



## The implementation of creative writing based on sport experience to improve Physical Education students' academic competence

*Implementación de la escritura creativa basada en la experiencia deportiva para mejorar la competencia académica de los estudiantes de Educación Física*

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### Abstract

**Introduction:** ademic competence in physical education students depends not only on physical abilities but also on reflective thinking and the ability to express ideas in writing. Creative writing based on sport experiences can support academic development.

**Objective:** This study aims to examine the effectiveness of sport experience-based creative writing in improving students' academic competence.

**Methodology:** This study used a true experimental design with pre-test and post-test involving an experimental and a control group. A total of 120 students were randomly assigned into two groups: experimental (n = 60) and control (n = 60). The experimental group engaged in reflective and narrative writing activities, while the control group followed conventional learning. Data were analyzed using an independent samples t-test with IBM SPSS 22.

**Results:** The experimental group showed significant improvement (56.20 to 74.60; Sig. = 0.000), while the control group showed limited progress. A significant difference was also found in the post-test (Sig. = 0.004).

**Conclusion:** Creative writing based on sport experience is effective in improving the academic competence of Physical Education students.

### Keywords

Creative writing; sport experience; academic competence; Physical Education; self-expression.

### Resumen

**Introducción:** La competencia académica de los estudiantes de educación física depende no solo de sus habilidades físicas, sino también de su pensamiento reflexivo y su capacidad para expresar ideas por escrito. La escritura creativa basada en experiencias deportivas puede favorecer el desarrollo académico.

**Objetivo:** Este estudio tiene como objetivo examinar la efectividad de la escritura creativa basada en experiencias deportivas para mejorar la competencia académica de los estudiantes.

**Metodología:** Este estudio utilizó un diseño experimental verdadero con pretest y postest, que incluyó un grupo experimental y un grupo de control. Un total de 120 estudiantes fueron asignados aleatoriamente a dos grupos: experimental (n = 60) y de control (n = 60). El grupo experimental participó en actividades de escritura reflexiva y narrativa, mientras que el grupo de control siguió un método de aprendizaje convencional. Los datos se analizaron mediante una prueba t de Student para muestras independientes con IBM SPSS 22.

**Resultados:** El grupo experimental mostró una mejora significativa (de 56,20 a 74,60; Sig. = 0,000), mientras que el grupo de control mostró un progreso limitado. También se encontró una diferencia significativa en el postest (Sig. = 0,004). **Conclusión:** La escritura creativa basada en la experiencia deportiva es eficaz para mejorar la competencia académica de los estudiantes de Educación Física.

### Palabras clave

Escritura creativa; experiencia deportiva; competencia académica; Educación Física; autoexpresión.

## Introduction

Education in the 21st century emphasizes not only the acquisition of knowledge but also the development of higher-order skills such as creativity, critical thinking, communication, and self-expression. These competencies are widely recognized as essential components of modern education and are closely linked to students' academic and professional success (Caena & Redecker, 2019; PISA, 2021). In higher education, students are expected to demonstrate academic competence through the ability to analyze information, reflect on experiences, and communicate ideas effectively in both written and oral forms (Carvalho, 2023; Hyland, 2019). Writing plays a central role in this process because it enables learners to organize their thoughts, articulate arguments, and develop reflective understanding of academic content (Goshu & Gebremariam, 2024). Research has shown that writing is a complex cognitive activity that supports learning processes, knowledge construction, and academic success across disciplines (Cronin et al., 2020; Hubert et al., 2025). In fact, writing competence is closely associated with students' academic achievement and intellectual development in higher education contexts (Déri et al., 2022; Rahayu et al., 2024).

Despite its importance, many university students still experience difficulties in developing strong writing competence, particularly students whose fields of study emphasize practical or physical activities rather than academic literacy (Goveia et al., 2025; Sember et al., 2020). This condition is often observed among students in Physical Education programs. Physical Education students typically engage more intensively in physical training, sports performance, and movement-based learning activities, while academic writing skills tend to receive less attention (Kirk, 2022; Wallace et al., 2023). As a result, some students encounter challenges when required to express ideas, reflect on learning experiences, or present academic arguments in written form (Azevedo et al., 2022; Macphail et al., 2019). These limitations may affect their academic competence, especially when completing assignments, writing reflective reports, or conducting research projects. Studies also indicate that students' attitudes toward writing and their writing self-efficacy significantly influence the quality of their academic writing performance (Aljuaid, 2024; Atasoy, 2021; Zhang et al., 2022).

