

## Android-based basic combat learning model

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### ABSTRACT

**Problems:** This research is motivated by the limited teaching and learning activities of Basic Tarung Derajat in the Department of Sports Coaching, because the lecture hours are only 2 credits limiting student learning activities on campus. Purpose: This research aims to produce a learning product for students as well as in the form of materials / textbooks and an android application that contains Basic Tarung Derajat material in order to create more effective and efficient lectures. The subject of this research is students who take the Basic Tarung Derajat course. **Methods:** This research was conducted using the Development Research Method, which is a research method used to produce certain products, and test the effectiveness of these products which consist of: (1) Analyze (observation), (2) Design (designing the Basic Tarung Derajat lecture model), (3) Development (development of the Basic Tarung Derajat lecture model), (4) Implementation (implementation of models that have been made in the form of modules and applications), and (5) Evaluation (the results obtained from the application of the evaluation model of the results of research and models that have been made) then the final TKT is at level 3 **Results:** The results showed that (1) the development of the Android-based Basic Tarung Derajat learning model was carried out using the Thunkable.apk application named Tarung Derajat Dasar. (2) The validity of the media product gets a percentage of validity by the Material Expert of 70% in the category "valid". **Conclusion:** The results of student responses to interactive learning media based on android in the initial trial obtained score with a percentage of 80% with the category "practical" and on the field trial obtained a score with a percentage of 85% with the category "very practical". In previous studies, no one has used applications for learning Basic Tarung Derajat, while in this study researchers used applications to help students practice outside of lecture hours.

**Keywords:** basic tarung derajat, learning model, android application, student.

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### Introduction

Basic Tarung Derajat is an elective course in the Sports Coaching Department. To engage directly in various learning experiences through selected movement activities that are carried out systematically. However, a deep and thorough understanding of the concept is not enough to be able to teach Tarung Derajat Dasar effectively. Lecturers must also understand learning models. Models of teaching are really models of learning (Bruce and Marsa, 1996). they define learning model as the organization of the environment that can lead learners to interact and learn how to learn. Because each learner is unique and has different ways of learning according to his/her development and historical learning background, the learning models that develop are very diverse. Bruce and Marsha (1996), revealed no less than 18 learning models, these models can be selected or combined to be applied in the learning process of Basic Tarung Derajat.

The current condition of lecture patterns in universities that change by using offline and online patterns alternately depending on government regulations causes a lack of student motivation to carry out practical lecture activities in the field. One of the lecturers who teaches in the Basic Tarung Derajat course said, for students to do Basic Tarung Derajat lectures at home is very difficult to condition, because when they are at home students are difficult to remember the material that has been practiced offline, this is certainly a concern for researchers which in accordance with the government's expectations can control education by online, but for Basic Tarung Derajat courses it becomes a polemic and a big obstacle because it is practical. Online lectures are an online teaching and learning process (Alnedral, 2016; Noviatmoko & Widodo, 2016; Suryadi et al., 2022; Yanti et al., 2022).

Online learning makes an educator/lecturer create a digital textbook. One of the digital textbooks can utilize android. This android-based learning presentation can be more interactive. This online lecture

process has no access restrictions, this is what allows the teaching and learning process to be carried out for a longer time (Suhery et al, 2020). the implementation of online lectures without direct face-to-face but online requires an internet network (Aryati, 2021). The use of android that everyone can access easily and at any time. Research on the development of Android-based textbooks is supported by research conducted by Kuswanto (2020) and Handayani, A. S., & Lindawati, L. (2019) and Gita Dwi Oktiana (2015) The results of the study are said to be very feasible. This can show that the use of textbooks can help students in learning learning material. (Ahyar et al., 2021, 2021; Khoerunnisa & Aqwal, 2020; Mirdad, 2020)

Android application-based learning media is something new in the world of education, this learning media is usually in the form of an educational application or application that contains learning materials and materials. The application product can be downloaded on smartphones and gadgets with the android operating system, usually available on google play or play store. Basically, learning media based on android applications is a learning media product in the form of an application that can be downloaded or downloaded on an android-based smartphone or downloaded on an android-based smartphone. The android application is a medium that is classified as an electronic form of learning media, because the android application product is run on smartphones and gadgets with the android operating system. Which smartphones and gadgets are one of the communication technologies. (kemendikbud, 2024).

