Project Oriented Problem Based Learning (POPBL) Model With *Ispring Suite* Interactive LKPD Assistance to Improve Ability in Poetry Writing

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Abstract

Students' ability to write poetry while learning Indonesian has not been optimally achieved yet. This problem occurs because of the learning models that is not student-cantered. Also, It was often found that learning had not been implemented using the role of media in supporting the student learning process needs to be optimized. In addition, worksheets with comprehensive assessment of poetry writing skills have not been used by teachers. The POPBL (project-oriented learning) model, which combines the role of technology in the form of digital LKPD based on iSpring Suite, is an alternative solution for improving students' writing poetry skills. The use of this worksheet is oriented towards assessing the process according to the indicators of students' poetry writing abilities. This quasi experimental research was carried out using a quantitative approach. The research took place at Muhammadiyah 3 Senior High School Surakarta. There were 30 students as participants from XI IPA 1 and XI IPA 2. The instrument of data collection was utilized to test students' ability in poetry writing. Data analysis was carried out using inferential statistical tests namely independent t-test. The results of the analysis obtained in experimental class 1 showed an increase in the ability to write poetry of 77.47 and in experimental class 2 of 62.87. The independent T test conducted showed that the two groups had significant differences with a significance value of 0.001. The test results showed how class that implement POPBL model and Ispring Suites LKPD media were more optimal rather than the other class in terms of improving students' poetry writing abilities.

Keywords: POPBL Model; Digital LKPD; Ability to Write Poetry; Learning Indonesian

Abstrak

Kemampuan menulis puisi siswa dalam pembelajaran bahasa Indonesia belum optimal tercapai. Masalah ini terjadi karena penggunaan model pembelajaran tidak berpusat pada siswa. Banyak ditemukan bahwa pembelajaran belum dilaksanakan dengan memanfaatkan serta mengoptimalkan penggunaan media dalam mendukung proses belajar siswa. Selain itu lembar kerja dengan penilaian kemampuan menulis puisi yang komprehensif belum digunakan oleh guru. Model POPBL (Project Oriented Based Learning) dengan memadukan peran teknologi berupa LKPD digital berbasis Ispring suites menjadi alternatif solusi untuk meningkatkan kemampuan menulis puisi siswa. Penggunaan lembar kerja ini berorientasi pada penilaian proses sesuai dengan indikator kemampuan menulis puisi siswa. Penelitian ini dilakukan dengan pendekatan kuantitatif untuk jenis penelitian quasi eksperimen. Penelitian berlangsung di SMA Muhammadiyah 3 Surakarta pada 30 siswa kelas XI kelas XI IPA 1 sebagai kelas eksperimen 1 dan kelas XI IPA 2 sebagai kelas eksperimen 2. Pengumpulan data dilakukan dengan instrumen tes dan perangkat pembelajaran yang telah memenuhi uji kelayakan. Instrument pengumpul data dilakukan dengan tes kemampuan menulis puisi siswa. Analisis data dilakukan dengan uji statistic inferensial yaitu uji t independent. Hasil analisis diperoleh pada kelas

eksperimen 1 peningkatan kemampuan menulis puisi sebesar 77,47 dan pada kelas eksperimen 2 sebesar 62,87. Uji T independent yang dilakukan menunjukkan bahwa kedua kelompok memiliki perbedaan yang signifikan dengan nilai signifikansi 0,001. Dengan demikian dapat disimpulkan bahwa pada kelas eksperimen 1 dengan model POPBL dan media LKPD Ispring suites lebih optimal dalam meningkatkan kemampuan menulis puisis siswa.

Introduction

Writing skill is a part of four basic language skills that cannot be separated from one another (Syafitri et al., 2023). Good writing performance represents people's overall capability and can assist their potential in communication and exchanging information (Gulo and Sidiqin, 2020). Maelasari (2020) also stated that writing ability mutually supports other skills for communicating, expressing ideas, expressing thoughts, striking opinions as a writer to influence others, and providing stimulus to someone's thoughts to change attitudes about writing. Apart from being the basis of life, Ramadhan et al., (2022) stated that writing skills cannot be mastered by some people quickly, autodidactically, or spontaneously without going through a continuous process of practice and habituation.