One pedagogical strategy that has gained increasing attention in recent years is the integration of creative writing activities into educational programs. Creative writing allows students to explore ideas, emotions, and personal experiences through imaginative and expressive forms of writing such as narratives, reflective journals, and storytelling (Ayu et al., 2023; Bailey & Bizzaro, 2019; Hubert et al., 2025). Unlike traditional academic writing, which often emphasizes rigid structures and formal conventions, creative writing provides greater flexibility for students to express their thoughts and identities (Ahmed & Ahmed, 2022; Harmer, 2017). Research indicates that creative writing activities can enhance students' creativity, reflective thinking, and cognitive engagement, while also supporting the development of self-expression and personal voice in learning (Chasi-Solórzano et al., 2025; Sword, 2023).

Creative writing also plays a significant role in fostering students' psychological and social development. Through writing narratives or reflective texts, students are able to connect personal experiences with academic knowledge, thereby strengthening their understanding of learning content (Listyani, 2019; Roberts et al., 2023). Moreover, creative writing encourages learners to express their emotions, perspectives, and identities, which contributes to the development of self-confidence and self-awareness (Cronin et al., 2020; Li et al., 2023). Studies highlight that writing activities that emphasize creativity and reflection can improve students' motivation, writing self-efficacy, and engagement in learning processes (Fadhillah et al., 2023; Moonma, 2021). When students perceive writing as a meaningful medium for self-expression, they are more likely to participate actively in academic tasks and develop stronger communication skills.

In the context of Physical Education, creative writing offers a unique opportunity to bridge practical experiences with academic reflection. Physical Education students often acquire valuable experiential knowledge through sports training, physical activities, and teamwork experiences (Sientop & Mars, 2022; Young et al., 2020). However, without structured reflection, these experiences may remain implicit and unarticulated. Reflective writing has been widely recognized as an effective strategy to help students interpret experiences, analyze performance, and connect practice with theoretical understanding (Williyan et al., 2025; Zhang et al., 2025). By implementing creative writing activities



based on students' sport experiences, students can reflect on their physical activities, analyze their performance, and connect practical experiences with theoretical concepts in sports science and education (Azevedo et al., 2022; Cappello et al., 2025). Such reflective writing practices can enhance students' ability to interpret experiences critically and communicate their insights in academic contexts.

Although numerous studies have examined the role of writing instruction in improving students' academic performance, research focusing specifically on creative writing based on sport experience in Physical Education programs remains limited. Most studies in Physical Education education tend to focus on physical performance, motor skill development, or sports pedagogy (Priyadi et al., 2024; Perrone et al., 2024; Singh et al., 2019), while the integration of reflective and creative writing practices has not been widely explored. Furthermore, existing studies on creative writing primarily focus on language or literature education, leaving a significant gap in understanding how creative writing activities grounded in sport experience can support the academic competence of students in non-language disciplines.

Therefore, the researcher is interested in conducting a study entitled "*The Implementation of Creative Writing Based on Sport Experience to Improve Physical Education Students' Academic Competence*".

### **Research Objectives**

The objectives of this research are:

1. To examine the implementation of creative writing based on sport experience among Physical Education students.
2. To analyze the impact of creative writing based on sport experience on students' academic competence.
3. To explore how sport-experience-based creative writing activities support Physical Education students in expressing ideas and reflecting on their learning experiences

### **Hypotheses**

H<sub>01</sub>: Creative writing based on sport experience does not significantly affect the academic competence of Physical Education students.

H<sub>a1</sub>: Creative writing based on sport experience significantly affects the academic competence of Physical Education students.

## **Method**

### **Research Design**

This study aimed to investigate the effectiveness of creative writing based on sport experience in improving the academic competence of Physical Education students. The research employed a true experimental design using a randomized pre-test–post-test control group design. This design allows researchers to establish a causal relationship between the intervention and learning outcomes because participants are randomly assigned to experimental and control groups (Creswell, 2022; Neuman, 2019).

