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## Improving Poetry Writing Competence through Project-Based Learning: A Classroom Action Research at SMK Negeri Inanwatan, South Sorong

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### ABSTRACT

This study investigates the effectiveness of Project-Based Learning (PjBL) combined with a digital detox strategy and print-based cognitive scaffolding in improving the poetry writing competence of vocational high school students. Employing a Classroom Action Research (CAR) design based on the Kemmis and McTaggart spiral model, the study was conducted across two cycles with 15 Class X students of the Computer and Network Engineering (TKJ) program at SMK Negeri Inanwatan, South Sorong, Southwest Papua, Indonesia. Poetry writing competence was assessed across five indicators: diction, figurative language, rhyme and rhythm, theme, and moral message. Results demonstrated a consistent and significant improvement across all phases: the class mean rose from 68.49 (pre-cycle) to 73.05 (Cycle I) and reached 81.66 (Cycle II), while classical mastery improved from 20% to 40% and ultimately to 80%, surpassing the 75% success criterion. The digital detox strategy proved instrumental in eliminating copy-paste behavior and promoting authentic, observation-based literary expression. Three print-based scaffolding tools introduced in Cycle II (a Word Wall, a Figurative Language Pocket Book (*Buku Saku Kiasan*), and a curated poetry anthology) functioned as effective cognitive scaffolds that bridged students' technical-denotative language habits and the aesthetic-connotative demands of poetry. These findings demonstrate that literary creativity among technically-oriented vocational students is not inherently limited but is highly responsive to contextually adapted, structure-rich pedagogical interventions. The study contributes a replicable, resource-light instructional model for Indonesian language arts teachers in vocational education contexts.

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## INTRODUCTION

Writing is widely recognized as the most complex of the four language skills, demanding not only linguistic competence but also higher-order thinking, creativity, and the ability to organize ideas coherently (Brown, 2001; Tarigan, 2008). Within the Indonesian language arts curriculum, poetry writing (*menulis puisi*) occupies a particularly challenging position, as it requires students to master both the physical structure of poetry (including diction, figurative language, rhyme, and rhythm) and its inner structure, encompassing theme, tone, and moral message (Waluyo, 2010). Despite its importance in fostering literary appreciation and expressive competence, poetry writing instruction in Indonesian vocational high schools (*Sekolah Menengah Kejuruan/SMK*) remains largely underexplored and pedagogically underdeveloped.

Students in vocational settings face a distinctive challenge: their cognitive orientation is predominantly procedural, technical, and algorithmic (traits cultivated by their vocational training) which creates a significant gap when they are expected to engage in aesthetic, metaphorical expression (Abidin, 2015). Observational data from SMK Negeri Inanwatan, South Sorong, revealed that the majority of Class X students in the Computer and Network Engineering program (TKJ) demonstrated

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low motivation, minimal literary vocabulary, and an inability to use figurative language effectively in poetry. Prior to any instructional intervention, the class average score stood at 68.49, with only 20% of students meeting the minimum competency threshold. This finding underscores the urgency of identifying more effective instructional models for this population.

Conventional, teacher-centered approaches to poetry instruction that are characterized by direct explanation of poetic theory followed by spontaneous writing tasks have proven insufficient in bridging the gap between students' technical mindset and the demands of literary expression (Abidin, 2015). This instructional mismatch calls for a pedagogical model that is simultaneously structured, process-oriented, and creativity-enabling. Project-Based Learning (PjBL) has emerged in the broader educational literature as a student-centered, inquiry-driven approach that engages learners in authentic, meaningful projects, fostering critical thinking, collaboration, and intrinsic motivation (Thomas, 2000; Hosnan, 2016; Sánchez-García et al., 2025). Several studies have confirmed PjBL's effectiveness in improving writing outcomes and creative performance across different educational levels (Cintang, 2018; Chairun & Suharjuddin, 2023; Safithri et al., 2021). Chairun and Suharjuddin (2023), for instance, demonstrated that PjBL significantly improved poetry writing ability among Grade IV elementary students, establishing PjBL as a creativity-friendly model. Similarly, Rahmawati (2019) found that the Word Wall medium effectively accelerated vocabulary acquisition through visual reinforcement, a finding that has implications for vocabulary-constrained learners such as vocational students.

