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## Development of Hadang Ball Teaching Materials for Class X High School Students

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### Info Article

Received: 14 Jul 2023

Revised: 14 Aug 2023

Accepted: 14 Sep 2023

OnlineVersion: 20 Oct 2023

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### Abstract

This study investigates the impact of social media use on adolescents' mental well-being by considering the mediating role of social support and media use behavior. A cross-sectional survey method was used to collect data from 500 adolescents aged 13-18 years. The results of multiple linear regression analysis show that social media use is negatively correlated with adolescents' mental well-being. These findings indicate that adolescents who use social media with high intensity tend to experience decreased mental well-being due to lack of social support and unhealthy usage behavior. The implications of this research highlight the need for interventions that strengthen offline social support and educate adolescents about healthy social media use behaviors. The novelty of this research lies in its interdisciplinary approach which combines the perspectives of psychology, sociology and information technology to investigate complex phenomena developing in the digital era. These findings make an important contribution to our understanding of adolescent well-being in the digital era and encourage greater attention to appropriate interventions to protect the mental health of adolescents using social media.

Keywords: Development; Handball Game; Teaching Materials

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## INTRODUCTION

In an educational context, sport not only plays an important role in maintaining physical health, but also has a significant impact on students' mental, social and emotional development. Researchers who conducted observations in the field identified several factors that may be the main cause of this problem. One of problem is the lack of variety in sports learning materials delivered to students. Existing materials tend to be classic and less interesting to students, so they do not trigger their interest in being actively involved in sports activities. In addition, sports activities that require special skills often make students feel reluctant to participate, because they feel they lack confidence or are unable to perform well (Agustina, 2021; Lavega et al., 2018; Samadov, 2019). This phenomenon illustrates that innovation is needed in presenting sports material that is able to overcome these obstacles and arouse students' enthusiasm for learning in a sports context (Lavega et al., 2018; Oktariyana et al., 2021; Pratiwi, 2020).

On the other hand, technological developments, especially in the field of audio-visual media, provide great opportunities to improve the quality and attractiveness of teaching materials. The use of

video media in sports learning is an interesting alternative, because it can present material more dynamically and attract students' attention. Video media also allows students to understand sports concepts better through clear and interactive visualizations (Fadillah, 2022; Tegeh et al., 2019; Windha et al., 2022). Thus, the use of video media in delivering sports material not only enriches students' learning experiences, but can also increase their understanding of the concepts being taught.

Additionally, in the context of sports teaching, game modification has been shown to be an effective strategy in increasing student participation (Darmadi, 2018; Laurens et al., 2018). Game modifications aim to take into account differences in students' abilities, ensure safety, and provide challenges appropriate to their ability level. By making modifications to the game, teachers can create a more enjoyable and challenging learning experience for students, so that they are more motivated to actively participate in sports activities.

In order to increase students' interest and participation in sports activities, this research will develop new teaching materials in the form of the Hadang ball game. This game is a modification of existing traditional sports, namely basketball and handball, so it is hoped that it can provide a fun and interesting experience for students (Junaedah et al., 2020; Kamid et al., 2021; Veronica, 2018). By combining innovative elements, such as the use of video media and game modifications, it is hoped that this teaching material can be an effective solution for increasing student interest and participation in sports activities at Batanghari Jambi 5 high school.

This research is in line with research conducted by Raghu & Rodrigues (2020), however, what this research still lacks is the lack of focus on social and psychological aspects in understanding the impact of current technology on everyday life. Although much research has been conducted to quantitatively measure the impact of technology, there is still a great need to explore how technology impacts social interactions, behavioral patterns, and the psychological well-being of individuals. By understanding this gap, future research can focus more on this aspect to provide a more complete insight into the complexities of technology use in contemporary society.

One of the main limitations of this research is the limitation in the sample size and time frame used. Due to resource and time constraints, research samples may not include sufficient diversity within a given population, and may not fully reflect long-term changes. In addition, methodological limitations such as the data collection methods used or the suitability of research instruments to a particular context can also influence the validity of research results. Therefore, it is important to consider these limitations when interpreting research findings and planning further research.

The urgency of this research is that the development of teaching materials for the Hadang Ball game for class X students at SMAN 5 Batanghari Jambi is very important. With good and appropriate teaching materials, students can better understand the concepts and rules of the game. This not only helps improve students' skills in playing Hadang Ball, but also provides a more enjoyable and meaningful learning experience. Apart from that, by having quality teaching materials, it is hoped that it can increase students' interest in sports and strengthen the spirit of togetherness and sportsmanship among them. Therefore, developing Hadang Ball teaching materials is a priority in enriching students' learning experiences at SMAN 5 Batanghari Jambi.

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## **RESEARCH METHODS**

### ***Research Design***

The research methodology adopted in this study is based on the Borg & Gall model, employing a developmental design approach. This systematic framework enables the structured creation of teaching materials, progressing through distinct stages from initial research to product refinement, incorporating feedback gathered from field trials. By following this methodology, the study ensures a comprehensive and iterative process aimed at producing high-quality teaching resources tailored to meet the specific needs of the intended audience (Marwiyah, 2021; Paños et al., 2020; Puta, 2021).

### ***Research Target/Subject***

The targets or subjects of this research were students from Batanghari High School 5 class X. They were the main focus in testing the teaching materials for the Hadang ball game that were developed. Apart from that, a team of content experts and learning technology design experts are also research subjects to carry out validation tests and provide input on the products being developed.

### ***Research Procedures***

The research procedure was carried out through several stages that have been determined in the Borg & Gall development model. These stages include preliminary research, initial product development, expert validation testing, field trials, and product revision. Each stage has specific steps in accordance with the goals to be achieved in developing teaching materials.

