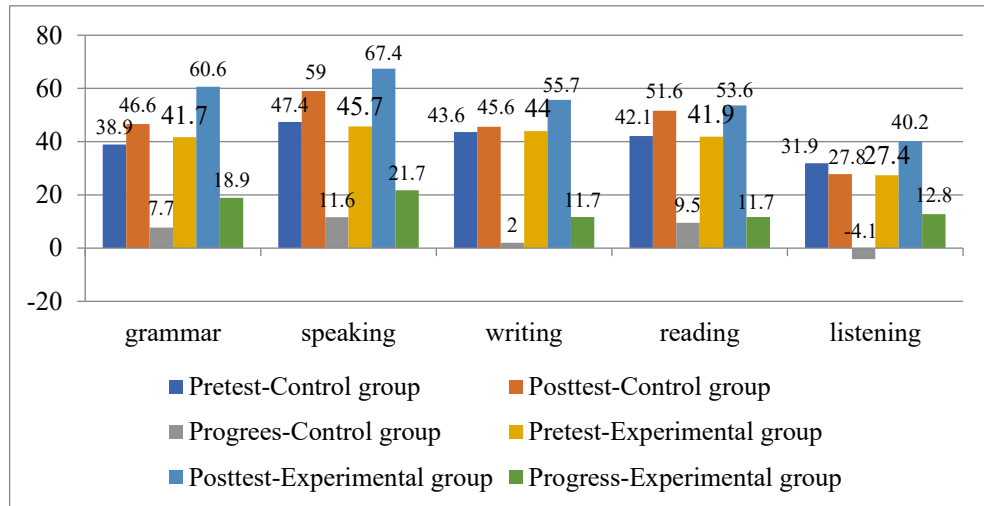


Figure 6. The learners' proficiency after the treatment for replication 3 (UMPAR).

4.3 The Learners' Average English Proficiency after the Treatment for All the Replications

Figure 7 presents the learners' average English proficiency after the treatment for all the three replications. As can be observed, the mean scores of English proficiency in all the three repetitions (UNHAS, UMI, and UMPAR) significantly increased up to one proficiency level, namely from the category of Modest User (M=42.7) to Competent User (M=61.7). In the control group, while there was an increase in their mean scores, there was no change in their category, starting from 44.8 (Modest User) to 52.29 (Modest User). This indicates that the PIM model was more effective to improve the learners' English proficiency compared to the conventional GTM approach. Moreover, the findings demonstrates that PIM can be considered an effective alternative which could foster significantly the participants' English proficiency.

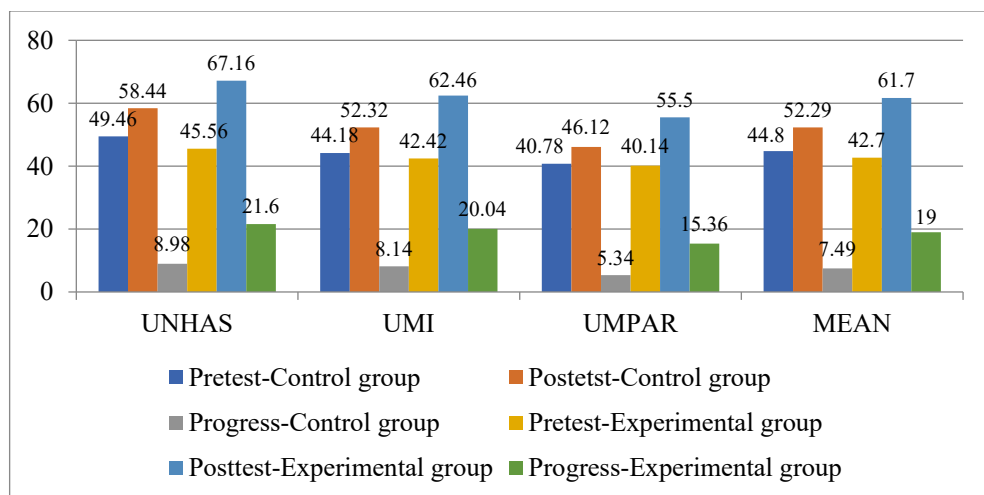


Figure 7. The recapitulation of the average learners' proficiency after the treatment for all the observed sites.

5. DISCUSSION

The findings of the present study are in accordance with those of [Muho and Kurani \(2011\)](#), reporting that a considerable number of their participants found interaction very fruitful to improve their language proficiency. Additionally, the results of the study are compatible with those of [Saito et al. \(2021\)](#), revealing that longitudinal interaction impacted the Japanese EFL learners' oral proficiency regardless of their experience and oral proficiency levels. Further, the findings of the study are in congruent with the results of the previous studies ([Jiang & Zhang, 2019](#); [Rahayu, 2020](#); [Yang et al., 2021](#)), indicating that EFL learners perceived interaction in the classroom as helpful to foster their English proficiency levels.