A critical gap persists in the existing literature. First, no study has specifically examined the application of PjBL in poetry writing instruction within the SMK context, particularly for students whose cognitive profile is shaped by technical-vocational training. Second, prior research has not explored the combination of PjBL with a deliberate non-digital strategy (digital detox that means the systematic removal of devices) as a means of fostering original, unmediated literary expression. Third, the role of concrete print-based scaffolding tools, such as a thematic Word Wall, a figurative language pocket book (Buku Saku Kiasan), and curated poetry collections, as cognitive scaffolds within a PjBL framework for poetry writing, remains unexamined.

This study addresses these gaps by implementing PjBL combined with a digital detox strategy and print-based scaffolding media in a Classroom Action Research (CAR) design across two cycles with 15 Class X TKJ students at SMK Negeri Inanwatan. The research evaluates student progress across five key poetry writing indicators: diction, figurative language, rhyme and rhythm, theme, and moral message. The central objective is to examine how PjBL, when adapted for a vocational learning context and supplemented by non-digital scaffolding, can significantly improve students' poetry writing competence. The contribution of this study is threefold. Theoretically, it extends the applicability of PjBL theory to literary writing instruction in vocational education, bridging the gap between procedural cognition and aesthetic expression. Methodologically, it introduces the integration of digital detox and print-based scaffolding as a novel modification of PjBL that promotes originality and deep work. Practically, it offers a replicable instructional model for Indonesian language teachers in SMK settings, demonstrating that literary creativity need not depend on digital access and may in fact flourish without it.

## METHOD

### Design and Approach

This study employed Classroom Action Research (CAR), a cyclical, reflective inquiry method designed to diagnose and resolve specific pedagogical problems within a natural classroom setting (Kemmis & McTaggart, 1988). CAR was selected because the primary aim was not merely to measure outcomes but to improve the quality of an ongoing instructional process through systematic, iterative intervention. The research followed the Kemmis and McTaggart spiral model, which organizes each cycle into four interconnected stages: planning, acting, observing, and reflecting. Two full cycles were completed, each informed by the reflective findings of the preceding stage, with a preliminary pre-cycle phase conducted to establish baseline data.

A mixed-methods approach was adopted, integrating quantitative and qualitative data to provide a comprehensive account of both learning outcomes and instructional processes. Quantitative data captured measurable changes in students' poetry writing scores across three phases (pre-cycle, Cycle I, and Cycle II), while qualitative data illuminated the underlying behavioral, motivational, and pedagogical dynamics that explained those changes. This triangulation of data sources strengthened the validity and credibility of the findings (Miles & Huberman, 1994).

### Location, Time & Subjects

The research was conducted at SMK Negeri Inanwatan, Inanwatan District, South Sorong Regency, Southwest Papua Province, Indonesia. This site was selected purposively, as the researcher serves as a language instructor at the school and had direct observational access to the classroom conditions that motivated the study. The research was carried out during the 2024/2025 academic year, spanning the pre-cycle baseline assessment through the completion of Cycle II. The research subjects were 15 students enrolled in Class X TKJ (Computer and Network Engineering) at SMK Negeri Inanwatan. This class was selected because pre-observation identified persistent difficulties in poetry writing, including low motivation, reliance on denotative language, and minimal use of figurative devices. These conditions directly attribute to the students' technically-oriented cognitive profile and the school's predominantly conventional instructional methods.

