Collaborative Learning through Inside Outside Circle (IOC)- Post to Post Game in 21st Century Mufradat Learning

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Receive: 20/02/2024  |  Accepted: 23/02/2024  |  Published: 01/03/2024

Abstrak
Metode pembelajaran Inside Outside Circle (IOC) merupakan salah satu model pembelajaran kooperatif. Metode IOC-Post to Post Game menggabungkan unsur pembelajaran kooperatif dengan permainan pos berangkai atau Post to Post Game. Dalam IOC-Post to Post Game siswa bekerja sama secara tim dengan bertukar informasi dan berkolaborasi untuk menyelesaikan tugas atau perintah yang diberikan. Pembelajaran abad 21 mengharuskan siswa memiliki keterampilan abad 21 guna menghadapi tantangan masa depan. Berdasarkan hal tersebut, dibutuhkan metode pembelajaran yang tidak hanya dapat mencapai tujuan pembelajaran, tetapi juga dapat melatih keterampilan esensial pembelajar abad 21 termasuk pada pembelajaran bahasa Arab. Dalam pembelajaran bahasa Arab, penguasaan mufradat merupakan pondasi utama yang harus dimiliki. Penelitian yang diselenggarakan di MI Nurul Huda pada kelas III bertujuan untuk mengetahui adakah pengaruh metode pembelajaran secara kolaboratif melalui IOC-Post to Post Game terhadap penguasaan mufradat siswa kelas III. Pada penelitian ini digunakan pendekatan metode kuantitatif yaitu Quasi Eksperimen dengan desain Nonequivalent Control Group Design. Adapun teknik pengumpulan data yang digunakan yaitu tes yang berupa pre-test dan post-test dan non tes berupa wawancara dan dokumentasi. Temuan dari penelitian ini yaitu metode pembelajaran kolaboratif IOC-Post to Post Game memberikan pengaruh terhadap pemahaman mufradat siswa dengan tingkat efektivitas sedang, dengan hasil N-Gain Score sebesar 0,320 serta metode pembelajaran kolaboratif IOC-Post to Post Game memberikan dampak positif terhadap keaktifan dan keterampilan sosial siswa. Temuan penelitian memberikan rekomendasi lebih lanjut dalam pembelajaran mufradat pada abad 21 melalui pembelajaran berbasis kolaborasi.

Kata Kunci: bahasa Arab, inside outside circle (IOC), pembelajaran kolaboratif, pembelajaran abad 21, post to post game.
Abstract
One of the cooperative learning models is the Inside Outside Circle (IOC) learning method. The IOC-Post to Post Game method combines elements of cooperative learning with the Post to Post Game. In the IOC-Post to Post Game students work together in teams by exchanging information and collaborating to complete a given task or order. 21st-century learning requires students to have 21st-century skills to face future challenges. Based on that, a learning method is needed to achieve learning goals and train essential skills for 21st-century learners, including Arabic language learning. In Arabic language learning, vocabulary mastery is the main foundation that must be possessed. A study conducted at MI Nurul Huda in the third grade aims to determine whether there is an influence of collaborative learning methods through IOC-Post to Post Game on students’ mastery of vocabulary in the third grade. This study used a quantitative approach, namely a Quasi-Experiment with Nonequivalent Control Group Design. The data collection techniques used were tests in the form of pre-tests and post-tests and non-tests in the form of interviews and documentation. The findings of this study are that the collaborative learning method IOC-Post to Post Game has an effect on students’ understanding of vocabulary with a moderate level of effectiveness, with an N-Gain Score of 0.320, and the collaborative learning method IOC-Post to Post Game has a positive impact on students’ activity and social skills. The research findings provide further recommendations for learning mufradat in the 21st century through collaboration-based learning.

Keywords: arabic language, collaborative learning, inside the outside circle (IOC), post-to-post game, 21-century learning.