Writing ability has a vital role in life. Some literature states that writing skills can represent a positive and professional self-image. Apart from that, based on the idea of thinking within one's own self, the ability to write can greatly contribute to increasing the effectiveness and efficiency of communication for each individual. Additionally, the ability to write is part of a high-level thinking process, which shows that everyone can think critically and analytically about various things. Therefore, the ability to write in Indonesian language subjects is essential to provide provision and development of writing skills in learning for high school (SMA) students. High school students need good writing skills for preparing their future life.

At least, students' writing skills will be used in writing job applications, writing daily reports, and analysing critical information (Krisphianti et al., 2022). Writing abilities or skills can be obtained through parental guidance from toddlerhood or a short process through continuous learning from elementary school to secondary school (university). Students' writing skills can develop well if the learning process occurs appropriately. According to Sari (2023), good learning process which can improve writing skills should bring the real context closer and require students to think critically about phenomena. Apart from that, there is a need for relevant media to record all student learning activities, including at least worksheets that are available to express their thoughts and ideas.

According to Masturah et al. (2018), the modern education era requires innovations that are beneficial for teachers and students. This innovation is needed so that learning is not monotonous and uses the same tools. Lack of learning innovation can have an impact on student learning outcomes (Zumra and Rahmi, 2024). Students prefer learning that uses different tools such as interactive learning media. This aspect is very important because it helps ensure student activity while learning. Moto (2019) revealed that the use of interactive learning media has a significant impact on students. Learning media makes it easier for students to understand the material and the importance of the learning process (Ginting et al., 2024). In addition, this can also arouse students' curiosity and encourage concrete knowledge mastery. However, learning media not only requires theoretical understanding, but must also be supported by active practice, including design, and use of media and media development (Ahmadi et al., 2024). In reality, educators often have

difficulty implementing learning media that supports students' writing skills improvement. It is found that lots of them only apply traditional learning models in the form of lecture methods (Hamid and Hadi, 2020). Sumarsih and Wirdati (2022); Chofifah et al., (2019) revealed that the lecture method is an old method that is less effective and not good if it is continuously applied to the Indonesian language learning process.

Thus, the reason why many students writing skill is still lacking is because of the lecture method's implementation. Researchers also discovered this condition during pre-observation research, that was conducted at Muhammadiyah 3 Senior High School Surakarta and participated y students from eleventh grade. Various innovations have been made to better this condition. One of the roles of this innovation is actualized in form of learning research for finding solutions purposes, so t students' writing skills can be improved. One of the innovations to answer problems is learning research carried out by applying the writing training method by Sari and Septiani (2020) for high school students in Jakarta. However, the results of this research stated that writing training methods could have been more effective in improving students' writing skills. Ratnawati (2020) also researched the application of a writing innovation in making comic strips at SMA Negeri 2 Kuta. However, the study's final results showed that this innovation is ineffective for students' writing skill enhancement. Previous studies that researchers found from previous research indicate that innovation in learning needs to be supported by relevant learning tools. One of them is the existence of learning media in the classroom. The types of media used as tools to support learning activities are diverse. The type of learning media can be in a form of manipulation or an influence from rapid increase of technology development (Rubiantica et al., 2021).