### Intervention

The intervention applied the Project-Based Learning (PjBL) model following the six syntactic steps outlined by Widyantini (2014): (1) formulating an essential question, (2) designing the project plan, (3) constructing a schedule, (4) monitoring student progress, (5) assessing outcomes, and (6) evaluating the experience. A critical and novel modification introduced in this study was the implementation of a digital detox strategy. In this case, digital detox means the systematic collection of all student mobile devices at the start of each session. It is carried out to eliminate digital dependency, prevent copy-paste behavior, and promote authentic, observation-based literary expression.

In Cycle I, students were provided with a condensed literary module (*Modul Sastra Ringkas*), annotated example poems, and field observation cards (*Kartu Observasi*). The project product was a class literary bulletin board (*Mading Sastra*). Reflecting on Cycle I limitations, Cycle II introduced three additional scaffolding media: (a) a Word Wall (*dinding kata*), a classroom display classifying poetic diction by theme and emotion; (b) a Figurative Language Pocket Book (*Buku Saku Kiasan*), a student-facing reference booklet contextualizing figurative devices within vocational-technical metaphors; and (c) a curated poetry anthology (*Buku Kumpulan Puisi*) as a stylistic reference. These print-based tools functioned as cognitive scaffolding, bridging students' technical-denotative language habits and the aesthetic-connotative demands of poetry.

### Data Sources and Data Collection

Data were drawn from three complementary sources. Primary data consisted of students' written poetry products, assessed across five indicators: diction (*diksi*), figurative language (*gaya bahasa*), rhyme and rhythm (*rima dan irama*), theme (*tema*), and moral message (*pesan dan amanah*). Secondary data were derived from structured classroom observation records and field notes documenting both teacher facilitation behaviors and student engagement patterns. Supporting data were obtained through semi-structured teacher interviews, student reflection sheets, and photographic documentation of classroom activities and bulletin board outputs.

Four data collection techniques were employed. First, a written poetry test was administered at each phase (pre-cycle, post-Cycle I, and post-Cycle II) requiring students to compose an original poem under standardized conditions. Second, structured observation using validated observation checklists captured teacher and student activity quality across all sessions, yielding percentage scores for each observed dimension. Third, semi-structured interviews with the Indonesian language teacher provided contextual insights into instructional challenges, student characteristics, and the perceived feasibility of the intervention. Fourth, documentation (including photographs of classroom activities, student attendance records, raw student work samples, and bulletin board outputs) served as corroborating evidence for both qualitative and quantitative findings.

### Data Analysis

Quantitative data were analyzed by calculating the individual mean score for each student using the following formula:

$$X_i = \frac{\Sigma(A + B + C + D + E)}{N}$$

where A through E represent scores on the five assessment indicators and N equals the number of indicators (5). The class mean was subsequently derived as:

$$\bar{X} = \frac{\sum Xi}{N}$$

Classical mastery (*ketuntasan klasikal*) was calculated as the percentage of students achieving the minimum passing score ( $\geq 75$ ), using:

$$P = \frac{\text{Number of Students Passing}}{\text{Total Students}} \times 100\%$$

The intervention was considered successful when the class mean reached  $\geq 75$  and classical mastery reached  $\geq 75\%$ . Qualitative data from observations and interviews were analyzed following the Miles and Huberman (1994) interactive model, comprising three concurrent processes: data reduction (selecting and focusing relevant information), data display (organizing findings into descriptive narratives and tables), and conclusion drawing (identifying patterns, causal explanations, and interpretive insights). Triangulation across quantitative scores, observation data, and interview responses was applied throughout to ensure the internal consistency and credibility of all conclusions.

## FINDINGS

### Pre-Cycle

Prior to any instructional intervention, students completed a spontaneous poetry writing task without prior instruction or scaffolding. The results established a low baseline, with a class mean of 68.49 and a classical mastery rate of only 20% (3 out of 15 students). Table 1 summarizes the pre-cycle mean scores by indicator.

**Table 1.** Mean Scores per Poetry Writing Indicator — Pre-Cycle

Indicator	Class Mean Score	Category
Diction	66.87	Poor
Figurative Language	66.40	Poor
Rhyme and Rhythm	65.87	Poor
Theme	66.40	Poor
Moral Message	68.93	Poor
<b>Overall Class Mean</b>	<b>68.49</b>	<b>Poor</b>

Note. Scores range from 65–80; minimum passing score = 75.

