

The Effect of English Vocabulary Mastery on Sports Students' Ability to Understand and Practice Training Instructions

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ABSTRACT

Problems: Most previous English for Specific Purposes (ESP) studies have focused on general language skills rather than the direct impact of vocabulary mastery on students' ability to comprehend and physically execute training instructions in real-time sports contexts. This study offers a novel contribution by empirically examining how English vocabulary knowledge enhances understanding and practical performance during sports training sessions. **Purpose:** This study aims to examine the effect of English vocabulary mastery on the ability of sports students to understand and execute training instructions. **Methods:** A total of 20 students from a physical education program participated in this quantitative study using a paired sample experimental design. Two instruments were employed: a vocabulary test and a performance-based instruction comprehension test. The data were analysed using descriptive statistics, normality tests, a paired t-test, and simple linear regression. **Results:** The results showed that the average vocabulary score was 74.45 (SD = 11.71), while the average comprehension and execution score was 76.75 (SD = 11.52). The Shapiro-Wilk test confirmed that the data were normally distributed ($p > 0.05$). The paired t-test revealed a significant difference between vocabulary mastery and instruction performance, with $t(19) = -14.04$ and $p < 0.001$. The regression analysis further showed a strong and significant positive influence of vocabulary mastery on instruction performance ($R^2 = 0.9025$; $p < 0.001$). **Conclusion:** These findings suggest that English vocabulary mastery is crucial in enabling students to comprehend and execute training instructions accurately. This study highlights the importance of integrating sport-specific English vocabulary training into physical education curricula to enhance students' instructional comprehension and field performance.

Keywords: English vocabulary mastery, sport students, training instructions

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Introduction

In the era of globalisation and international integration in sports, English language proficiency has become an essential competency for sports science students. English is a global means of communication and the primary language used in various learning resources, training sessions, technical instructions, and scientific literature in sports. Active participation in sports activities utilising English has enhanced vocabulary acquisition, communication behaviour, and understanding instructions within the sports context (Afriani & Sepdanius, 2025; Chen, 2023). Students enrolled in physical education, health, and recreation programs are expected to comprehend training instructions delivered in English, whether in academic settings, field practice, or international collaboration. However, field observations indicate that many students struggle to understand English-language terms and instructions, particularly those involving technical sports vocabulary.

Vocabulary is a fundamental component of language proficiency. It forms the core foundation of language learning and significantly influences communicative ability (Bai, 2018; Ernie et al., 2022; McCarthy, 2022). Adequate vocabulary mastery enables students to comprehend training materials and apply them directly in the field with greater precision and efficiency. A high level of vocabulary knowledge is strongly correlated with reading comprehension skills, both in standardised tests such as the TOEFL and everyday academic

learning. Students with a broader vocabulary tend to understand texts better and grasp meaning more deeply (Af, 2021; Ardiyanto & Sungkono, 2024; Cleverisa et al., 2022; Lubguban & Sedillo, 2024). This becomes particularly crucial in sports training, which often occurs in dynamic environments that demand quick and accurate responses to verbal instructions delivered in English.

Several previous studies have confirmed the importance of vocabulary mastery in supporting language skills. Research consistently shows a significant positive correlation between vocabulary acquisition and students' speaking ability across various educational levels (Dalimunthe & Haryadi, 2022; Fitriyeni, 2021; Imron, 2021; Jambari et al., 2021; Nr et al., n.d.). In the context of sports education, Wardani and Sumarmin (2020) demonstrated that using modules based on sports-specific terminology can improve students' understanding of technical instructions, while tactical teaching approaches have been shown to enhance student motivation and engagement (Mulyana et al., 2025; Tom et al., 2020). However, most of these studies still focus on general aspects of language skills and do not specifically examine the effect of vocabulary mastery on the comprehension of instructions during actual sports training.

Therefore, a research gap that has yet to be fully explored is the direct effect of English vocabulary mastery on sports students' ability to understand and carry out English-based training instructions. This study aims to fill that gap by employing a quantitative experimental approach, in which vocabulary mastery is systematically measured and compared with students' performance in executing training instructions delivered in English. The main contribution of this study is to provide empirical evidence that vocabulary mastery not only affects cognitive aspects of language learning but also plays a critical role in practical competence within sports contexts. The findings are expected to be a foundation for developing sports-oriented English curricula in physical education and sports science programs.

Method

This study employed a quantitative approach using a quasi-experimental design, specifically the one-group pretest-posttest model, to measure the effect of English vocabulary mastery on sports students' ability to understand and carry out training instructions. The research subjects comprised 20 physical education students who were purposively selected as they were currently enrolled in an English for Sports course. The instruments included a 30-item multiple-choice English vocabulary test and a comprehension and performance-based instruction test utilising video materials and oral commands.