Nurhayati et al. (2022) stated that using learning media and appropriate learning models can enhance students' language skills, especially writing. This learning media is interactive (Qadriani et al., 2021). It applies a direct feedback pattern between students and the media. Thus, it creates two-way communication. Interactive learning media has a good function in generating a pleasant learning atmosphere for students. Therefore, its effectiveness is proven as it can support the process of achieving expected learning goals. Thus, it is in line with the ongoing improvement of the learning quality. Information technology-based learning media can be in form of digital interactive media, such as applications or websites (Wijaya et al., 2021). As revealed by Pramita et al., (2022), using digital interactive media effectively can improves students' writing skills. There is at least an 80% change in students' writing ability as interactive models and information technology are implemented. However, the use of interactive digital media to improve students' writing skills in the form of Student Worksheets (LKPD), which is applied side by side with the Project Oriented Problem-Based Learning (POPBL) learning model, has yet to be widely implemented. The POPBL learning model is a collaborative learning model that combines learning project activities with the Problem-Based Learning (PBL) learning model (Jenniver et al., 2023). Azzahra et al., (2023) revealed that the POPBL learning model is more effective than other interactive learning models.

One of the reasons is that it includes direct interaction activities in groups. It enables students to find ideas and immediately take action to actualize their ideas in the learning series which they are currently following. The quality of learning can be seen through the models, methods, and supporting media which are used during the learning process (Widyatama et al., 2021). Even though the latest media does not necessarily improve the effectiveness of student learning, students' poetry writing skills in learning using the Project Oriented Problem-Based Learning (POPBL) model supported by interactive LKPD in the form of iSpring Suite are effective. The research shows that it is seen from the average post-test score for the experimental class of 77.47 while the control

class was 69.87. Based on the t-test that has been carried out, there is a significant difference. Thus, the influence of using the POPBL model assisted by interactive LKPD based on iSpring Suite improves students' poetry writing abilities. Besides, media and learning models should always go hand in hand, and this is reinforced by (Liliana et al., 2020). The research is successful in implementing learning methods by using digitalized sheets to address the problem of low writing skills. The results showed that students' writing ability increased significantly. Based on this study, researchers found that the research process from previous studies had gone well before. Moreover, there was an opportunity to create innovation on this research design. As for this opportunity, the author found that previous research had not shown the process of compiling and designing worksheets.

It needs doing for meeting the empirical credibility and feasibility purposes. Apart from that, another perspective that the researcher introduces in this research is presenting a worksheet developed with iSpring Suite. The media with iSpring Suite is an open-source platform that can be accessed for free by anyone, anytime and anywhere. Research conducted by Ani and Lazulva (2020) shows that iSpring Suite can be used as a reference in presenting media and teaching materials that are relevant for various learning models. Previous studies have also shown the worksheet design which was developed with iSpring Suite in Indonesian language learning has not been optimized. It allows researchers to formulate worksheets in an exciting and interactive learning process.

Researchers also designed a POPBL-based learning model that accommodated the approach in learning process both in groups and individually. Thus, the researcher assumes that the learning design has the ability to provide positive changes in improving high school students' ability in poetry writing. Based on the explanation above, researcher in this study presents the way to overcome the problem of learning Indonesian for students from Muhammadiyah 3 High School in eleventh grade. The form of design to overcome this problem is by implementing the Project-Oriented Problem-Based Learning (POPBL) learning model assisted by the iSpring Suite Digital Interactive LKPD.

Method

The research used a quantitative approach and a quasi-experiment as the research design. The researcher conducted the study at Muhammadiyah 3 Senior High School Surakarta in Jebres, Surakarta City, Central Java. The research was done on 30 students of eleventh grade from MIPA, XI MIPA 1 class as experimental class 1 and XI MIPA 2 as experimental class 2. POPBL learning in the research design was implemented in experimental class 1 by implementing earning media in the form of interactive LKPD based on *iSpring Suite* as the treatment. Besides, learning in experimental class 2 was done by using conventional/printed LKPD. The assessment for measuring students' ability to write poetry in the learning process was carried out by using an instrument namely Poetry Writing Worksheet, The test technique was done by using pre-test and post-test. Hypothesis testing for research data uses inferential statistical testing namely the independent sample t-test. This test was carried out with the help of SPSS. Hypothesis testing can be carried out if the prerequisite tests have been fulfilled. It covers normal data distribution and homogeneous data. Other analyses were conducted by descriptive techniques to provide a comprehensive picture of students' abilities in poetry writing.

