

# Android-Based Pocket Book Development as an Effort to Increase Learning Motivation in Tax Administration Subject

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## ABSTRACT

This study aims to 1) develop Android-based pocketbook learning media. 2) To find out the increase in learning motivation of class XI students of Banking and Microfinance at SMK Negeri 1 Pasaman in the 2020/2021 academic year after using Android-Based Pocket Book learning media. The research method used is the research and development method (Research and Development) with the ADDIE development model which consists of five stages of development, namely Analysis, Design, Development, Implementation, and Evaluation. The research subjects were students of class XI Banking and Microfinance at SMK Negeri 1 Pasaman, the object under study was the development of Android-based Pocket Book media. Based on the results of the validation by material experts, an average value of 4.7 (very feasible) was obtained, evaluation experts obtained an average value of 3.8 (feasible), linguists obtained an average value of 4.4 (very feasible), media experts obtained an average value of 4.45 (very feasible), learning practitioners obtained an average value of 4.78 (very feasible). So that the average value of the experts is 4.43 (very feasible). Student responses to Android-Based Pocket Book learning media 4.44 (very feasible). The increase in student learning motivation obtained an increase of 8% from 75% to 83%. The results of the calculation using a gain score obtained a figure of 0.32 which means that the Android-Based Pocket Book learning media can increase student learning motivation.

**Keywords:** Learning media, Android-based pocket book, learning motivation.

## 1. INTRODUCTION

Education is carried out through the learning process activities. The learning process can take place with a complete learning tool. One of them is learning media. Learning media is an intermediary tool for teachers to convey information in the form of learning materials to students. There are many kinds of learning media used by teachers, some are graphic or non-electronic based and there are also digital or electronic learning media. The use of electronic learning media can be operated through an intermediary tool, one of which is a smartphone.

Smartphone is a mobile phone that has many advanced features, this is supported by the existing system on the smartphone itself. Smartphones that are widely used in Indonesia are smartphones that have an Android operating system, as well as students in

general, many of them use smartphones with the Android operating system. I

Android is an operating system on Linux-based mobile devices that includes an operating system, middleware, and applications. Android provides an open platform for users to make it easier for developers to develop the applications they want to create [1]. According to Sugeng Purwantoro states that android is software used on mobile devices, and android consists of an operating system, middleware and core applications [2]. Android is a more flexible operating system that has the ability to install a wide variety of applications, be it apps from the Playstore or from outside the Playstore. In contrast to the iPhone, which the iPhone cannot do. The advantage of this Android-based smartphone can be used by teachers, namely that the teacher can make application programs as a learning medium. Learning media that make use of mobile phone technology is known as mobile learning. According to Sung, Chang,

and Yang, it is stated that the benefits of using e-media from mobile learning are quite effective in increasing the learning independence of students, because with mobile learning it can help students individually control, decide the time and place and the length of study according to what students want [3]. In Jennifer's opinion, mobile learning provides benefits and convenience in accessing learning directly, namely by accessing applications so that information or material is quickly obtained [4]. In line with Hwang & Tsai's opinion, mobile learning uses cellular technology to facilitate and promote learning anywhere and anytime [5].

Learning media according to Rossi and Breidle are tools and materials programmed to achieve educational goals, for example radio, books, television, magazines, newspapers and so on [6]. According to Arda et al, the media is one of the success factors in the learning process in schools because the media can help teachers convey information to students and from students to teachers [7]. The effective use of media can facilitate learning in achieving efficient learning goals [8],[9]. Learning media can be used in various subjects. One of them can be applied to tax administration subjects. Tax administration subjects are vocational subjects in business and management expertise (C1), accounting and finance expertise program (C2), banking and microfinance expertise competencies (C3), which contain core competencies and basic competencies taught in class XI banking and finance. micro. Tax administration subjects contain material on general provisions and tax procedures contained in KD and IPK. There are several materials on tax administration subjects that change frequently because they have to follow the latest government rules and regulations so that it is difficult for students to find suitable material to study at this time, and students are required to look for these latest rules by assigning students to look for material from various sources. that is, one of them from the internet, while books for the latest material are difficult to find because the rules for the year that are in progress are sometimes not published. However, when searching on the internet, students find it difficult because there are many tax rules and materials available in general, and it is difficult to find taxation material specifically for learning tax administration. Learning carried out in each subject should be achieved in accordance with the objectives that have been planned, student achievement in learning can be supported by student learning motivation. In accordance with the opinion of Sardiman states that learning motivation is the overall driving force in students that provides direction and ensures student learning continuity so that learning objectives are achieved [10]. However, in the tax administration subject in class XI Banking and Microfinance still has low learning motivation.