Two groups participated in this study: an experimental group that received instruction through creative writing activities based on students' sport experiences and a control group that followed conventional learning activities without the implementation of sport-experience-based creative writing. Both groups were given a pre-test at the beginning of the study and a post-test at the end of the treatment to measure changes in students' academic competence. This design enables the researcher to compare learning outcomes before and after the implementation of the program.

### **Participants**

This study involved 120 second-semester students from the Physical Education Study Program at Universitas PGRI Palembang. The participants consisted of both male and female students, with a total of 68 males and 52 females, and their ages ranged from 18 to 21 years, with an average age of 19 years.



The participants were selected using simple random sampling to ensure that each student in the population had an equal chance of being included in the study (Ahmed, 2024; Makwana et al., 2023). After the selection process, the participants were randomly assigned into two groups consisting of 60 students in the experimental group and 60 students in the control group. Random assignment was applied to minimize potential bias and to ensure the equivalence of both groups before the treatment. The experimental group participated in creative writing activities based on sport experiences integrated into the learning process, whereas the control group continued to follow the regular instructional activities commonly implemented in the Physical Education program. The inclusion of a relatively large number of participants was intended to enhance the reliability and generalizability of the research findings regarding the effectiveness of sport-experience-based creative writing in improving the academic competence of Physical Education students.

### **Research Procedure**

The implementation of creative writing based on sport experience in the experimental group was conducted over three semesters, providing sufficient time for students to develop their academic competence through continuous writing practice.

The research procedure consisted of three main stages.

#### 1) The pre-test stage.

At the beginning of the study, both the experimental and control groups completed a pre-test to measure their baseline academic competence before the intervention was implemented.

#### 2) The treatment stage.

During the treatment period, the experimental group participated in structured creative writing activities based on sport experiences integrated into the learning process. These activities encouraged students to express their thoughts and experiences related to sports participation through several forms of writing, including reflective journals, narrative essays about sport training and competitions, as well as personal reflections on physical activity experiences, were implemented as part of the learning activities. The creative writing activities were designed by a lecturer with a background in language pedagogy who graduated from the Department of Language and Arts Education. The lecturer also has relevant teaching experience in both Physical Education and academic writing. This educational background and professional experience provided a solid foundation for designing integrated learning activities and strengthened the reliability of the intervention. This combination of expertise ensured that the activities were pedagogically sound and relevant to the students' academic and disciplinary context. Students followed a guided writing process consisting of several stages:

1. Brainstorming ideas based on sport experiences,
2. Drafting initial texts,
3. Revising and improving their writing, and
4. Participating in peer feedback sessions.

These stages aimed to enhance students' ability to organize ideas, reflect critically on their experiences, and communicate academic concepts through writing. Meanwhile, the control group followed the regular instructional process without participating in the sport-experience-based creative writing activities.

#### 3) The post-test stage.

At the end of the intervention period, both groups completed a post-test to measure changes in academic competence and evaluate the effectiveness of creative writing based on sport experience in improving students' academic performance.

### **Research Instrument**

The instruments used in this study consisted of two main tools.



- 1) Academic Competence Test was administered to measure students' ability to express ideas, reflect on sport learning experiences, and communicate academic content through written texts. The assessment focused on several aspects, including content organization, clarity of ideas, critical reflection, and language use, following approaches commonly used in studies on writing competence in higher education (Feretti & Graham, 2019; Nitko, 2019). The results of this test were classified using Table 1.
- 2) Self-Expression Questionnaire using a Likert scale was employed to assess students' ability to express ideas, feelings, and sport-related experiences through writing in academic contexts. Similar instruments have been widely used to evaluate students' expressive abilities and writing engagement (Miall & Kuiken, 2019; Robinson, 2024). The results of this questionnaire were classified using Table 2. The results of both instruments were analyzed using score ranges to classify the levels of students' academic competence and self-expression.