Introduction
Education in the 21st century emphasizes students’ skills in accessing information from various sources, analytical thinking, and collaborating to solve problems (Kemdikbud, 2013 in Sauri et al., 2021). This paradigm is relevant to the concept of education according to UNESCO, which includes: learning to know, learning to do, learning to be, and learning to live together. (Priscilla & Yudhyarta, 2021). The four pillars of education need to be balanced with essential 21st-century skills that students must possess. These essential 21st-century skills are now known as the concept of 6C, including Critical thinking, Communication, Collaboration, Creativity, Character education/connectivity, and Citizenship/culture. (Miller & Fullan in Anugerahwati, 2019). To prepare competent future generations, these skills need to be instilled and practiced. (Trisnawati & Sari, 2019). In facing these demands, the role of teachers becomes crucial in integrating essential 21st-century skills into learning, including Arabic language learning. (Setyawan & Ahsan, 2020; Sukirman et al., 2023). In Arabic language learning, there are at least four aspects of language proficiency (maharah lughawiyyah) that must be mastered, namely listening skills (istima’), speaking skills (kalam), reading skills (qiraah), and writing skills (kitabah). (Dalimunthe, 2023). To acquire language proficiency, understanding, and mastering vocabulary is an important initial step (Azharunnailah et al., 2023; Fatoni & Maimunah, 2023). Because in practice, sentences are formed by combining vocabulary to convey meaning. (Mannan & Afifah, 2023). Vocabulary or mufradat in foreign language learning is a unitary concept and important to master because the broader one’s vocabulary, the higher their language proficiency level becomes. (Ridwan & Awaluddin, 2019; Azizah, 2020; Faradisa & Fitriani, 2023). Thu’aimah (in Ashari, 2020) mentions that there are four scopes of objectives in Arabic language learning, namely introducing new vocabulary to students, training students to pronounce vocabulary correctly and appropriately, as well as enabling students to understand and
apply vocabulary in speaking (oral) and writing.

The achievement of learning objectives can be pursued using appropriate teaching techniques. Teachers can employ various teaching techniques, tailored to the circumstances and learning needs, rather than being confined to a single type of teaching method. (Albantani, 2018; Saleh et al., 2021). Among the suitable forms of learning in the concept of 21st-century learning is collaborative learning. (Cantika & Fudhla, 2023). In collaborative learning, students work in groups and collaborate to solve problems, complete tasks, and create products. Collaborative learning is a 21st-century learning concept that can cultivate a collaborative spirit among peers, enabling students to learn how to position themselves and take roles within the team or group. (Setyawan & Ahsan, 2020). In collaborative learning, teachers still play a role as facilitators, guiding, directing, and supervising the learning process. (Septikasari & Frasandy, 2018). In other words, collaborative learning places greater emphasis on interactions among students with the guidance of the teacher as a facilitator of learning.

Among the types of collaborative learning is the cooperative learning model. (Sutrisna, 2017; Sauri et al., 2021; Agustin et al., 2022). In cooperative learning, students can learn in groups and work together to complete a task or material (Hasanah & Himami, 2021). Then Johnson (1994) and Kagan (1994) said (in Uzma & Sumarni, 2023) that cooperative learning can encourage students' collaborative spirit, build communication and social adaptation, and encourage students to think critically. Cooperative learning has various types of learning, including the type of Inside Outside Circle (IOC) (Kagan & Kagan (2009) (Handayani et al., 2019). The Inside-inside-outside circle (IOC) method involves students in a circle consisting of small and large circles, then students interact and share information by pairing simultaneously and then alternating with other pairs in a short and regular time (Rahman, 2019; Bukhari & Hasanah, 2020; Kedhi et al., 2023). The interaction that occurs in the IOC learning model can increase learning responsiveness, encourage student collaboration, make learning activities more interesting, and increase student attraction to learning to optimize student learning outcomes (Ismiyati et al., 2023; Roziqin & Ibad, 2023).

Maulida et al (2019) have conducted research related to the effect of using the IOC method entitled "Keefektifan Model Pembelajaran Inside Outside Circle (IOC) terhadap Keterampilan Menyimak dan Berbicara Bahasa Arab Siswa Kelas VII MTS Miتفahul Ulum Grobogan", using quasi-experimental research methods. The findings of the research were an increase in students' Arabic istima' (listening) and takallum (speaking) proficiency, as seen from the average post-test listening score of the experimental class which increased significantly to 59.48 from the original score of 42.1. Meanwhile, the average post-test speaking score of the experimental class also obtained an increase although not as large as listening, namely from the initial value of 43.46 to 58.43. Related research was also written by Kurniasih (2023) with the title "Penerapan Model Pembelajaran Cooperative Learning Teknik Inside Outside Circle untuk Meningkatkan Pemahaman Belajar Siswa pada Materi Thaharah", the research method used is qualitative descriptive. Based on this research, students better understand the material through communication and collaboration with other students. Referring to the findings of previous research, it can be stated that the Inside Outside Circle (IOC)
method in learning activities can support students to master learning material through collaboration and cooperation between students established in it.