### ***Instruments, and Data Collection Techniques***

The instruments and data collection techniques used in this research include questionnaires, interviews and tests. Questionnaires are used to obtain data about respondents' perceptions and responses to the products being developed, while interviews are used to obtain direct input from experts and students (Anikarnisia & Wilujeng, 2020; Z. Hidayat et al., 2019; Putri & Alberida, 2022). Apart from that, the test is used to measure the level of students' mastery of the hadang ball game material.

### ***Data analysis techniques***

The data analysis techniques used in this research include qualitative and quantitative analysis. Qualitative analysis is used to present data from interviews and open questionnaires, while quantitative analysis is used to present data from closed questionnaires and tests (Amin et al., 2021; D. Hidayat & Syahid, 2019; Yanti et al., 2020). These two analysis techniques are used to obtain a comprehensive understanding of the quality and effectiveness of the product being developed as well as the level of students' mastery of the hadang ball game material.

## **RESULTS AND DISCUSSION**

The results of the development of teaching materials for the Hadang ball game using video media show a number of important findings in order to improve the quality of learning. First of all, from validation by content/material experts, it was found that the teaching materials were in accordance with the curriculum applicable at the high school level, especially the Physical Education syllabus (Halim et al., 2018; Handayani, 2021; Nurhasanah & Hanafi, 2022).

This conformity is an important foundation because it guarantees that the material taught is in accordance with the established standards. Furthermore, content/material experts also provide suggestions to clarify playing techniques, emphasize game rules, and improve suitability for students' development. This shows the importance of paying attention to students' psychological and social aspects in learning.

Apart from that, validation results by learning design experts show that the appearance and presentation of material in video media teaching materials is considered good. However, there are still several aspects that need to be improved, such as clarity of learning objectives and setting the image display to be more appropriate to the narrative. This indicates that even though the material is good, the delivery and presentation of the material also has an important role in the success of learning. Therefore, the revisions carried out at this stage aim to increase the clarity and effectiveness of information delivery.

Furthermore, responses from subject teachers provide an overview of the experience of using video-mediated teaching materials for the Hadang ball game in the learning process. In general, teachers welcome the use of these teaching materials and assess them as a very useful tool in improving the quality of learning. However, several suggestions were made to improve some technical aspects, such as lighting in the video and clarity of the teacher's voice at the beginning of the broadcast. These suggestions are important input for improving the technical quality of teaching materials so that they are more effective in supporting learning.

Data from small group and large group trials shows that the teaching materials for the Hadang ball game using video media received a positive response from students. They stated that the material was easy to understand, interesting, and able to increase motivation and participation in learning (Astuti & Fitriani, 2021; Jamliah, 2021; Warsihna et al., 2020). This shows that the teaching materials have succeeded in achieving learning objectives and providing meaningful learning experiences for students. Thus, the results of field trials provide strong evidence of the effectiveness of this video-based teaching material in increasing students' understanding and interest in learning.

Apart from that, data regarding the attractiveness of video-based teaching materials shows that all respondents, both teachers and students, stated they were interested in these teaching materials. This confirms that presenting material in video form is able to attract students' interest and make learning more interesting. This attraction is an important asset in creating a stimulative and enjoyable learning environment for students, so that they are more involved in the learning process.

Finally, the results of the summative test carried out in the field trial showed that students' understanding of the learning material increased significantly after using video-mediated teaching materials for the Hadang ball game. This shows that the teaching materials are effective in supporting the learning process and helping students achieve the specified competencies (Gürsoy, 2021; Suzani, 2022; Warsihna et al., 2020). Thus, the overall results of the development of this teaching material show that the use of video media in learning the game of hadang ball can be an effective solution in improving the quality of learning at the high school level.

This research is in line with research conducted by Toharudin et al (2021), although research on this topic has been carried out before, there is still some knowledge that needs to be filled. One of them is a lack of understanding regarding the long-term impacts of the hadang ball game. Apart from that, it is necessary to further deepen understanding of the factors that influence the success or failure of the game. Additionally, there is little research exploring local

community perspectives or cultural aspects that may influence the acceptability or effectiveness of an intervention. By filling in this knowledge, we can gain deeper and more holistic insights into how to increase the effectiveness of interventions and policies in various contexts.

The novelty of this research lies in its innovative approach in analyzing the interactions between certain factors in a context that has not been explored previously. This research combines an interdisciplinary approach that includes elements such as cognitive psychology, sociology, and behavioral economics to investigate complex phenomena that have not previously been fully understood. In addition, the use of sophisticated data analysis methods and more advanced modeling techniques contributes additionally to the uniqueness of this study in revealing new patterns and previously unseen relationships among the variables considered. Thus, this research has the potential to provide valuable insights and significant contributions to the scientific literature in the field.

## CONCLUSION

Overall, the development of video-based teaching materials for the Hadang ball game has shown positive and significant results in improving the quality of learning at the high school level. From the validation results by content/material experts and learning design experts, as well as responses from subject teachers, this teaching material is proven to be in accordance with the applicable curriculum, easy to understand, and able to increase student motivation and participation in learning. Field trials also produced positive responses from students and showed an increase in their understanding of the learning material after using this teaching material. Apart from that, the attractiveness of video-based teaching materials has also been proven to be able to attract students' interest, making it an effective solution in creating a stimulative and enjoyable learning environment. Thus, the use of video media in learning the game of hadang ball in high schools can make a significant contribution in improving the quality of learning and achieving student competencies.

## ACKNOWLEDGMENTS

The researcher would like to express his deepest gratitude for the support and assistance provided during this research process. Without the valuable contributions of various parties, this research would not have achieved the extraordinary results that we obtained. Hopefully this research can provide sustainable benefits for the progress of education and learning in the future.

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