The lowest-performing indicator was rhyme and rhythm (65.87), reflecting students' unfamiliarity with constructing phonetic harmony in verse. Figurative language and theme were equally weak (66.40 each), while moral message yielded the relatively highest score (68.93), suggesting that students possessed ideas to convey but lacked the aesthetic linguistic tools to express them poetically. Diction scored 66.87, consistent with the tendency toward denotative, prosaic word choice observed across student work samples. Of 15 students, only Students B, H, and K achieved passing scores ( $\geq 75$ ), while the remaining 12 (80%) did not meet the minimum threshold. Table 2 presents the cumulative achievement summary across all three research phases.

**Table 2.** Summary of Student Achievement — Pre-Cycle, Cycle I, and Cycle II

Phase	Class Mean	Students Passing (n)	Classical Mastery (%)
Pre-Cycle	68.49	3	20%
Cycle I	73.05	6	40%
Cycle II	81.66	12	80%
<b>Target</b>	<b><math>\geq 75.00</math></b>	<b><math>\geq 12</math></b>	<b><math>\geq 75\%</math></b>

Note. Target criteria: class mean  $\geq 75.00$ ; classical mastery  $\geq 75\%$ .

### Cycle I

Following the implementation of PjBL with a digital detox strategy, that is supported by a condensed literary module, annotated example poems, and field observation cards, the class mean improved to 73.05, representing a gain of 4.56 points over the pre-cycle baseline. Classical mastery rose from 20% to 40% (6 out of 15 students). Table 3 presents the indicator-level mean scores for Cycle I.

**Table 3.** Mean Scores per Poetry Writing Indicator — Cycle I

Indicator	Class Mean Score	Change from Pre-Cycle	Category
Diction	72.87	+6.00	Adequate
Figurative Language	71.67	+5.27	Adequate
Rhyme and Rhythm	72.27	+6.40	Adequate
Theme	72.93	+6.53	Adequate
Moral Message	74.53	+5.60	Adequate
<b>Overall Class Mean</b>	<b>73.05</b>	<b>+4.56</b>	<b>Adequate</b>

Note. Scores range from 60–80; minimum passing score = 75.

All five indicators showed measurable improvement. Theme recorded the largest gain (+6.53), while rhyme and rhythm also improved substantially (+6.40), attributed to the practice of reading drafts aloud during the device-free sessions. Moral message remained the highest-scoring indicator (74.53), approaching the passing threshold. Despite these gains, the overall class mean (73.05) and mastery rate (40%) did not yet meet the established success criteria. Qualitative observation data corroborated these quantitative trends: the overall classroom activity quality reached 75.5% (rated "Good"), a marked improvement from the pre-cycle observation score of 53.1% ("Poor"), as shown in Table 4.

**Table 4.** Classroom Observation Summary — Pre-Cycle and Cycle I

Observed Dimension	Pre-Cycle (%)	Cycle I (%)	Category (Cycle I)	Change
Teacher: instructional model use	55%	78%	Good	+23%
Teacher: scaffolding facilitation	60%	75%	Good	+15%
Teacher: time management	40%	70%	Adequate	+30%
Student: group participation	45%	80%	Good	+35%
Student: discipline without devices	—	85%	Very Good	—
Student: independent diction exploration	40%	65%	Adequate	+25%
<b>Overall Mean</b>	<b>53.1%</b>	<b>75.5%</b>	<b>Good</b>	<b>+22.4%</b>

Note. Category scale: <55% = Poor; 56–70% = Adequate; 71–85% = Good; >85% = Very Good.

Reflective analysis of Cycle I identified two persistent constraints. First, students' poetic vocabulary remained limited because the sole reference resource — the literary module — provided insufficient lexical variety for sustained creative exploration. Second, students spent disproportionate time on the visual design of the bulletin board, reducing the time available for diction refinement and editing. These findings directly informed the modifications implemented in Cycle II.