The findings of the study may be explained using the premises of the Interactive Hypothesis ([Long, 1996](#)). Along with this hypothesis, it may be argued that the conversational interaction among the participants was useful because they might have facilitated "language acquisition because it connects input (what learners hear and read); internal learner capacities, particularly selective attention; and output (what learners produce) in productive ways" ([Long, 1996, pp. 451-452](#)). In line with the findings of the study, it may be argued that implementing PIM might have provided the participants with sufficient exposure to comprehensible input and constructive feedback for their peers, and these resulted in changes in their output ([Gass & Mackey, 2007](#); [Masrizal, 2014](#); [Swain, 2005](#)). To justify the findings of the study from the Interactive Hypothesis, it may be argued that the interaction among the participants might have led to the negotiation of meaning. This, in turn, might have provided the opportunity for the participants to notice the differences between the target forms and their own interpretation of the target forms ([Yang et al., 2021](#)). In a sense, the findings of the study receive support from this commonly accepted principle in the field of second language acquisition: "there is a robust connection between interaction and learning" ([Gass & Mackey, 2007, p. 176](#)).

The significant improvement in the participants' English proficiency at the end of the treatment may be explained from the perspectives of Sociocultural Theory ([Vygotsky, 1986](#)) and Social Constructivism ([Bruner, 1990](#)). These theories state that the social interaction among the participants plays a positive role in the learning process because it places the learning process in the zone of proximal development (ZPD) of the participants ([Rezai, 2022](#)). Accordingly, this might have assisted the participants to co-shape the target forms and structures substantially ([Azizi & Rezai, 2022](#); [Ellis, 2008](#); [Saito et al., 2021](#)). Another line of discussion for the findings from these theories may be ascribed to this widely accepted assumption that the learning process starts from the interpersonal level, and then it is internalized and consolidated at the intrapersonal level with the help of meaningful interaction ([Brown, 2007](#); [Lantolf et al., 2021](#)).

The noticeable gain of the participants may also be justified from the perspective of comprehensible input hypothesis ([Krashen, 1997](#)). Aligned with this hypothesis, it may be argued that when the participants engaged in interaction together, they might have been exposed to sufficient comprehensible input. That is, the interaction among the participants might have made the input be tailored to their needs. Additionally, it may be argued that the interactive input might have been more useful than the non-interactive input due to the interactional modifications which might have occurred in the negotiation of meaning when a communication problem arose ([Ellis, 2008](#)). In other

words, according to the findings, it may be argued that the interactional modifications might have made the input comprehensible, and the comprehensible input might have promoted the acquisition of the target linguistic forms (Krashen, 1991). Long (1996) stresses when participants could negotiate meaning, the input comprehensibility might increase, and they tended to notice the salient linguistic features.

All in all, it can be argued that the interaction may have provided sufficient opportunities to affect the different aspects of the language processes, especially when the participants might have faced communication breakdowns (Yang et al., 2021). This might have allowed the participants to work together to shape the required linguistic knowledge.

6. CONCLUSION

As noted above, the present study explored the effects of PIM on improving Indonesian learners' English proficiency. The results of the study documented that PIM significantly improved the participants' English proficiency. In other words, the findings evidenced that, as opposed to GTM, PIM could facilitate English learning so effectively that the EFL learners could achieve a good command of English at the end of the instruction. It can be concluded that PIM enjoys the required capabilities to be considered an effective solution to the long-lasting problem of learning English in the Indonesian EFL context wherein EFL learners cannot converse in English in real-life situations after attending English classes. Of particular note is that due to the noticeable advantages of PIM to raise the participants' English proficiency, it can be implemented in large classes which are the typical format in Indonesia.

The findings of the present study may have some important implications for different educational stakeholders. The first implication is for the educational policy-makers in Indonesia. They can benefit from the results of this study to consider PIM as an effective alternative to the conventional teaching methodologies. Thus, they can supply the required conditions for the implementation of this approach in the education systems. The second implication is for teacher educators. They can take advantage of the findings of this study to include PIM as a new teaching approach in their syllabus for student teachers. For this, they can instruct the principles and procedures of PIM such that student teachers can implement PIM efficiently in their future classes. The third implication is for materials developers. They can gain a better understanding of the fundamental features of PIM and design and develop the educational materials based on its tenets. The last implication is for EFL teachers who may have been seeking an alternative teaching approach that can meet EFL students' needs. They can accommodate PIM in their classes and make the way for their learners to learn English efficiently.

Given the limitations imposed in the current study, some suggestions for further research are presented. First, as the study was conducted in the setting of three universities in Indonesia, more studies can be carried out in other parts of the country to increase the credibility of the findings. Second, because the current study included university students, further studies can entail elementary school students and high school students with different levels of English proficiency to increase the generalizability of the results of the study. Third, since the present study used a quasi-experimental design, future studies can employ qualitative designs, such as

observation, interviews, and a microgenetic development approach to disclose how PIM leads to improving EFL learners' achievement. Likewise, considering the present study was a cross-sectional study, longitudinal studies need to be conducted to uncover how PIM results in the improvement of English learning over a period of time. Finally, as the present study was book-based, which includes grammar, vocabulary, speaking, etc., further studies on a specific aspect of language proficiency should be implemented, such as peer correction on writing and peer review on collaborative dialogues.

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