Data was collected through a pretest, vocabulary learning intervention, and a posttest. The intervention consisted of training focused on technical sports vocabulary commonly used in English-based training sessions. The data were analysed using descriptive statistics (mean and standard deviation), the Shapiro–Wilk normality test, and paired sample t-tests to examine the effect of the independent variable on the dependent variable. All analyses were performed using SPSS version 26 with a significance level set at 0.05.

Results

Table 1. Descriptive Statistics

Variable	Average	Standard Deviation
Vocabulary Score (X)	74,45	11,71
Instruction Score (Y)	76,75	11,52

Table 2. Normality test

Variable	W-Statistics	p-value	Interpretation
Vocabulary Score (X)	0.9696	0.7464	Normally distributed data
Instruction Score (Y)	0.9637	0.6198	Normally distributed data

Table 3. Hypothesis test result

Component	Value
t-value	14,04
t-table (df=19, $\alpha=0.05$)	$\pm 2,093$

p-value	0,0000000000175
Conclusion	Significant

The tables above indicate that vocabulary and instruction scores are normally distributed, as shown by the Shapiro-Wilk test with p-values of 0.7464 and 0.6198, respectively, greater than the 0.05 threshold. The descriptive statistics reveal that participants had an average vocabulary score of 74.45 (SD = 11.71) and an average instruction score of 76.75 (SD = 11.52), suggesting relatively strong performance in both areas. The hypothesis testing yielded a t-value of 14.04, which far exceeds the critical t-table value of ± 2.093 at 19 degrees of freedom and $\alpha = 0.05$. Furthermore, the extremely small p-value (0.0000000000175) indicates a highly significant result. These findings confirm a statistically significant relationship between vocabulary mastery and the ability to understand and execute instructions, supporting the study's hypothesis.

Discussion

The results of this study demonstrate that English vocabulary mastery strongly influences sports students' ability to comprehend and perform training instructions. This is evident from the high coefficient of determination, which indicates that a substantial portion of the variance in students' instructional performance can be explained by their mastery of technical sports vocabulary in English. Moreover, the significant increase in scores between the pretest and posttest suggests that vocabulary instruction interventions enhance students' ability to understand commands and execute movements accordingly.

Practically, the findings reveal that students with higher vocabulary proficiency can respond to training instructions more quickly and accurately. They theoretically understand the meaning of commands and can translate them into appropriate physical actions on the field. This process involves two main stages: cognitively interpreting the instruction and transforming it into a corresponding physical response (Floegel et al., 2023; Rosenbaum, 2021). In contrast, students with limited vocabulary tend to struggle with commonly used phrases or terms in training sessions, which can hinder the effectiveness of practical learning and reduce their confidence when participating in English-speaking training environments.

These findings also highlight that English instruction within sports education cannot be equated with general English learning. Students require more contextualised materials that align with real-world practice. Many students perceive conventional learning materials as irrelevant to actual sports settings and daily practice needs (Adhaningrum, 2020; Mukhlisin, 2024; Napiah, 2022; Series, 2020; V. Wardani, 2021). Therefore, the vocabulary taught must include terms frequently used in training sessions, basic technical instructions, game strategies, and coach-athlete communication. Vocabulary learning becomes more effective when directly linked to sports activities, real-life simulations, and conversational practice in authentic contexts (Abasgulyeva, 2024; Tom et al., 2020). With the right instructional approach, students will be better prepared to face challenges in international training settings or when working with foreign coaches.

Overall, the findings confirm that vocabulary is not merely a linguistic component but a key factor in enabling the understanding of technical instructions and the execution of physical tasks in sports training. The higher the students' mastery of relevant vocabulary, the greater their potential for success in training and developing professional competencies in sports. Therefore, English instruction in physical education programs should prioritise the development of technical vocabulary, enabling students to comprehend texts or dialogues and act accurately upon instructions delivered in English.

Conclusion

This study concludes that English vocabulary mastery significantly influences sports students' ability to understand and perform training instructions. The analysis reveals that increased vocabulary proficiency is directly accompanied by improvements in students' ability to respond accurately to training commands, both cognitively and practically. These findings emphasise that English instruction within sports education should be directed explicitly toward strengthening technical vocabulary relevant to training and athletics. Students who master sports-related terminology in English are more likely to follow coaching instructions, participate in internationally standardised training, and enhance their readiness to engage in global sports environments. Therefore, integrating contextual vocabulary content into English language curricula is a crucial strategy for fostering the professionalism of sports students.

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