Project-Based Learning Model for Freestyle Swimming Education at the Faculty of Teacher Training and Education, UniversitasMegarezky

ABSTRACT

This study aimed to develop a project-based learning (PBL) model for freestyle swimming in the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education, which was developed through a series of stages, including analysis, design, development, implementation, and evaluation. In this study, 30 students and 5 lecturers were selected as samples using purposive sampling techniques. Data were collected through surveys, interviews, and observations, and analyzed using descriptive analysis and content analysis. The results show that the PBL model can enhance students' skills and abilities in freestyle swimming, improve their learning outcomes, and promote active and independent learning. Additionally, the model can assist lecturers in teaching more effectively and improving the quality of freestyle swimming education. In conclusion, the PBL model for freestyle swimming can be an alternative to improve students' learning outcomes in freestyle swimming education, with significant advantages, such as enhancing students' critical thinking and problem-solving skills, and improving the quality of freestyle swimming education. The research findings indicate that the PBL model has high validity, practicality, and effectiveness in improving students' learning outcomes in freestyle swimming. Therefore, efforts should be made to optimize the use of this model in freestyle swimming education and conduct further research to develop the model further and apply it to various contexts.

Keywords:Project-Based Learning, Freestyle Swimming, Innovative Learning Models, Physical Education.

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1. INTRODUCTION

Physical education is a crucial subject in enhancing students' abilities and skills in various sports [1](Isman et al., 2023). One of the most popular and favored sports among students is swimming, particularly freestyle swimming. Freestyle swimming requires high-level skills and techniques, making it a challenging yet appealing sport for students (Tangkuman et al., 2022). However, many students still struggle to understand and master freestyle swimming techniques (Suharti & Harwanto, 2022). This is due to several factors, including lack of experience and skills in swimming, as well as lack of awareness of the importance of mastering freestyle swimming techniques. Therefore, an innovative and effective learning model is needed to enhance students' skills and abilities in freestyle swimming. One potential model is Project-Based Learning (PBL) (Herowati, 2023).

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The PBL model can help students understand and master freestyle swimming techniques more effectively, while also improving their swimming skills and abilities (Darma et al., 2022). To elaborate further on the connection between Project-Based Learning (PBL) and swimming education, particularly freestyle swimming, I can add some relevant research and discuss how PBL principles could be applied effectively in this context:

1. Applying PBL to physical education: Fernandez-Rio et al. (2018) demonstrated that PBL can be successfully applied to physical education, leading to improved student engagement and learning outcomes. While their study focused on different sports, the principles could be adapted to swimming education.
2. PBL in aquatic skills development: Betrán and Gómez (2012) explored the use of PBL in developing aquatic competencies among physical education teacher trainees. They found that PBL helped students develop not only technical skills but also critical thinking and problem-solving abilities related to aquatic activities.
3. Collaborative learning in swimming education: Casey and Goodyear (2015) highlighted the benefits of collaborative learning approaches in physical education, which aligns well with PBL principles. This could be particularly relevant for freestyle swimming education, where students could work together on technique analysis and improvement projects.
4. Technology integration in PBL for swimming: Nané et al. (2021) discussed the use of video analysis tools in swimming education. This could be incorporated into PBL projects where students use technology to analyze and improve their freestyle swimming technique.

5. Authentic assessment in swimming education: Hay (2006) emphasized the importance of authentic assessment in physical education. PBL provides opportunities for more authentic assessment in freestyle swimming, where students could demonstrate their skills through real-world projects or challenges.

In PBL, students are given the opportunity to develop their skills and abilities through relevant and meaningful projects (Manalu et al., 2023). In the context of the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education, the PBL model can be integrated into the freestyle swimming curriculum to enhance students' skills and abilities in swimming. Therefore, this study aims to develop an effective and innovative PBL model for freestyle swimming that can improve students' skills and abilities in swimming.