Based on the results of observations made in class XI Banking and Microfinance at SMK Negeri 1 Pasaman, it can be seen that students' learning motivation is still low. This can be seen when the learning process takes place, namely in the tax administration subject with a total of 32 students, there are 26 or 81.25% of students still have low learning motivation, namely 20 students look lethargic and not enthusiastic in learning, this is shown from the condition physical students who are sleepy, often yawn, often leaning on the back of the chair, leaning their head on the table, no response when the teacher asks questions and not actively asking questions. And 6 students who chat with their friends. While those who were active in learning were only 18.75% of 32 students, that is, when the teacher asked questions, only 6 students participated and were enthusiastic in answering these questions. This is due to the large number of rules and provisions in laws regulating taxes that make students lazy to read and study this tax administration subject. This is in accordance with the opinion of Bligh and Saa which states that one of the factors that affect student motivation is student interest in the subjects they are studying [11]. Students' motivation to learn is less to learn more about this tax administration subject.

Motivation according to Behice Varisoglu is an encouragement that helps students to confidently achieve success in learning both the success of knowledge and skills [12]. Motivation to learn is something that is in students who encourage learning activities with the aim of gaining skills and experiences [13]. According to Hariyanto, learning motivation is the entire driving force that comes from within and from outside the student that ensures continuity and provides direction in learning activities so that learning objectives can be achieved [11]. Learning motivation is the entire driving force that comes from within and from outside the student which ensures continuity and provides direction in learning activities so that learning objectives can be achieved [11]. Motivation to learn is an encouragement that helps students ensure the continuity of learning activities and the implementation of learning is better so that it makes it easier for students to understand the subject matter. Motivation to learn is influenced by factors that come from within the student and from outside the student himself. This is in accordance with the opinion of Hamzah B. Uno which states that learning motivation arises due to the presence of extrinsic and extrinsic factors [14]. The intrinsic factor is a factor that comes from within the student, this factor varies for each student depending on the willingness and encouragement from within the student to learn. While factors from outside the student, namely factors from the surrounding environment such as learning methods, learning infrastructure, learning media and so on. Low learning motivation can also be caused by incomplete

teaching materials that are in accordance with KD and GPA as learning reference materials.

The way that teachers can do to overcome the lack of teaching materials is to be able to make and arrange material in the form of small pocket books that are easy to carry anywhere. However, in this digital era, pocket books can be made in the form of applications so as to provide convenience and effectiveness to be carried anywhere by students. This pocket book in the form of an application is also called an android-based pocket book. Actually there are many kinds of learning media that teachers can use in learning and not only Android-based pocket books, but Android-based pocket books have the advantage of efficiency for students, namely wherever students are at any time students can read and learn by accessing the pocket book application. this is on condition that you only bring a smartphone.

Android-based pocket book is one of the electronic learning media that is run by installing the application on a smartphone with an Android system which contains material according to KD and learning indicators as well as learning evaluations in the form of question exercises. Learning media in the form of Android-based pocket books have been developed by previous researchers in various schools to support learning activities. However, the pocket books that have been developed by previous researchers still have many deficiencies in the material, appearance, features and exercises of the problem. The advantages of this android-based pocket book in tax administration subjects can be seen in a more attractive background image, the material contained in the pocket book already contains the latest tax rules, contains sounds on the navigation buttons when clicked, sounds on the start page, menu page material as well as the splash screen. In the exercise, the problem is that there is a score score that states that the student has passed or not after answering the exercise in the tax administration pocket book. At SMK Negeri 1 Pasaman, this android-based pocket book has never been made and developed, especially in the subject of tax administration.

## **2. METHOD**

This type of research is the method of research and development (research & development). According to Sugiyono states that research and development is a research method that aims to produce certain products and in the R&D research method the effectiveness of these products is tested [15]. In line with the opinion of Endang Mulyatiningsih research & development is research and development which aims to produce new products by carrying out stages of the development process [16]. The development model used in this study is the ADDIE model developed by Dick and Carry with the stages of Analysis, Design, Development, Implementation, and Evaluation [16].

The data collection technique in this study is to use a questionnaire or questionnaire. The questionnaire contains a set of statements or questions that are given to respondents to answer [15]. Through this questionnaire, the feasibility of the media being developed is measured as well as measuring student learning motivation. The data collection instruments used were a questionnaire for assessing the feasibility of an Android-based Pocket Book media and a questionnaire measuring student learning motivation. The questionnaire for the assessment of the feasibility of learning media involved 4 lecturers, namely 1 lecturer as a material expert, 1 lecturer as an evaluation expert, 1 lecturer as a language expert and 1 lecturer as a media expert, and 1 learning practitioner of SMK Negeri 1 Pasaman and class students. XI PBKM of SMK Negeri 1 Pasaman. Questionnaires measuring student learning motivation were distributed to class XI PBKM 2 students of SMK Negeri 1 Pasaman 2 times, namely before the implementation of learning media and after the implementation of learning media.