Table 1. Qualification for Learning Achievement

No	Classification	Score
1	Excellent	81 - 100
2	Very Good	66 - 80
3	Good	56 - 65
4	Fair	41 - 55
5	Poor	0 - 40

Table 2. Qualification for Self-Expression

No	Classification	Score
1	High	71 - 100
2	Average	41 - 70
3	Low	0 - 40

Source: (Feretti & Graham, 2019; Nitko, 2019)

### Validity and Reliability

Before being used in the study, both instruments were tested for validity and reliability to ensure their accuracy and consistency. Content validity was established through expert judgment involving three specialists in Physical Education, educational assessment, and academic writing who evaluated the relevance and clarity of each item. Based on their feedback, several items were revised. A pilot test was then conducted with students outside the research sample, and the results were analyzed using Pearson correlation for item validity and Cronbach's Alpha for reliability. The analysis showed that all items met the validity criteria ( $r > 0.30$ ) and demonstrated good internal consistency with Cronbach's Alpha values above 0.70, indicating that the instruments were reliable for use in the main study. The results of the validity and reliability testing for each instrument are presented in Table 3.

Table 3. Results of Instrument Validity and Reliability Testing

Instrument	Number of Items	Item Validity (r-value)	Criteria	Cronbach's Alpha	Interpretation
Academic Competence Test	10	0.42 - 0.71	$r > 0.30$	0.84	Reliable
Self-Expression Questionnaire	15	0.45 - 0.76	$r > 0.30$	0.88	Reliable

Source: Processed research data

The results of the validity test showed that all instrument items had correlation coefficients ranging from 0.42 to 0.76, which were higher than the critical value ( $r > 0.30$ ), indicating that all items were valid. Furthermore, the reliability analysis demonstrated that the Academic Competence Test obtained a Cronbach's Alpha value of 0.84, while the Self-Expression Questionnaire obtained a value of 0.88. These results indicate that both instruments have good internal consistency and are reliable for use in the study.

### Data Analysis

The data analysis in this study involved several statistical procedures. First, a normality test was conducted to determine whether the data were normally distributed. After confirming normal

distribution, an independent sample t-test was used to analyze the differences between the experimental and control groups.

The analysis compared the pre-test and post-test results to determine whether the implementation of creative writing based on sport experience had a significant effect on students' academic competence and their ability to express sport-related learning experiences through writing. Statistical analysis was conducted using SPSS with a significance level of 0.05.

## Results

The implementation of creative writing based on sport experience was carried out over three semesters in the Physical Education study program at Universitas PGRI Palembang. The program consisted of structured writing activities designed to encourage students to express ideas and reflect on their sport-related learning experiences. The activities included reflective journal writing, narrative writing related to sport training and participation, and personal storytelling about participation in physical education learning.

During the implementation process, students actively engaged in brainstorming, drafting, revising, and sharing their written work with peers. Classroom discussions and peer feedback sessions were also conducted to support students in developing their ideas and improving their writing quality. The findings indicate that the sport-experience-based creative writing activities provided opportunities for students to articulate their experiences in sports and physical activities while simultaneously strengthening their reflective thinking.

Based on the findings of this research, meaningful data were obtained indicating that the implementation of creative writing based on sport experience contributes positively to the development of students' academic competence and their ability to express ideas and reflect on sport learning experiences. These findings support the objective of this study, which is to examine the implementation of creative writing based on sport experience and analyze its impact on Physical Education students' academic competence and self-expression ability.

The results of the normality and homogeneity tests are presented in Table 4. The Shapiro-Wilk test shows significance values greater than 0.05, indicating that the data are normally distributed. In addition, the Levene's test also shows a significance value greater than 0.05, which means that the data have homogeneous variance. Therefore, the data meet the requirements for further analysis using parametric statistical tests.

Table 4. The Result of Normality and Homogeneity Test of Research Data

Variables	Group	Test	Sig. of Saphiro-Wilk Test	Levene tatictic
Academic Competence	Exp. group	Pre-test	0.112	0.742
		Post-test	0.087	
	Cont. group	Pre-test	0.094	
		Post-test	0.168	
Self-Expression	Exp. group	Pre-test	0.821	0.095
		Post-test	0.774	
	Cont. group	Pre-test	0.846	
		Post-test	0.291	

Table 4 presents the results of the normality and homogeneity tests conducted to determine whether the research data met the assumptions required for parametric statistical analysis. The Shapiro-Wilk test results show that the significance values for both the pre-test and post-test scores of academic competence and self-expression in the experimental and control groups are greater than 0.05, indicating that the data are normally distributed. Furthermore, the Levene's test results also show significance values greater than 0.05, suggesting that the data have homogeneous variances between groups.