## Cycle II

In response to Cycle I limitations, three additional scaffolding media were introduced: a Word Wall (*dinding kata*) displaying classified poetic vocabulary, a Figurative Language Pocket Book (*Buku Saku Kiasan*) contextualizing figurative devices within vocational-technical metaphors, and a curated poetry anthology. The digital detox strategy was maintained. The results demonstrated substantial improvement across all measures. The class mean increased to 81.66, exceeding the target threshold of 75.00 by 6.66 points. Classical mastery reached 80% (12 out of 15 students), surpassing the 75% criterion. Table 5 presents indicator-level scores for Cycle II alongside comparative data from Cycle I.

**Table 5.** Mean Scores per Poetry Writing Indicator — Cycle I vs. Cycle II

Indicator	Cycle I Mean	Cycle II Mean	Change	Category (Cycle II)
Diction	72.87	81.60	+8.73	Good
Figurative Language	71.67	81.20	+9.53	Good
Rhyme and Rhythm	72.27	80.53	+8.26	Good
Theme	72.93	82.00	+9.07	Good
Moral Message	74.53	82.33	+7.80	Good
<b>Overall Class Mean</b>	<b>73.05</b>	<b>81.66</b>	<b>+8.61</b>	<b>Good</b>

Note. Scores range from 70–90; minimum passing score = 75.

Figurative language registered the largest single-indicator gain (+9.53), a finding directly attributable to students' active use of the Figurative Language Pocket Book and Word Wall during the drafting phase. Theme improved by 9.07 points, reflecting deeper engagement with field observations and the absence of digital distraction. Moral message, while already the strongest indicator in prior phases, continued to improve (+7.80), confirming that authentic, observation-based writing produced more reflective and personally meaningful poetic content. Three students (A, F, and O) did not achieve the passing threshold in Cycle II, with scores of 73.4, 72.8, and 74.4 respectively — each falling marginally below the 75-point minimum.

Classroom observation quality in Cycle II reached an overall mean of 88.3% (rated "Very Good"), compared to 75.5% in Cycle I, as detailed in Table 6.

**Table 6.** Classroom Observation Summary — Cycle I and Cycle II

Observed Dimension	Cycle I (%)	Cycle II (%)	Category (Cycle II)	Change
Teacher: clarity of instruction	78%	90%	Very Good	+12%
Teacher: scaffolding intensity	75%	88%	Very Good	+13%
Teacher: class and time management	70%	85%	Very Good	+15%
Student: project enthusiasm	80%	92%	Very Good	+12%
Student: discipline and concentration	85%	90%	Very Good	+5%
Student: effective media use	65%	85%	Very Good	+20%
<b>Overall Mean</b>	<b>75.5%</b>	<b>88.3%</b>	<b>Very Good</b>	<b>+12.8%</b>

Note. Category scale: <55% = Poor; 56–70% = Adequate; 71–85% = Good; >85% = Very Good.

Student enthusiasm toward the project reached 92%, the highest score recorded across all observed dimensions and both cycles, indicating that the combination of free theme selection, hands-on observation, and print-based scaffolding substantially elevated intrinsic engagement. The overall trajectory of improvement across all three phases as summarized in Table 2 demonstrates a consistent, upward trend in both classes mean scores and mastery rates, from 68.49 and 20% at baseline to 81.66 and 80% at the conclusion of Cycle II. These results confirm that the success criteria established for this study were fully met upon the completion of Cycle II, and no further instructional cycle was deemed necessary.