The use of the Inside Outside Circle (IOC) method can be more interesting when combined with other innovative and creative learning media (Susanti et al., 2020). In line with Dwimarta et al., (2023), in practice, the application of Inside Outside Circle (IOC) can be combined with other learning media such as game media. The use of games in learning activities can arouse enthusiasm, and student interest in learning (Uliyah & Isnawati, 2019). The combination of learning methods and games will provide significant benefits if applied appropriately. Based on research conducted by Allinda Dwimarta, et al in 2023 entitled "Pengaruh Model Pembelajaran Inside Outside Circle berbantuan Media Ular Tangga Digital terhadap Pemahaman Konsep Bangun Datar pada Siswa Kelas V Sekolah Dasar", the learning model influences student understanding. This is based on the average achievement of the post-test score achieved by the comparison class (control class) which is 70.5, as well as the average achievement of the post-test score of the treatment class (experimental class) which is 80.5. Referring to the results of previous research, researchers tried to apply the Inside Outside Circle (IOC) learning method, supported by the use of other games, namely Post to Post Game as an alternative innovative and collaborative learning method for 21st century learning. Post to Post Game or Post Berangkai game consists of stop posts where at each post students will complete the available tasks/orders and be done together with their teams (Unaanah et al., 2023) Through post-to-post games, students not only learn but also can play and work together to create a more interactive classroom atmosphere.

In this research, the object of research is a grade III student of Madrasah Ibtidaiyyah (MI) Nurul Huda located in West Bandung Regency. This research is based on the situation and condition of students at the time of learning. According to the results of an interview with one of the Arabic teachers, from the learning carried out, teachers face several obstacles, including there is a significant difference in the range of highest and lowest scores, which is caused by there are still students who have difficulty mastering mufradat because they cannot read Arabic script and some students chat and are engrossed in themselves when the teacher explains so that only a few students respond to the questions that given by the teacher. Understanding and mastering mufradat is the initial foundation for being able to fluently speak Arabic. In line with this presentation, the use of collaborative learning models through IOC-assisted Post-to-Game games at the MI level is considered significant to be applied and researched to increase understanding, increase activeness, and encourage student cooperation in helping other students who face difficulties in learning mufradat. The findings of this research are expected to be a recommendation for Arabic learning methods in the 21st century.

Learning methods in learning activities are one of the components that help achieve learning (Carey et al., 2007 in Anjani et al., 2020). Predetermined learning objectives can be realized easily and effectively with the right learning methods (Hidayat et al., 2020). Learning methods in the 21st century should not only aim to achieve learning objectives but should also be able to equip students with 21st-century learner skills during the learning process (Winaryati et al., 2022; Juana et al., 2023). The type of learning that can support these skills is collaborative learning (Septikasari & Frasandy, 2018). Collaborative learning
places a focus on the role of students, which encourages them to improve critical thinking skills through communication as well as teamwork to complete a task or solve a specific problem (Mardhiyah et al., 2021; Adawiyah &; Jennah, 2023).

**Methods**

A quantitative approach was used with a quasi-experimental design in this study. The form of quasi-experimental design used is Nonequivalent Control Group Design. Nonequivalent Control Group Design is used because the control class and experiment class are not randomly selected.

The following is a quasi-experimental design scheme in the form of a Nonequivalent Control Group Design (Sugiyono, 2013). Khususnya untuk penelitian kualitatif, waktu dan tempat penelitian perlu dituliskan secara jelas (untuk penelitian kuantitatif, juga perlu). Target/subjek penelitian (untuk penelitian kualitatif) atau populasi-sampel (untuk penelitian kuantitatif) perlu diuraikan dalam bagian ini. Perlu juga dituliskan teknik memperoleh subjek (penelitian kualitatif) dan atau teknik samplingnya (penelitian kuantitatif).

<table>
<thead>
<tr>
<th>Table 1. Research Scheme</th>
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</thead>
<tbody>
<tr>
<td>E</td>
</tr>
<tr>
<td>K</td>
</tr>
</tbody>
</table>

Source: (Sugiyono, 2013).

Description:
- E: Experimental Class
- O₁: Pretest experimental class before treatment
- O₂: Posttest experimental class after treatment
- X₁: Treatment process carried out by experimental classes with IOC- Post to Post Game Learning
- O₃: Pretest control group before treatment
- X₂: Treatment process performed in the control class
- O₄: Posttest control class after treatment.

The samples in this study were class B which was used as an experimental class and class A which was used as a control class. The sampling technique uses purposive sampling. The instruments used in this study are test and non-test instruments. The test instruments are obtained from pre-test and post-test and non-test instruments are obtained from interviews and documentation. Initial data was obtained through interviews with teachers and documentation in the form of recaps of student learning outcomes. Both data obtained were then used as preliminary research studies. Another instrument in this study is a test instrument in the form of 20 multiple-choice questions which were tested at the beginning of the study and the end after giving treatment to the experimental class and control class.