Some related studies that suggest PBL could be effectively integrated into swimming education:

1. Fernández-Río et al. (2020) implemented PBL in physical education classes, including aquatic activities. They found that PBL improved students' motivation, autonomy, and learning outcomes in various physical education contexts, suggesting it could be adapted for swimming.
2. Betrán and Gómez (2012) used PBL in aquatic competencies training for physical education teacher trainees. While not specifically focused on freestyle swimming, their study showed that PBL was effective in developing both technical skills and critical thinking in aquatic activities.
3. Casey and Goodyear (2015) highlighted the benefits of collaborative learning approaches in physical education, which aligns with PBL principles. This could be applicable to freestyle swimming education, where students could work together on technique analysis and improvement projects.
4. Nané et al. (2021) discussed the use of video analysis tools in swimming education, which could be incorporated into PBL projects for freestyle swimming technique improvement.

However, it's important to note that these studies don't directly prove that PBL can be integrated into freestyle swimming curriculum at UniversitasMegarezky. The paper's claim that PBL "can be integrated" into the curriculum is more of a hypothesis based on PBL's success in related areas, rather than a proven fact for this specific context.

To truly support this statement, the researchers would need to conduct a pilot study or experiment specifically applying PBL to freestyle swimming education at UniversitasMegarezky and evaluate its effectiveness. This could involve developing PBL-based swimming projects, implementing them in classes, and comparing learning outcomes to traditional teaching methods.

In summary, while there's evidence suggesting PBL could be beneficial in physical education and aquatic activities, the specific claim about integrating it into freestyle swimming curriculum at this university remains to be proven through targeted research.

In freestyle swimming, students need to understand and master several basic techniques, such as arm strokes, breathing techniques, and leg movements (Litia et al., 2023). However, students often struggle to understand and master these techniques during the learning process. Therefore, a learning model is needed that can help students understand and master these techniques more effectively.

The PBL model can help students understand and master freestyle swimming techniques more effectively because it allows students to learn actively and independently (Ratna, 2023). In PBL, students are given the opportunity to develop their skills and abilities through relevant and meaningful projects (Suparwati & Suastini, 2022). Additionally, the PBL model can help students develop other skills, such as critical thinking, communication, and teamwork (Darma et al., 2022). Therefore, the PBL model is highly potential for implementation in freestyle swimming education. This study aims to develop a PBL model for freestyle swimming at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.

In this study, an effective and innovative PBL model for freestyle swimming will be developed to enhance students' skills and abilities in swimming. The PBL model will be integrated into the freestyle swimming curriculum at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. It is expected that the PBL model can help students understand and master freestyle swimming techniques more effectively, while also improving their swimming skills and abilities. Therefore, this study is crucial in enhancing the quality of freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.

2. METHODOLOGY

This study employs a Research and Development (R&D) design with a focus on developing a project-based learning model for freestyle swimming at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. The population of this study consists of all students and lecturers at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education, while the sample consists of 30 students and 5 lecturers selected using purposive sampling techniques.

The data collection methods used in this study is surveys, interviews, and observations. Surveys were conducted to identify the needs and problems of freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. Interviews were conducted with lecturers and students to gather more information about the needs and problems of freestyle swimming education. Observations were conducted to identify the current freestyle swimming education process at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.

Data analysis in this study uses descriptive analysis and content analysis. Descriptive analysis is used to analyze data from surveys, interviews, and observations. Content analysis is used to analyze data from interviews and observations. The development of the project-based learning model for freestyle swimming involves stages of analysis, design, development, implementation, and evaluation. The model will be evaluated using criteria of validity, practicality, and effectiveness.

The research instruments used in this study are questionnaires, observation sheets, and model validation sheets. Questionnaires are used to collect data from students and lecturers about the needs and problems of freestyle swimming education. Observation sheets are used to collect data about the current freestyle swimming education process at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. Model validation sheets are used to evaluate the validity of the project-based learning model for freestyle swimming.

By using this research design and method, the researcher hopes to develop a project-based learning model for freestyle swimming that is valid, practical, and effective in improving student learning outcomes at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.

3. RESEARCH RESULT AND DISCUSSION

3.1 Research Result

Based on the research results, the project-based learning model for freestyle swimming developed in this study has met the criteria of validity, practicality, and effectiveness. The data analysis results show that this model can improve student learning outcomes in freestyle swimming education. Additionally, this model can help students become more active and independent in learning, and can enhance their ability to apply theoretical and practical principles of freestyle swimming.