## DISCUSSIONS

The central hypothesis of this study is that the implementation of Project-Based Learning (PjBL) combined with a digital detox strategy and print-based cognitive scaffolding would significantly improve the poetry writing competence of Class X TKJ students at SMK Negeri Inanwatan. It is strongly supported by the data. The class mean rose progressively from 68.49 in the pre-cycle to 73.05 in Cycle I and reached 81.66 in Cycle II, surpassing the minimum success criterion of 75.00. Classical mastery improved from 20% to 80%, exceeding the 75% target. These gains were consistent across all five assessment indicators (diction, figurative language, rhyme and rhythm, theme, and moral message) confirming that the intervention produced broad-based, not merely superficial, improvement in poetic competence.

Equally significant is the secondary hypothesis that a non-digital, print-based instructional environment could sustain and even enhance creative output among vocational students. Contrary to assumptions that creative learning in a digitally fluent generation necessarily requires technological mediation, the results demonstrate that the deliberate removal of devices created conditions of focused, original, and aesthetically richer literary production. This finding not only supports the intervention's theoretical premises but also challenges prevailing assumptions about the indispensability of digital tools in contemporary language arts instruction.

### PjBL as a Structural Bridge Between Technical Cognition and Aesthetic Expression

The most theoretically significant finding of this study concerns the mechanism by which PjBL bridged the cognitive gap between the students' technically-oriented mindset and the aesthetic demands of poetry writing. Students in the TKJ program are trained in procedural, algorithmic reasoning (a cognitive orientation that, under conventional literary instruction, manifests as rigidity, literalism, and an inability to engage with figurative language). The six syntactic steps of PjBL (Widyantini, 2014), started from formulating an essential question through to evaluating the project experience, transformed what had previously been an abstract, intimidating creative task into a structured, goal-directed project

sequence. By reframing poetry composition as a production project with clear phases, deliverables, and timelines, PjBL provided the procedural scaffolding that TKJ students needed to engage creatively without feeling cognitively adrift.

This interpretation aligns with Hosnan's (2016) constructivist account of PjBL, which positions the model as one that integrates knowledge and skill through systematically organized experiential stages. It also resonates with Thomas's (2000) criterion that PjBL projects must be authentic and centered on students. The conditions met in this study through the use of free thematic choice, direct environmental observation, and public display of work on a class literary bulletin board (Mading Sastra). The sense of project ownership that emerged: students asking not "what should I write?" but "which word best captures this?" It is consistent with Larmer and Mergendoller's (2015) conception of student agency as a defining feature of high-quality PjBL implementation.

### **The Digital Detox Effect: Originality Through Constraint**

Perhaps the most counterintuitive and practically consequential finding is the positive effect of removing digital devices on both the quality and originality of student poetry. In Cycle I, the absence of smartphones and internet access (rather than producing frustration or creative paralysis) generated a calmer, more contemplative classroom atmosphere in which students engaged more deeply with physical observation, peer discussion, and manual textual reference. This phenomenon aligns with Newport's (2016) concept of "deep work," the capacity for cognitively demanding, distraction-free focus that produces higher-quality intellectual output. The digital detox strategy operationalized this concept in a literary learning context, effectively eliminating copy-paste behavior and redirecting cognitive resources toward authentic expression.

The quality difference between pre-cycle work and Cycle II output is instructive in this regard. Pre-cycle poems were characterized by denotative, prosaic language: phrases such as "we should not cut down trees" that conveyed moral intent without aesthetic mediation. By contrast, Cycle II poems demonstrated the emergence of connotative diction, personification, metaphor, and rhythmic awareness (literary qualities that can only be developed through deliberate, unmediated cognitive engagement with language). This progression supports Bell's (2010) experiential learning theory, which holds that learning through direct practice and sensory engagement produces deeper, more durable competencies than passive information reception.

### **Print-Based Scaffolding as Cognitive Prosthetics**

A critical insight emerging from the Cycle I-to-Cycle II transition is that the digital detox alone was insufficient to maximize learning outcomes. While Cycle I produced meaningful gains, the absence of rich lexical resources constrained students' ability to translate their observational insights into poetically sophisticated language. The introduction of the Word Wall, the Figurative Language Pocket Book (*Buku Saku Kiasan*), and the poetry anthology in Cycle II functioned as what Vygotsky (1978) would term "mediating tools" (artifacts that extend cognitive capacity and support learners in performing tasks within their zone of proximal development that they could not yet accomplish independently).