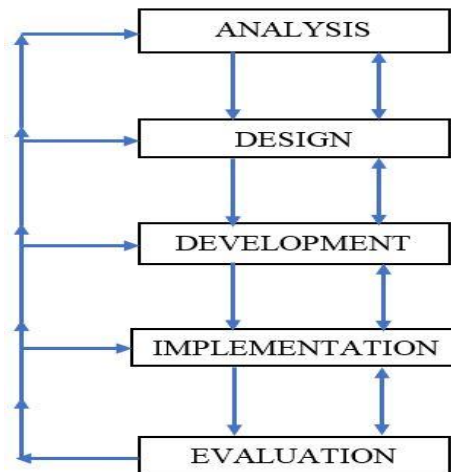
In previous research entitled Development of Learning Video Media for Tarung Derajat Athletes Training Unit (SATLAT), conducted by Riduan Saleh Lubis (2019). Research Results (1) Tarung Derajat material expert test is included in the excellent category (92.58%), (2) learning design expert test in the assessment with good category (66.88%), (3) software engineering expert test is in the good category (71.05%), (4) individual trials are in good qualifications (79.16%), (5) small group trials are in good qualifications (78.84%), (6) field trials are in very good qualifications (85.56%). The results of hypothesis testing prove that there is a significant difference between the results of athlete training taught using learning video media and the results of athlete training taught using conventional learning media. The training results of athletes who are taught using learning video media are 67% and higher than the group of athletes who are taught using conventional learning media, which is 59.50%.

There has been research related to the development of Tarung Derajat learning media that is packaged through learning videos, but there has not been seen a special design for the Basic Tarung Derajat learning model using android. For this reason, researchers will make a design of an interesting Basic Tarung Derajat learning model, and in accordance with the current curriculum and neatly packaged in an android application so as to facilitate lecturers and students in the teaching and learning process.

The use of android-based textbooks is one of the features that can be used for learning resources for students, android-based textbooks can be an alternative media for the teaching and learning process. Based on observations and interviews with lecturers teaching Basic Tarung Derajat courses, there is no android-based textbook in the lecture process. Textbooks are materials or lecture materials that are arranged systematically, which are used by teachers in the lecture process. Therefore, an android-based learning model is needed so that learning resources can be accessed easily, and increase learning and learning activities. (Lufthansa, 2020; Lufthansa et al., 2020; Prabowo et al., 2021; Wijaya, 2023). The purpose of this research is to create a form of android-based learning model that can be a tool to help students master the techniques taught at home and during lectures. So that there is no reason for students to follow Basic Tarung Derajat practice lectures both from home and on campus.

## Method

This research is development research using the ADDIE Model. The ADDIE research model as the name implies is a model that involves the stages of model development with five steps/phases of development including: Analysis, Design, Development or Production, Implementation or Delivery and Evaluations). The ADDIE model was developed by Dick and Carry in 1996 to design learning systems (Mulyanitiningsih, 2016). In the steps of product development, the ADDIE development research model is considered more rational and more complete. Mulyatiningsih (2016) suggests that this model can be used for various forms of product development in learning activities such as models, learning strategies, learning methods, media and teaching materials. ADDIE Development Research Model. The sample of this study were students who took the Basic Tarung Derajat course totaling 21 people.



### ADDIE Research Development Model Stages

1. **Analysis.** In the ADDIE development research model, the first stage is to analyze the need for new product development (models, methods, media, teaching materials) and analyze the feasibility and requirements of product development. The development of a product can be initiated by a problem in an existing/applied product. Problems can arise and occur because current or available products are not relevant to the needs of the target, learning environment, technology, characteristics of students and so on. then in this analysis stage the researcher will analyze the needs of PJOK learning in the research object's high school.
2. **Design.** The design activity in the ADDIE development research model is a systematic process that starts from designing the concept and content in the product. The design is written for each product content. Instructions for applying the design or making the product are written clearly and in detail. At this stage the product design is still conceptual and will underlie the development process in the next stage. The learning model design uses an android application that is designed to be as attractive as possible and easy to use.
3. **Development.** Development in the ADDIE development research model contains the realization of the product design that was previously made. In the previous stage, a conceptual framework for implementing a new product was developed. The conceptual framework is then realized into a product that is ready to be implemented. At this stage, it is also necessary to create instruments to measure product performance. Variations and interesting learning models are packaged in an application and can be used anywhere.
4. **Implementation.** The application of the product in the ADDIE development research model is intended to obtain feedback on the product created/developed. Initial feedback (initial evaluation) can be obtained by asking questions related to product development objectives. The application is carried out in reference to the product design that has been made. Implementation of learning models in the form of android for high school students.
5. **Evaluation.** The evaluation stage in the ADDIE model development research is carried out to provide feedback to product users, so that revisions are made according to the evaluation results or needs that cannot be met by the product. The ultimate goal of evaluation is to measure the achievement of development goals. Evaluation and revision of the application and implementation of research and research data collection