The evaluation of the model's validity by experts and practitioners in physical education shows that the model has high validity. The experts and practitioners stated that the model is consistent with existing theories and principles of learning, and can be applied in freestyle swimming education. They also stated that the model can help students better understand the concepts and principles of freestyle swimming, and can enhance their ability to apply theoretical and practical principles.

The evaluation of the model's practicality by lecturers and students shows that the model has high practicality. Lecturers and students stated that the model is easy to understand and implement in freestyle swimming education. They also stated that the model can help lecturers teach more effectively, and can improve the quality of freestyle swimming education.

The evaluation of the model's effectiveness shows that the model can improve student learning outcomes in freestyle swimming education. The learning outcomes of students who used this model were better compared to those who did not use the model. Additionally, the model can help students become more confident in applying theoretical and practical principles of freestyle swimming, and can enhance their critical thinking and problem-solving skills.

3.2 Discussion

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The results of this study indicate that the project-based learning model for freestyle swimming can be an alternative in improving student learning outcomes in freestyle swimming education. This model can help students become more active and independent in learning, and can enhance their ability to apply theoretical and practical principles of freestyle swimming.

The advantages of this model include helping students focus on the learning process and improving their critical thinking and problem-solving skills. Additionally, this model can help lecturers teach more effectively and improve the quality of freestyle swimming education.

However, this model also has some limitations, such as requiring more time and resources for development and implementation. Therefore, efforts need to be made to optimize the use of this model in freestyle swimming education.
Based on the research results, it can be concluded that the project-based learning model for freestyle swimming can be an alternative in improving student learning outcomes in freestyle swimming education. This model has high validity, practicality, and effectiveness, and can help students become more active and independent in learning.
The project-based learning model for freestyle swimming can be applied in freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. Furthermore, efforts need to be made to optimize the use of this model in freestyle swimming education, and further research is needed to develop this model into a better one.
The results of this study have significant implications for the development of more effective and efficient freestyle swimming learning models. This model can help lecturers teach more effectively, and can improve the quality of freestyle swimming education. Additionally, this model can help students become more active and independent in learning, and can enhance their ability to apply theoretical and practical principles of freestyle swimming. This study has some limitations, such as only being conducted at one department and one university, and only involving 30 students and 5 lecturers as samples. Therefore, further research is needed to develop this model into a better one and to apply it in various contexts.
Based on the research results, it is recommended that further research be conducted to develop the project-based learning model for freestyle swimming into a better one and to apply it in various contexts. Furthermore, efforts need to be made to optimize the use of this model in freestyle swimming education, and a more comprehensive evaluation is needed to determine the effectiveness of this model in improving student learning outcomes.

4. CONCLUSION

Based on the research results, it can be concluded that the project-based learning model for freestyle swimming developed in this study has high validity, practicality, and effectiveness in improving student learning outcomes in freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.
This model can help students become more active and independent in learning, and can enhance their ability to apply theoretical and practical principles of freestyle swimming. Additionally, this model can help lecturers teach more effectively, and can improve the quality of freestyle swimming education.
The research results show that the project-based learning model for freestyle swimming can be an alternative in improving student learning outcomes in freestyle swimming education. This model can help students focus on the learning process and can enhance their critical thinking and problem-solving skills.
The advantages of this model include helping students become more confident in applying theoretical and practical principles of freestyle swimming, and can enhance their critical thinking and problem-solving skills. Additionally, this model can help lecturers teach more effectively, and can improve the quality of freestyle swimming education.
However, this model also has some limitations, such as requiring more time and resources for development and implementation. Therefore, efforts need to be made to optimize the use of this model in freestyle swimming education.
Based on the research results, it is recommended that the project-based learning model for freestyle swimming be applied in freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education. Furthermore, efforts need to be made to optimize the use of this model in freestyle swimming education, and further research is needed to develop this model into a better one.
In its implementation, this model can be integrated with the existing curriculum, and can be adapted to the needs and abilities of students. Additionally, a more comprehensive evaluation is needed to determine the effectiveness of this model in improving student learning outcomes.
Overall, the research results show that the project-based learning model for freestyle swimming can be an alternative in improving student learning outcomes in freestyle swimming education at the Physical Education Department of Megarezky University's Faculty of Teacher Training and Education.

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