



# The Influence of Learning Styles and Student Motivation on Swimming Practice Achievement in Physical Education Students at Universitas Cut Nyak Dhien Langsa

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## Abstract

### Background

Student achievement in swimming practice is influenced by multiple factors, including learning styles and achievement motivation. Understanding these factors is essential for improving educational outcomes in physical education programs.

### Objectives

This study aimed to analyze the influence of learning styles and achievement motivation on the swimming practice achievement of Physical Education students at Universitas Sains Cut Nyak Dhien Langsa.

### Methods

The study employed a quantitative approach with a total of 23 fifth-semester students selected through proportional random sampling. Data were collected using documentation of swimming practice scores and questionnaires on learning styles and motivation. Pearson product-moment correlation and multiple regression analysis were applied at a 5% significance level.

### Results

Findings showed that learning styles had a significant positive effect on swimming practice achievement (contribution: 10.2%), achievement motivation also had a significant positive effect (contribution: 9.6%), and the two variables combined contributed 16.6% to swimming practice achievement.

### Conclusion

Learning styles and achievement motivation significantly influence swimming practice achievement among Physical Education students. Educators are encouraged to foster effective learning strategies and strengthen student motivation to optimize performance in practical courses.

**Keywords:** Learning Styles, Achievement Motivation, Swimming Practice Achievement, Physical Education

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## INTRODUCTION

Sports education in Indonesia plays a strategic role in preparing professional educators, coaches, and sports managers who are capable of competing at national and international levels. Universities are expected to produce creative, independent, and skilled graduates who can meet the demands of the sports industry while fulfilling the *Tri Dharma Perguruan Tinggi* (threefold mission of higher education) through teaching, research, and community service (Syah, 2005). To achieve this goal, students must demonstrate strong academic and practical performance, particularly in sport-specific skills such as swimming.

Student achievement in practical courses is influenced by both internal and external factors. Muhibbin Syah (2005) categorizes these into three domains: internal factors, such as physical and psychological conditions; external factors, such as learning environments and available resources; and learning approaches, such as the strategies and methods used by students. Two of the most critical internal factors affecting achievement are learning styles and motivation.

Learning style is defined as a consistent way of perceiving, processing, and understanding information (Nasution, 2008). According to DePorter and Hernacki (2009), the three dominant learning styles are visual,

auditory, and kinesthetic. Students who recognize and apply their learning style appropriately tend to process information more effectively, thereby achieving higher academic and practical performance.

In addition to learning style, motivation also plays a vital role in student success. Achievement motivation is the psychological drive that encourages individuals to perform tasks better, faster, and more effectively (McClelland, 1961). Individuals with high achievement motivation typically display responsibility, goal orientation, creativity, and persistence in pursuing excellence (Sobur, 2003). In the field of sports, achievement motivation is particularly crucial, as it fosters discipline, resilience, and continuous improvement (Winkel, 1996).

Swimming practice, as part of the Physical Education curriculum, is not only important for academic assessment but also for developing practical competencies relevant to water safety, rescue operations, and competitive sports (Gagné, 1985). Preliminary observations at Universitas Sains Cut Nyak Dhien Langsa indicated that student achievement in swimming practice had not met the expected standards. This raises the question of whether differences in learning styles and levels of achievement motivation may contribute to these outcomes.

Therefore, this study aims to analyze the influence of learning styles and achievement motivation on swimming practice achievement among Physical Education students at Universitas Sains Cut Nyak Dhien Langsa. The findings are expected to provide theoretical insights and practical recommendations for improving teaching strategies and fostering student motivation in sports education programs.

## METHOD

### Participant

The study involved 23 students from the fifth semester of the Physical Education and Health Study Program at Universitas Sains Cut Nyak Dhien Langsa. Participants were selected using proportional random sampling, as the population was considered homogeneous. The sample size determination referred to the Krejcie and Morgan table (Sugiyono, 2010).

### Research Design

This study employed a quantitative correlational design to examine the influence of learning styles and achievement motivation on swimming practice achievement. Data were collected from March to April 2025 at the Vitra Tirta Raya Swimming Pool in Langsa. The independent variables were learning styles and achievement motivation, while the dependent variable was swimming practice achievement.

#### Data Collection Instruments

1. **Documentation:** swimming practice scores obtained from the official records of the Physical Education department.
2. **Questionnaire:** a Likert-scale questionnaire measuring learning styles and achievement motivation. The response options included “Strongly Agree,” “Agree,” “Disagree,” and “Strongly Disagree.”

### Data Analysis

Data were analyzed using descriptive statistics, Pearson product–moment correlation, and multiple regression analysis at a 5% significance level. Descriptive statistics provided means, standard deviations, and ranges of each variable. Correlation analysis was used to determine the relationship between learning styles, motivation, and swimming practice achievement. Multiple regression analysis was applied to measure the combined influence of learning styles and motivation on achievement.