The data analysis techniques include the normality test as the first step of the prerequisite test which aims to find out whether data from both classes have a normal distribution or not, and then a homogeneity test is carried out to determine the homogeneity of data variance. After the data is declared normally distributed and homogeneous (the same), a t-test is carried out with a paired sample t-test to find out whether there is an influence from the learning method given and last, an N-Gain Score test is carried out to measure the increase in student understanding of the learning method carried out. In the testing process, researchers used the SPSS 25 statistical application.

**Result and Discussion**

The research activity was carried out for grade III students of MI Nurul Huda, Parongpong District, West Bandung Regency. A quantitative approach is used with a form of Quasi Experiment type Nonequivalent Control Group Design. Two
classes were used in this study, including one class as an experimental class (III B) and another class (III A) as a comparison class or control class. In the initial step of the study, students in the experimental class and control class were given a pre-test in the form of 20 multiple-choice questions to measure the initial ability of students from both classes. The next step is the provision of treatment (treatment) to the experimental class and control class, in the form of the application of the collaborative learning method Inside Outside Circle (IOC) - Post to Post Game in the experimental class and the application of conventional learning methods in the control class. The steps for implementing the collaborative learning method with the IOC-Post to Post Game are as follows:

After treatment, students in the experimental class and control class were given a final test (post-test) to see the difference in learning outcomes between the two classes. The *mufradat* learning outcomes of experimental and control class students were measured using the same pre-test and post-test questions. Treatment is given in each class with the same amount, which is 3 times. Through the collected student data, the results of the pre-test and post-test scores of the control class and experimental class were obtained, and then descriptive analysis was carried out on each variable using the SPSS 25 statistical application. The results of the descriptive analysis are presented in Table 2 below:

<table>
<thead>
<tr>
<th>Table 2. Analysis Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descriptive Statistics</strong></td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Referring to the table above, it can be seen that the experimental class pre-test results found the lowest value of 20 and the highest value of 85 with an average value of 57.50. In the control class, the lowest pre-test score was 15 and the highest score was 90 with an average score of 51.67. Then in the post-test results of the experimental class, the lowest score was found to be 40 and the highest value was 100 with an average value of 72.83. Meanwhile, for the post-test results of the control class, the lowest score was 30 and the highest score was 95 with an average score of 65.67. By referring to Table 2, it can be seen that the post-test value of the experimental class is higher than the control class. The next step
is to perform a prerequisite test data analysis, preceded by a normality test.

The purpose of conducting a normality test is to find out whether the data is normally distributed or not. Researchers used the Kolmogrov-Smirnoff theory to test the normality of the data of both classes. The Kolmogrov-Smirnoff test is effective and valid for samples totaling > 50 (Dahlan in Azharunnailah et al., 2023). The results of the normality test analysis are in Table 3 below.

Table 3. Normality Test Result

<table>
<thead>
<tr>
<th>Learning Outcome of Mufradat</th>
<th>Kolmogrov-Smirnov*</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Class Pre-Test</td>
<td>.104</td>
<td>30</td>
<td>.200</td>
</tr>
<tr>
<td>Experimental Class Post-Test</td>
<td>.158</td>
<td>30</td>
<td>.054</td>
</tr>
<tr>
<td>Control Class Pre Test (conventional)</td>
<td>.140</td>
<td>30</td>
<td>.137</td>
</tr>
<tr>
<td>Control Class Pre Test (conventional)</td>
<td>.140</td>
<td>30</td>
<td>.137</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

The data normality test process uses the help of the SPSS 25 application and the Kolmogrov-Smirnoff normality test theory. The data is said to be normally distributed if it shows significance (Sig.) > 0.05. Based on Table 3, the results of the pre-test and post-test experimental class and control class found a significance value of > 0.05, it can be concluded that the experimental class and control class data are normally distributed.

After the data is known to be normally distributed, the next step is to perform a homogeneity test to find out whether the data variance is the same (homogeneous) or different (heterogeneous).

Table 4. Homogeneity Test

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variance</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Outcomes of Mufradat</td>
<td>Based on Mean</td>
<td>1.434</td>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Based on Median</td>
<td>1.687</td>
<td>1</td>
<td>58</td>
</tr>
</tbody>
</table>

Referring to the results of the homogeneity test above, the mufradat learning results of experimental and control class students have a significance value of 0.236 > 0.05, so it can be said that the data is homogeneous.