## **3. RESULTS AND DISCUSSION**

This research produced a product, namely an Android-based Pocket Book in the subject of Tax Administration for class XI students of Banking and Microfinance. The model used is the ADDIE model. The steps are carried out as follows:

### **3.1. Analysis**

The analysis stage is the initial stage in developing an Android-based Pocket Book. At this stage: a) analysis of student needs. Analysis of student needs on the problems and characteristics of students as research and development subjects. Characteristics include hardware (hardware) owned by most students such as what smartphone they have and software (software) that is on the student's mobile device. b) Competency and instructional analysis which includes analysis of Core Competencies (KI) and Basic Competencies (KD) in the form of materials and exercises that will be published in Android-Based Pocket Book learning media that will be developed.

### **3.2. Design**

At the design stage carried out is media design which includes the design of the media design as a whole or storyboard, preparation of materials, exercises and answers to exercises, collection of material for the background, navigation buttons, fonts, logos that will be included in the media application.

### **3.3 Development**

The development stage is the process of making media that is carried out to completion. Things that were done at the development stage were: 1) Making

Android-based Pocket Book learning media, such as a) Logo and application splash screens, b) Start page, c) Main menu, d) Help page, e) Competency page, f) Pages material list, g) Material page, h) Exercise page, i) Profile page. 2) Validation of Feasibility by Material Experts, Evaluation Experts, Linguists, Media Experts and Learning Practitioners. This eligibility validation is carried out by providing a questionnaire to the validator who will validate the Android-based Pocket Book media.

**Table 1.** Android-Based Pocket Book Validation Results

No	Validation	Average Value	Information
1	Subjects	4,70	Very feasible
2	Expert Evaluation	3,80	feasible
3	Linguists	4,40	Very feasible
4	Media expert	4,45	Very feasible
5	Learning Practices	4,78	Very feasible
	Total	4,43	Very feasible

Source: Data processed in 2021

From table 1 it can be seen that the average value of all expert validations is 4.43 which is included in the range  $X > 4.2$  in the very feasible category. This means that learning media is very suitable for learning. This can be seen from the feasibility of the material expert who obtained the average value of the material expert validation of 4.7 which is included in the range  $X > 4.2$  in the very feasible category. This eligibility can be seen from the suitability of the material with the basic competencies in the syllabus. The material in the learning media consists of 6 basic competencies, and all of these materials are in accordance with the indicators of achieving the competence of each basic competency, the presentation of material that is very clear, systematic and material related to laws and regulations has been presented in regulations. the latest.

The average result of the validation value from the evaluation expert was 3.8 which was included in the range of  $3.4 < X < 4.2$  in the feasible category, meaning that the whole question could be used in the learning process. The feasibility can be seen from the suitability of the questions with the material presented in the pocket book, the suitability of the questions with the competency achievement indicators. The questions are made based on the question grid, this question grid is made based on the basic competencies and competency achievement indicators in the syllabus. The feasibility of the questions can also be seen from the ease of the problem. There are low, medium and difficult levels of ease of questioning. The ease of this question is in accordance with the competency achievement indicators

of each of each basic competency. Each question has one correct answer. And the length of the question formulation is relatively the same and the items do not depend on the previous questions.

The average result of the validation value of linguists is 4.4 which is included in the range  $X > 4.2$  in the very feasible category, meaning that the language used in the learning media is suitable for use in learning. This feasibility can be seen from the language used is in accordance with the rules of good and correct language, the terms used are in accordance with the concepts on the subject matter, the language used is communicative, and the sentences used in the material and questions already represent the contents of the message or information that is want to be conveyed.

The average result of the media expert validation value is 4.4 which is included in the range  $X > 4.2$  in the very feasible category, meaning that the Android-based pocket book learning media is very suitable for use in learning. The feasibility of learning media can be seen in the application file size that is not too large, the application does not hang or does not stop when it is operated. Applications can be run in various smartphone specifications, media can be used repeatedly. And users can interact with the application because of the questions that exist in the media.

The average result of the validation value of learning practitioners is 4.78 which is included in the range  $X > 4.2$  in the very feasible category, meaning that the Android-based Pocket Book learning media is very suitable for use in learning. This feasibility is in accordance with the response of class XI students of Banking and Microfinance at SMK Negeri 1 Pasaman who stated that the media is very easy to use, the material in the media is very clear and complete in every indicator in basic competencies. The results of this study are relevant to research from Azwar Mukholich with the title "Development of Android-Based Pocket Books as an Effort to Increase Learning Motivation in Tax Administration Subjects for Class XI AK at SMK Negeri 2 Magelang" who obtained average validation results from all experts [17]. namely in the feasible category, meaning that the Android-Based Pocket Book learning media is feasible to be tested and is suitable for use for the learning process.