Result and Discussion

The study was done in three stages namely planning, implementation, and evaluation. The first research series at the planning stage in this research determined the Learning Outcomes (CP), Learning Objectives (TP), and Indicators of learning

achievements according to the independent curriculum in Indonesian language learning phase F for Senior High School students on eleventh grade. The indicator of learning achievement for writing poetry is Students can understand writing poetry texts' physical and basic elements and Students can develop ideas based on personal experiences or aspirations through poetic texts.

The second stage in planning is arranging the Teaching Modules according to achievement indicators, namely arranging Teaching Materials in PowerPoint slides and compiling LKPD, both conventional and digital media-based LKPD with Ispring suites, and compiling assessment instruments to measure student learning outcomes. The feasibility of all devices that were used in the research has been tested using the Aiken index involving three experts. The experts are Drs. Agus Budi Wahyudi, M.Hum (content expert), Taufiq Satria Mukti, M.Pd (media expert), and Dr. Main Sufanti, M. Hum (language learning expert in Bahasa Indonesia). The results show the feasibility test with Aiken index showed the content feasibility test was 0.843, the design feasibility was 0.8, and the learning feasibility was 0.817. Based on the acquisition of the Aiken index.

It can be concluded that all learning tools which were used in the research were applicable and suitable. Research about the implementation of interactive LKPD based on iSpring Suite has been done. It showed that students' writing skills have improved. ISpring Suite is an interactive learning media which integrates Microsoft PowerPoint software. It is purposefully created with game-like design. Figure (1) shows the iSpring Suite display. It has navigation buttons which is similar the button on mobile phone's game. The design attracts students' attention to take part in learning about the poetry writing sub-achievement and it is also easy to be operated.


Figure 1. Display of the iSpring Suite LKPD

Figure 1 shows the iSpring Suite-based LKPD that is used during learning activity (a) the iSpring LKPD is designed similar to a digital game on a smartphone, (b) the iSpring LKPD consists of 4 buttons with different functions which include the CP & TP, Material, Working Instructions, and Questions, (c) starting point of using it is pressing the start button at the top of the home page, (d) firstly, students are directed to open the material button when the teacher is delivering the lesson. After the material has been presented, students were directed to press the back button for going to the next button. The button is called as work instructions button, it is used before students start working on the questions.

Using iSpring Suite technology in designing LKPD has the purposes for overcoming boredom in the learning process by presenting interactive elements. By utilizing a game-based approach, the LKPD encourages student participation actively, provides a more dynamic learning experience, and make the learning process more enjoyable. In addition, the easy-to-understand structure and attractive graphics from LKPD can increase students' motivation and create a more effective and delightful learning atmosphere

Figure 2. Learning Activities

Learning using iSpring Suite-based LKPD consists of learning objectives. Those include student's opportunity to (a) write poetry according to personal experiences they have had, and (b) develop creative imaginative thinking. At first, students had difficulty in completing their writing assignments. There was a significant increase in student learning outcomes when they write poetry that is based on their personal experience during the learning process. Initially, students were unable to complete the poetry assignment independently at all, without the help of Google. However, after using the POPBL model in learning process and in interactive LKPD iSpring Suite, the result show that students can successfully finished their thoroughly. Below is a worksheet that has been uploaded to the LKPD as a poetry text according to the instructions in the learning series. It is presented in figure 3.
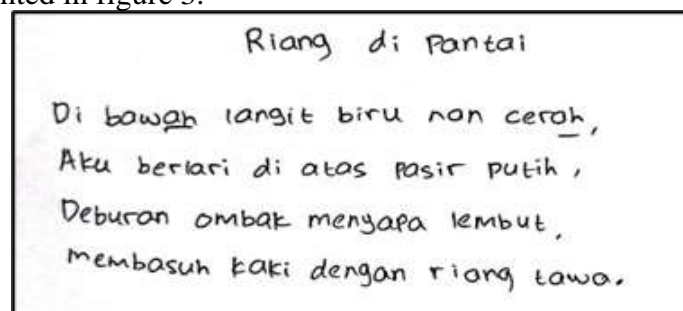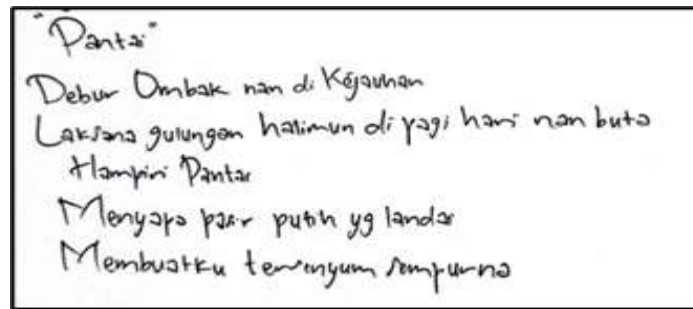
Figure 3. iSpring LKPD Student Worksheet