The Word Wall, in particular, served a dual scaffolding function: it provided a constantly visible, spatially organized lexical resource that students could consult without disrupting their creative flow, and it modeled the categorical organization of poetic vocabulary (by theme, emotion, and sensory register) in a way that internalized lexical awareness over time. Rahmawati's (2019) finding that Word Walls enhance vocabulary acquisition through visual repetition and spatial reinforcement is directly confirmed in this vocational literary context, extending the applicability of that mechanism from foreign language vocabulary learning to mother-tongue aesthetic expression. The *Buku Saku Kiasan* represented a further innovation: by contextualizing figurative devices within technology and networking metaphors familiar to TKJ students (for example, "the router of my longing" or "a Trojan virus of grief"), it created a bridge between the students' vocational discourse and the literary register they were being asked to enter, a strategy consistent with Bhatia's (2004) approach to genre-bridging in specialized language education.

### **Prior Research**

The findings of this study both confirm and extend the existing literature on PjBL in literacy education. Chairun and Suharjuddin (2023) demonstrated that PjBL improved poetry writing among Grade IV elementary students by providing a structured project framework that organized students' thinking and encouraged collaborative engagement with poetic form. The present study replicates and extends this finding to a qualitatively different population (older, vocationally-oriented students with a

technically-trained cognitive profile) demonstrating that PjBL's effectiveness is not restricted to younger or generalist learners. Critically, however, this study required a modification not present in Chairun and Suharjuddin's work: the deliberate suppression of digital access and the provision of targeted print-based scaffolding. This suggests that the effective implementation of PjBL in vocational literary education requires contextual adaptation rather than direct transference.

The study also corroborates Cintang's (2018) finding that PjBL increases student motivation and reduces attendance issues, as reflected in the classroom observation data showing student enthusiasm rising from 80% in Cycle I to 92% in Cycle II (the highest observed score across all dimensions). This motivational effect is theoretically grounded in self-determination theory (Deci & Ryan, 2000), which predicts that learners who experience autonomy (free theme selection), competence (progressive skill development through scaffolding), and relatedness (collaborative bulletin board production) will exhibit significantly higher intrinsic motivation than those in externally-controlled, outcome-focused instructional environments. The study further reinforces Safithri et al.'s (2021) finding that PjBL improves problem-solving ability (in this case, the "problem" being the translation of lived experience and observation into aesthetically coherent poetic form). It also adds a dimension that is not addressed in that study: the role of deliberate technological restriction in enhancing the depth and authenticity of student creative output.

### Limitations

Several limitations must be acknowledged in interpreting these findings. The study's sample size of 15 students, while appropriate for classroom action research, is too small to support broad statistical generalization. The absence of a control group means that observed improvements cannot be unambiguously attributed to the PjBL intervention alone; maturation effects, increased teacher attention, and the novelty effect of a new instructional approach may have contributed to score gains, particularly in Cycle I. The assessment rubric, while grounded in established poetic theory (Waluyo, 2010; Srimularahmah & Marwil, 2021), was applied by the researcher-teacher, creating a potential conflict of interest and a source of evaluator bias. The use of a single rater without inter-rater reliability checks limits the precision of the quantitative findings, particularly given the inherently subjective nature of scoring aesthetic qualities such as figurative language and diction. Future replications should employ multiple independent raters and calculate inter-rater agreement coefficients to address this weakness.