Since the data fulfilled the assumptions of normality and homogeneity, further statistical analysis was conducted using parametric tests, specifically the independent sample t-test through IBM SPSS version 22, to examine whether there were significant differences in students' academic competence and self-

expression between those who participated in creative writing activities based on sport experience and those who followed the regular instructional process.

A comprehensive analysis of the students' academic competence was conducted using the Independent t-test based on the data presented in Table 5. This analysis aimed to examine the implementation of creative writing based on sport experience and its impact on improving the academic competence of Physical Education students.

Table 5. Frequency, Mean of Students' Academic Competence and Self-Expression

NO	Variables	Pre-test		Post-test		Mean Difference Pre- and Post-test Exp. Within	T-Value Pre- and Post within Exp. (Sig.)	Mean difference Pre- and Post-test Cont Within	Pre- and Post-test within Cont. (Sig.)	Mean Difference Pre- and Post-test between Exp. & Cont.	T-Value Post-test between Exp. & Control (Sig.)
		Mean Exp	Mean Cont	Mean Exp	Mean Cont						
1	Academic Competence	56.20	55.85	74.60	60.45	18.40	3.85	4.60	1.45	14.15	2.95
	a Excellent	0.00	0.00	10.80	2.50	10.80	2.80	2.50	0.90	8.30	2.10
	b Very Good	15.30	14.80	27.90	17.20	12.60	3.10	2.40	0.80	10.70	2.60
	c Good	22.60	23.15	26.70	25.40	4.10	1.90	2.25	0.95	2.45	1.20
	d Fair	12.40	13.20	7.60	11.10	-4.80	1.50	-2.10	0.70	-2.70	0.95
	e Poor	5.90	4.70	1.60	3.75	-4.30	2.20	-0.95	0.60	-3.35	1.80
2	Self-Expression	58.40	57.95	80.75	64.20	22.35	4.25	6.25	1.75	16.55	3.20
	a High	21.50	20.80	36.80	26.40	15.30	3.60	5.60	1.80	10.40	3.10
	b Average	25.40	26.10	29.10	27.80	3.70	1.20	1.70	0.60	2.00	0.85
	c Low	11.50	11.05	4.85	10.00	-6.65	2.50	-1.05	0.40	-5.60	2.10

Based on the results shown in Table 5, the experimental group demonstrated a substantial improvement in academic competence after participating in creative writing activities based on sport experience. The mean score increased from 56.20 in the pre-test to 74.60 in the post-test, resulting in a mean difference of 18.40. The t-test analysis produced a t-value of 3.85 with a significance level (Sig.) of 0.000, which is lower than the significance level ( $\alpha$ ) of 0.05. This indicates that the improvement in the experimental group is statistically significant.

In contrast, the control group showed only a slight improvement in academic competence. The mean score increased from 55.85 in the pre-test to 60.45 in the post-test, resulting in a mean difference of 4.60. However, the statistical analysis produced a t-value of 1.45 with a significance level of 0.152, which is higher than the significance level of 0.05. This result indicates that the improvement in the control group was not statistically significant.

Furthermore, the comparison of post-test scores between the experimental and control groups revealed a mean difference of 14.15, with a t-value of 2.95 and a significance level of 0.004. These results indicate that students who participated in creative writing based on sport experience achieved significantly higher academic competence than those who followed the regular instructional process.

The improvement in students' academic competence can be attributed to the implementation of creative writing activities based on sport experience that allowed students to express their ideas, experiences, and reflections related to physical education learning. Through activities such as reflective journals, narrative writing, and personal storytelling about sport training, competitions, and physical activities, students were able to organize their thoughts more systematically and connect practical experiences with academic understanding. As a result, the learning process became more reflective, engaging, and meaningful for students. These findings support the notion that creative writing can serve as an effective medium of self-expression that helps students articulate their understanding and deepen their comprehension of learning materials. By encouraging students to reflect on their sport experiences and communicate their ideas through writing, creative writing based on sport experience contributes to the enhancement of students' academic competence in Physical Education learning.