The assessment for measuring students' ability to write poetry in the learning process was carried out by using an instrument namely Poetry Writing Worksheet. Poetry writing worksheet that has been done by students is presented in the picture 3. The instrument grid are diction, Language Style, Rhyme, Matching the title and theme with the content of the poem Meaning. The Scoring of indicators is carried out by using a modified Likert scale on a scale of 4-1. It covers, Score 4 for very good quality, Score 3, Good quality, Score 2, Poor quality, Score 1, Very poor quality. The results, that were gained from using research design on Table 2, was obtained by analysing the research's data. It was gotten form worksheets which have been completed by students beforehand. Then, students' work in the form of writing poetry is scored according to the rubric that has been prepared. Based on the results from analysed students work, the Table 5 presented students' writing ability scores descriptively.

Table 1. Poetry Writing Ability Score

	Experiment 1		Experiment 2	
	Pre-test	Pos-test	Pre-test	Pos-test
Maximum	76	84	74	82
Minimum	60	72	47	52
Average	67.87	77,47	62,87	69.87
Increase in Learning Outcome (%)	100%		40 %	

Based on table 1, the average post-test score for writing skills in experimental class 1 was 77.47, and in experimental class 2 reached 62.87. The average scores for experimental class 1 and experimental class 2 were differed significantly by 14.6. Each increase in learning outcomes covers 100% and 40%, respectively. A normality test was carried out before doing inferential statistical tests by using the independent t-test. Results from the calculations of data normality test are shown in table 2 below.

Table 2. Normality Test Results

Class	Kolmogorov-Smirnov	Shapiro Wilk
	Sig.	Sig.
Experiment 1	.200	.792
Experiment 2	.200	.411

Kolmogorov-Smirnov and Shapiro-Wilk were used to calculate the normality od the data. Thus, the data is normally distributed if the significance value is >0.05. Based on the output above, the significance value (Sig.) for the Kolmogorov-Smirnov test was 0.200. Therefore, the research data was normally distributed. Since the data is normally distributed, the next step is testing data homogeneity.

Table 3. Homogeneity Test Results

	Levene Statistic	Sig.
Hasil Belajar Menulis		
Based on Mean	4.188	.050

The calculation of homogeneity output is based on significance value which is based on mean >0.05. Therefore, it shoes that the data has the same or homogeneous variance. The table above shows the significance value (Sig.) based on mean is 0.50. Thus, the variance of post-test data for the experimental class and control classes is the same. It means the data was homogeneous. After the fundamental assumptions are fulfilled and all data is normally distributed as well as homogeneous, the next step of hypothesis testing is conducting the independent t-test. Results of the independent t-test analysis are shown in table 4 below.

Table 4. Independent T-Test Calculation

Independent Samples Test	
	t-test for Equality of Means
	Sig. (2-tailed)
Hasil Belajar Menulis	.001

Based on the output of equal variances assumed, the obtained value of Sig. (2-tailed) was 0.001. It shows the difference of students average score or writing score both from experimental class post-test and the control class post-test. If we look at the homogeneous writing ability of students who used the *iSpring Suite* LKPD in experimental class learning, the average score was 77.47. However, the homogeneous writing ability of students in learning without the help of the *iSpring Suite* LKPD was 69.47.