### Result

Research and development conducted by researchers is to develop a learning model of Basic Tarung Derajat based on android, the learning application is named "Tarung Derajat Dasar" made using Thinkable application and converted into google play store. The application consists of several components, namely, the initial appearance of the application, the main menu, as well as Basic Tarung Derajat material for students in the form of e-books. The android-based Basic Tarung Derajat learning model that has been developed is then validated by material experts, media experts, learning experts and reviewed by 10 students who were randomly selected in the initial trial. The assessment carried out by media experts obtained a percentage score of 70% in the range of 61-80% with the category valid/worthy of use needs revision, material experts obtained a percentage score of 75% in the range of 61-80% with the category valid/worthy of use needs revision, learning experts obtained a percentage score of 75% in the range of 61-80% with the category valid/worthy of use. After the initial trial stage, the media product was revised based on the results of comments and suggestions at the initial trial stage, namely adjusting the application

information referring to Uk Tarung Derajat Students, improving the application introduction and sorting out the learning videos to be displayed and the bibliography menu related to the reference sources taken. After product revision then researchers conducted a lap trial which was conducted on Tarung Derajat Basic section code 202310870061 with the number of students as many as 25 people. The aim is to find out how the student's response after using the andro-based Basic Tarung Derajat learning model application. At the field trial stage obtained a percentage score of 85% practicality in the range of 81-100% with a very practical category. Furthermore, the revision of the final product based on comments and suggestions from students at the field trial stage is to add a practice question menu, to download the Basic Tarung Derajat Application <https://x.thunkable.com/copy/883bbcc4a0813a454c1ea06a94ad8109>. Here is the form of display on the Basic Tarung Derajat learning application:

### Discussion

This research aims to produce a learning product for students as well as in the form of materials / textbooks and an android application that contains Basic Tarung Derajat material in order to create a more effective and efficient lecture. Android application-based learning media is something new in the world of education, this learning media is usually in the form of an educational application or application that contains learning materials and materials. The application product can be downloaded on smartphones and gadgets with the android operating system, usually available on google play or play store. Basically, learning media based on android applications is a learning media product in the form of an application that can be downloaded or downloaded on an android-based smartphone or downloaded on an android-based smartphone. The android application is a medium that is classified as an electronic form of learning media, because the android application product is run on smartphones and gadgets with the android operating system. Which smartphones and gadgets are one of the communication technologies (kemendikbud, 2024). The subject of this research is students who take the Basic Tarung Derajat course. This research was conducted using the Development Research Method, which is a research method used to produce certain products, and test the effectiveness of these products which consist of: (1) Analyze (observation), (2) Design (designing the Basic Tarung Derajat lecture model), (3) Development (development of the Basic Tarung Derajat lecture model), (4) Implementation (implementation of models that have been made in the form of modules and applications), and (5) Evaluation (the results obtained from the application of the evaluation model of the results of research and models that have been made) then the final TKT is at level 3. The results showed that (1) the development of the Android-based Basic Tarung Derajat learning model was carried out using the Thunkable.apk application named Tarung Derajat Dasar. (2) The validity of media products gets a percentage of validity by Material Experts of 70% in the "valid / feasible" category, Media Experts with a percentage of 75% in the "valid / feasible" category and Learning Experts with a percentage of 75% in the "valid / valid" category. feasible" (3) students' responses to this android-based PJOK learning model product at the initial trial stage obtained a practicality percentage of 80% in the "Practical" category. Then at the field trial stage the percentage of practicality was 85% with the category "Very Practical". This shows that media products increase student interest and motivation to learn.

### Conclusion

The development of android-based Basic Tarung Derajat learning model is made using Thunkable application and converted to google play store. The validity level of the media is feasible to use. The results of student responses to android-based interactive learning media in the initial trial obtained a score with a percentage of 80% with the category "practical" and in the field trial obtained a score with a percentage of 85% with the category "very practical". This shows that the product of the android-based Basic Tarung Derajat learning model, makes students more interested and motivated for Basic Tarung Derajat lectures.

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