## RESULTS AND DISCUSSION

### Results

The descriptive analysis indicated that students' learning styles were categorized as high, with an average score of 70.19 and a standard deviation of 6.67. Scores ranged from 57 to 93, suggesting that most students demonstrated effective approaches in processing information and engaging with learning activities. Similarly, achievement motivation among students was also in the high category, with a mean score of 62.78 and a standard deviation of 7.44, ranging from 45 to 75. These findings reflect that the majority of students showed a strong drive to succeed and improve their performance. Furthermore, the average score for swimming practice achievement was 77.29 with a standard deviation of 4.32, ranging between 70 and 91, indicating that students' practical performance in swimming was generally strong.

The correlation analysis further demonstrated that learning styles had a significant positive relationship with swimming practice achievement ( $r = 0.320$ ,  $p < 0.05$ ). This suggests that students with

well-developed learning styles tended to achieve better outcomes in swimming practice. Achievement motivation also showed a significant positive correlation with swimming practice achievement ( $r = 0.310$ ,  $p < 0.05$ ), indicating that students with higher levels of motivation performed better in swimming practice.

Finally, the regression analysis confirmed that learning styles and achievement motivation together contributed significantly to swimming practice achievement ( $R = 0.408$ ,  $R^2 = 0.166$ ,  $p < 0.05$ ). This means that both factors jointly explained 16.6% of the variance in swimming practice achievement, while the remaining 83.4% was influenced by other factors beyond the scope of this study.

## Discussion

The findings of this study demonstrate that both learning styles and achievement motivation significantly influence swimming practice achievement among Physical Education students at Universitas Sains Cut Nyak Dhien Langsa. The descriptive results indicated that students generally possessed strong learning styles and high levels of motivation, which were reflected in their relatively good swimming practice performance. These results confirm the theoretical framework that student achievement is shaped not only by external learning conditions but also by internal factors such as cognitive approaches and psychological drives (Syah, 2005).

The positive relationship between learning styles and swimming practice achievement suggests that students who understand and apply their preferred way of learning are better able to master practical skills. This finding aligns with the perspective of DePorter and Hernacki (2009), who emphasized that visual, auditory, and kinesthetic learning preferences can enhance the effectiveness of knowledge acquisition. Students with stronger awareness of their learning style likely processed information more efficiently and transferred it into practical performance in swimming.

Similarly, the significant effect of achievement motivation on swimming practice achievement highlights the importance of psychological readiness in sports education. Students with high achievement motivation tend to be more persistent, responsible, and committed to their goals, which in turn leads to better performance outcomes. This result supports McClelland's (1961) theory of achievement motivation, which posits that individuals driven by the desire to succeed are more likely to perform better in academic and practical tasks. It also resonates with Sobur (2003), who argued that achievement motivation stimulates creativity, resilience, and competitiveness in students.

The regression results further confirmed that learning styles and achievement motivation jointly contributed 16.6% to swimming practice achievement. Although this contribution is statistically significant, it also indicates that the majority of variance (83.4%) is explained by other factors. These may include the quality of teaching methods, availability of facilities, social support, and students' physical readiness. This observation is consistent with Syah's (2005) categorization of internal, external, and learning approach factors that collectively shape learning achievement.

Overall, the study underscores the importance of addressing both cognitive and motivational aspects in sports education. For practical implications, educators should design teaching strategies that accommodate diverse learning styles, while also fostering motivation through goal-setting, feedback, and supportive learning environments. By doing so, universities can not only improve swimming practice achievement but also enhance the overall quality of sports education.

## CONCLUSION

This study concludes that both learning styles and achievement motivation have a positive and significant influence on swimming practice achievement among Physical Education students at Universitas Sains Cut Nyak Dhien Langsa. Specifically, learning styles contributed 10.2% to performance outcomes, while achievement motivation contributed 9.6%. When combined, these two factors explained 16.6% of the variance in students' swimming practice achievement. These findings indicate that students who are able to apply their preferred learning styles effectively and who possess strong motivation to achieve are more likely to demonstrate higher levels of performance in practical courses.

However, the relatively modest contribution of these two variables suggests that other factors such as teaching methods, learning facilities, social support, and physical fitness also play a crucial role in determining student achievement. For this reason, it is recommended that educators not only accommodate diverse learning styles and foster student motivation but also create supportive learning environments and provide adequate resources to optimize practical learning outcomes.

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## AUTHOR CONTRIBUTION STATEMENT

. Muhammad Syatiri was responsible for the conceptualization of the study, the development of the research design, data collection, data analysis, and drafting of the original manuscript. Boihaqi contributed to the methodological framework, validation of the data, supervision of the research process, and the critical review and editing of the manuscript. Aldiansyah Akabar assisted in data collection, data curation, and preparation of visual materials. Husaini contributed to the literature review and participated in the review and editing of the manuscript. Rawi Juanda provided resources, administrative support, and assisted in validating the findings. Musran contributed to the interpretation of the data, offered critical revisions, and approved the final version of the manuscript. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work.

## CONFLICT OF INTEREST AND FUNDING

There is no conflict of interest

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