Table 5. Output Group Statistics Results

Class	Mean
Experiment 1	77,47
Experiment 2	62,87

The emergence of homogeneous differences for students writing abilities scores is found. It happened because learning to write in Indonesian subjects by using LKPD with iSpring Suite assistance eased student's development in writing skills. The research showed students' scores in writing. Thus, before using the interactive LKPD, students from experimental class got an average score of 67.87, and the control class was 62.87. After learning activities in both classes was done by implementing different types of LKPD, a post-test was carried out to determine students' writing results. Then, researcher analysed the data of post-test from experimental class and control class. The results showed that there was an increase in students writing ability from both classes.

However, students from experimental class averagely achieved a more significant improvement unlike students from control class. The average score from experimental group was 77.47, whilst the control class, obtained an average score of 69.87. Experimental class used POPBL model that is supported by *iSpring Suite* interactive LKPD. Students from the class got their writing skills improved. Regarding to Sofiah et al., (2023), an essential factor of learning can be seen from the learning variations. It includes the supporting media which is designed by teachers. The media is created based on student characteristics for improving learning outcomes purposes. Melati et al., (2023) also supports that technology-based learning media is one element that can stimulate students' learning motivation.

Therefore, the learning outcomes can increase. According to the opinion above, the use of *iSpring Suite* as a support for interactive LKPD has the same function as a

learning stimulus. It can synchronize the harmonized views and experiences from the content of the lesson (Hikmah et al., 2023). Also, it is a technology-based media. Therefore, it is continuously change for enjoyable learning process purposes (Jannah and Atmojo, 2022). Teachers can use iSpring Suite as a form of beneficing the function from information technology. It can also support the creativity aspect during the process of designing Indonesian language learning materials. It is a new learning innovation. Also, it requires teachers to adapt to the existing conditions with the help of various IT developments that create interactive learning and influence student understanding (Syafitri et al., 2023).

Next, the results obtained by testing the post-test hypothesis using the sample t-test showed the Sig.(2-tailed) was 0.000. Thus, on the basis of significance < 0.05, H0 is rejected and Ha is accepted. Therefore, P (0.000) < 0.05, there is a difference in students' writing abilities between classes that use the POPBL learning model assisted by *iSpring Suite*-based LKPD and classes of students who use the POPBL learning model assisted by conventional (printed) LKPD. After carrying out the sample t-test, independent t-test was done to obtain equal variances assumed Sig results. (2-tailed) of 0.001 with a significance basis of <0.05. H0 is rejected, and Ha is accepted. Thus, P (0.001) < 0.05, it means that the Ha is accepted. It happened because the iSpring Suite inter active LKPD is more effective in improving students' writing skills compared to conventional printed LKPD. This research was supported by Ayunda et al. (2023).

She stated there was difference between the writing from students' who learn by using interactive LKPD and those who took part in learning from conventional LKPD. It is aligned with Siahaan (2020) view that teachers can create innovative learning products without involving a teacher's basic concept for creating teaching materials. Providing students with suitable characterized media could increase their interest in learning Indonesian. The use of LKPD teaching materials by using *iSpring Suite* helps students in having better understanding about concept of poetry texts (Sari et al., 2021). Satiti et al., (2023) also revealed the material listed in the iSpring Suite can be downloaded to cell phones. Thus, students can access it easily and it allows them, who do not understand about the material yet, to do a material review.

Conlusion

Students' poetry writing skills in learning by using Project Oriented Problem-Based Learning (POPBL) model that is supported by interactive LKPD in the form of iSpring Suite are effective. It could be seen from the average of post-test score from experimental class which was77.47. However, the control class got 69.87. Based on the t-test that has been carried out, significance difference from the data was found. Thus, the influence of using the POPBL model assisted by interactive LKPD based on iSpring Suite can improve students' ability in.

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