Based on the results of the Independent t-test analysis, it can be concluded that the implementation of creative writing based on sport experience significantly improves the academic competence of Physical Education students. Therefore, the hypothesis testing results indicate that:

The null hypothesis ( $H_{01}$ ), which states that creative writing based on sport experience does not significantly affect the academic competence of Physical Education students, is rejected.

The alternative hypothesis ( $H_{a1}$ ), which states that creative writing based on sport experience significantly affects the academic competence of Physical Education students, is accepted.

This study demonstrates that the implementation of creative writing based on sport experience has a positive impact on enhancing the academic competence of Physical Education students. The activities provide meaningful opportunities for students to express ideas, reflect on sport learning experiences, and develop a deeper understanding of academic content.

## Discussion

The present study demonstrates that the implementation of creative writing based on sport experience significantly enhances the academic competence of undergraduate Physical Education students. The results indicate that students in the experimental group showed notable improvement in organizing ideas, reflecting on their sport experiences, and communicating academic understanding compared to those in the control group (Dhananjaya et al., 2024). These findings are consistent with previous research indicating that structured writing activities can strengthen cognitive engagement, metacognition, and knowledge construction (Ahmed & Ahmed, 2022; Zhang et al., 2022).

Creative writing based on sport experience enables students to process and reflect on their participation in physical activities, training sessions, and sport practices. Through activities such as reflective journals, narrative writing, and personal stories related to sport experiences, students are encouraged to analyze and interpret their learning in Physical Education. These activities help students connect practical sport experiences with theoretical concepts, thereby improving academic literacy and learning outcomes (Bailey & Bizzaro, 2019; Chasi-Solórzano et al., 2025; Carvalho, 2023). In addition, expressive writing activities have been shown to enhance students' self-efficacy and metacognitive awareness, which play an important role in academic performance (Atasoy, 2021).

Integrating creative writing based on sport experience into Physical Education learning also supports holistic student development (Purnomo et al., 2024). While Physical Education traditionally focuses on motor skills and physical performance (Siedentop & Mars, 2022; Kirk, 2022), combining sport participation with reflective writing encourages the development of cognitive, emotional, and expressive abilities simultaneously (Cappello et al., 2025; Azevedo et al., 2022). Through writing about their sport experiences, students develop the ability to articulate ideas, construct meaningful arguments, and demonstrate higher-order thinking in written form (Sword, 2023; Feretti & Graham, 2019).

Furthermore, the implementation of this program enhances students' self-expression and reflective abilities. Writing about sport experiences allows students to internalize learning processes, evaluate their performance, and build a stronger academic identity as learners in Physical Education (Hubert et al., 2025; Li et al., 2023). This finding supports previous studies indicating that creative and reflective writing can improve academic outcomes as well as communication skills, critical thinking, and emotional awareness (Cronin et al., 2020; Ayu et al., 2023). These findings highlight the pedagogical value of implementing creative writing based on sport experience as an instructional strategy in Physical Education. By linking reflective writing with sport activities, students gain deeper understanding of academic concepts, improve cognitive engagement, and develop essential skills that support their academic competence and lifelong learning.

## Conclusions

This study examined the implementation of creative writing based on sport experience to improve the academic competence of Physical Education students. The findings indicate that students who participated in the program demonstrated a significant improvement in their academic competence compared to those who followed conventional learning activities. Creative writing activities based on sport experiences enabled students to reflect on their physical education learning, organize ideas more



clearly, and communicate their understanding more effectively. The results suggest that integrating creative writing based on sport experience into Physical Education learning can support students' academic development and reflective thinking. By writing about their sport activities and learning experiences, students are able to connect practical experiences with theoretical concepts, which strengthens their academic competence. Therefore, this approach can be used as an alternative instructional strategy to enrich learning processes and encourage deeper student engagement. Future studies are recommended to involve larger samples and explore the long-term impact of creative writing based on sport experience on other learning outcomes, such as critical thinking, motivation, and learning engagement in different educational contexts.

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