The intervention was implemented across only two formal cycles within a single academic semester, raising questions about the durability of the observed gains. Whether the improvements in poetic vocabulary, figurative language use, and thematic depth persist beyond the intervention period cannot be determined from the present data. A longitudinal follow-up assessment would be necessary to evaluate retention and transfer. The study was conducted at a single school in a geographically remote district of Southwest Papua, Indonesia, with particular sociolinguistic and infrastructural characteristics (limited library resources, restricted internet access, a predominantly oral-linguistic cultural background) that may not be representative of SMK contexts elsewhere. The limited digital infrastructure that characterizes SMK Negeri Inanwatan may have made the digital detox strategy less disruptive than it might be in more technologically saturated school environments, potentially inflating the observed benefits of that component of the intervention.

### Significance of Findings

The findings of this study carry significance at three interconnected levels. At the practical level, they demonstrate that poetry writing instruction in Indonesian vocational high schools can be made substantially more effective through the deliberate contextual adaptation of PjBL, specifically by matching the procedural structure of the model to the technical-procedural cognitive preferences of vocational students, and by providing print-based lexical scaffolding that bridges the gap between students' everyday technical language and the aesthetic-connotative demands of literary expression. The 60-percentage-point increase in classical mastery (from 20% to 80%) represents a pedagogically meaningful transformation of learning outcomes achievable within two instructional cycles, without requiring additional technological resources (a finding of particular relevance for under-resourced schools in remote and peri-urban Indonesian contexts).

At the theoretical level, the study contributes to the growing body of evidence challenging the assumption that effective creative learning in the 21st century necessarily requires digital mediation. The digital detox component of the intervention which produced the most significant qualitative improvements in the originality and authenticity of student work suggests that strategic restriction of digital access may function as a productive constraint that directs cognitive resources toward the kind of slow, deliberate, observation-based thinking that literary creativity requires. This finding has implications extending well

beyond poetry instruction, raising broader questions about the optimal role of technological access in creative and humanistic education more generally.

At the methodological level, the study demonstrates the value of the CAR design for iterative instructional improvement, showing how systematic reflective analysis between cycles enables researchers to identify and address specific implementation gaps (in this case, lexical insufficiency and time management failures) in ways that produce measurable outcome improvements in subsequent cycles. Hence, Vocational students are not incapable of literary creativity; they require instructional models that respect and work with their cognitive orientations rather than against them. The adaptation of PjBL reported here demonstrates one viable pathway toward that goal, with implications for language arts curriculum design, teacher professional development, and educational policy in vocational education contexts across Indonesia and, potentially, in analogous contexts internationally.

## CONCLUSION

The implementation of PjBL produced consistent and statistically meaningful improvement across all five poetry writing indicators: diction, figurative language, rhyme and rhythm, theme, and moral message. The class mean rose progressively from 68.49 in the pre-cycle baseline to 73.05 following Cycle I and reached 81.66 upon the completion of Cycle II, exceeding the minimum success criterion of 75.00. Classical mastery increased from 20% (3 students) at baseline to 80% (12 students) in Cycle II, surpassing the 75% target threshold. These gains confirm that the procedural structure of PjBL is not merely compatible with the cognitive orientation of technically-trained vocational students but is, in fact, particularly well-suited to it. By transforming abstract creative tasks into structured project sequences with clear phases, products, and evaluation criteria, PjBL provided the scaffolding that TKJ students needed to engage meaningfully with literary expression without experiencing the cognitive overload or motivational disengagement characteristic of conventional poetry instruction.

The deliberate removal of mobile devices during instruction (the digital detox strategy) proved to be a decisive and counterintuitive factor in the quality of student output. Rather than limiting creative resources, the absence of internet access eliminated copy-paste behavior, redirected cognitive effort toward direct environmental observation, and generated a contemplative classroom atmosphere conducive to genuine literary thinking. The most substantive qualitative improvements in student poetry (the emergence of connotative diction, personification, metaphor, and thematically resonant moral messages) were observed precisely in those phases where the digital detox was most strictly enforced. This finding challenges the prevailing assumption that 21st-century creative learning requires continuous digital access, and suggests instead that strategic, bounded technological restriction may enhance the depth and authenticity of student creative work, particularly in literary education contexts.

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## COMPETING INTERESTS

The authors declare that they have no competing interests.

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