After knowing the data is normally distributed and homogeneous, then a t-test is performed. The t-test aims to determine whether there is a difference in the post-test results of experimental class students and the post-test results of control class students. Researchers used the SPSS 25 application using the Paired Sample T-Test in conducting the t-test, with a significance level of < 0.05. The formulation of the hypothesis is as follows:

H0: There is no difference before and after the use of the IOC- Post to Post Game collaborative learning method on students' understanding of mufradat.

Ha: There are differences before and after the use of the IOC- Post to Post Game collaborative learning method on students' understanding of mufradat.

According to the test standard, if the Sig. (2-tailed) value < 0.05, then H0 is rejected, in other words, there is a significant difference in student learning outcomes. However, if the value of Sig. (2-tailed) > 0.05, then H0 is accepted, which means there is no significant difference in student learning outcomes (Ravis et al., 2019). The results of the paired samples T-test are in Table 5 below.
Table 5. Paired Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>P1 Experimental I Class Pre - Experimental I Class Post</td>
<td>13.608</td>
<td>2.484</td>
</tr>
</tbody>
</table>

Based on Table 5, it can be seen that the value of Sig. (2-tailed) is 0.000 which means less than 0.05. So it can be concluded that Ha is accepted, namely, the use of the IOC-Post to Post Game collaborative learning method has a significant impact on increasing students' understanding of *mufradat*.

Furthermore, the N-Gain Score test was carried out to determine the significance of improving the IOC-Post to Post Game collaborative learning method on student *mufradat* learning outcomes. Based on Meltzer's opinion, (in Oktavia et al., 2019), there are criteria for effectiveness values, namely:

<table>
<thead>
<tr>
<th>Gain Normality Value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.70 &lt; n &lt; 1,00</td>
<td>High</td>
</tr>
<tr>
<td>0.30 &lt; n &lt; 0.70</td>
<td>Medium</td>
</tr>
<tr>
<td>0.00 &lt; n &lt; 0.30</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Meltzer (Oktavia et al., 2019)

The N-Gain Score test of the experimental class and the control class is as follows:

**Table 6. N-Gain Score**

<table>
<thead>
<tr>
<th>N-Gain Test</th>
<th>Gain</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Class</td>
<td>0.320</td>
<td>Medium</td>
</tr>
<tr>
<td>Control Class</td>
<td>0.279</td>
<td>Low</td>
</tr>
</tbody>
</table>

According to the N-Gain score criteria proposed by Meltzer (in Oktavia et al., 2019), the higher the N-Gain score, the effectiveness of the learning method used. Based on Table 6, it can be seen that the experimental class has a value of 0.320 < 0.70 while the control class has a value of 0.279 < 0.30. Thus, it can be said that the IOC-Post to Post Game collaborative learning method towards increasing students' understanding of *mufradat* is classified as a medium category.

The results showed that IOC-Post to Post Game collaborative learning was effective in increasing students' understanding of *mufradat*. According to the results of interviews with teachers, in addition to being effective in increasing students' understanding of *mufradat*, collaborative learning through IOC-Post to Post Game also creates student activeness in the learning process through team collaboration and students who experience difficulties can be helped by other students who are more proficient. In the IOC-Post to Post Game collaborative learning process above, it is recommended for teachers to pay more attention to students to be more thorough in carrying out the commands given and liven up the learning atmosphere.

The principles of 21st-century learning position students as the center of learning and students play an active role in increasing knowledge, potential, and interest in themselves. In line with Syahputra (2018) among the main principles of 21st-century learning implementation is instruction should be student-centered where in learning practice, students are no longer just listeners or memorizers of the material delivered by the teacher, but students must be active in developing thinking skills, knowledge and skills in themselves.
Conclusion

Referring to the results of the study, it can be said that the application of collaborative learning through IOC-Post to Post Game can significantly improve the understanding of mufradat of grade III students of MI Nurul Huda, West Bandung Regency. This refers to the paired sample t-test results which have a significance value of 0.00 < 0.05 which means that the learning method has a significant impact on students' understanding of mufradat, as well as the acquisition of experimental class N-Gain Score results of 0.320 which means the effectiveness of using IOC-Post to Post Game collaborative learning belongs to the medium category. Research findings show that this method not only successfully overcomes students' problems in understanding Arabic vocabulary, but also positively affects students' activeness and social interaction through the collaboration built in it. The main findings in this study provide new insights into the development of Arabic learning strategies in the 21st century, especially at the MI/SD level.

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