### **3.4 Implementation**

The implementation stage is carried out by testing. The trial was conducted twice in 32 students of class XI PBKM SMK Negeri 1 Pasaman. The first trial was a randomized small group trial with 10 students. And the second trial was field trials with 22 students.

**Table 2.** Trial Results

No	Trial	Average Value	Information
1	Small group trial	4,31	Very feasible
2	Field Trial	4,44	Very feasible
	Total	4,31	Very feasible

From table 2 it can be seen that the results of the average value of small group trials and field trials are 4.31 and 4.44 which are included in the range  $X > 4.2$  in the very feasible category, meaning that the learning media is very suitable for use in the learning process. This feasibility can be seen from the media software engineering, such as the application does not stop during use, the application does not run slowly, and the operation of the media is simple. And the feasibility can be seen in the learning design where the material in the media is presented clearly because the language used is easy to understand, and also the examples given in the material are clear. The appropriateness of this student response can also be seen from the increase in student motivation, increased knowledge and increased student understanding through this pocket book learning media.

Based on the opinion of Sugiyono states that Research & Development is research that produces products [15]. The product must be tested for effectiveness so that it is ready for use in the field. This ready-to-use product is a product that falls into the minimum "feasible" category. The learning media developed have been tested for their effectiveness by expert lecturers and learning practitioners whose results are feasible. And also at the time of testing with students the results obtained were also decent. So that learning media products are suitable for use in learning activities and can also increase learning motivation in students.

**3.5 Evaluation**

The evaluation stage is the last stage in the development of this application. In the evaluation stage, measurement of product development achievement is carried out. Achievement can be seen in data analysis and increased student motivation after using learning media.

**a. Data analysis**

**1) Validity test**

The validity test was carried out to determine the validity of the learning motivation questionnaire and the student response questionnaire using the product moment correlation using the SPSS 21 program. The results of the data obtained from the SPSS program were the validity test for student response questionnaires based on 30 statement item numbers and obtained valid results in each statement. And in the student learning

motivation questionnaire obtained valid results in every 20 statements because the result of  $r$  count is greater than  $r$  table.

**2) Reliability Test**

Reliability test is carried out to see the reliability of something which means that it can be trusted to be reliable [18].

**Table 3.** The results of the questionnaire reliability test

No	Instrument	Value $r_{11}$	Information
1	Student response questionnaire	0,862	Very high
2	Questionnaire motivation to learn	0,781	High

There are two questionnaires that are seen for their reliability, namely the student response questionnaire and the motivation questionnaire before the implementation of the media. In the student response questionnaire, the reliability results obtained were 0.862, meaning that the student response questionnaire was declared reliable in the very high category. Whereas in the student learning motivation questionnaire before implementation of 0.781 means that this questionnaire is declared reliable in the high category.

**b. Increased Learning Motivation**

The increase in student learning motivation can be seen using a gain score, which is to see the results of a learning motivation questionnaire before implementation with a learning motivation questionnaire before implementation.

**Table 4.** Recap of student learning motivation questionnaire

No	Study motivation questionnaire	Percentage
1	Before implementation	75%
2	After implementation	83%

From the table of learning motivation data recap before and after the implementation above, it can be seen that the percentage is 75% and 83%. To see the increase in motivation, it can be calculated using the gain score formula as follows:

$$g = \frac{\% \text{ mean final motivation} - \text{mean initial motivation}}{100\% - \text{initial motivation average}}$$

$$g = \frac{83 - 75}{100 - 75}$$

$$g = \frac{8}{25}$$

$$g = 0,32$$

From the results of the calculation using the gain score, it shows a value of 0.32 which means that the Android-based pocket book learning media can increase the learning motivation of class XI PBKM 2 students of SMK Negeri 1 Pasaman. These results fall into the moderate category, namely in the range  $0.3 \leq g \leq 0.7$ . The increase in student motivation is due to the implementation of pocket book learning media based on android, this media is a new media used by class XI students of Banking and Microfinance at SMK Negeri 1 Pasaman. Previously, students learned to use unmobile learning media and had never used mobile learning media. This increased motivation can be seen from the activeness of students in learning such as students asking questions and finding out things they don't know after reading the material and answering practice questions in learning media. So that the learning process does not only focus on lectures given by the teacher, but now students can learn independently with Android-based pocket books. The results of this study are in accordance with the theory presented by Ega Riwa Wati which states that one of the practical benefits of learning media is that it can increase and direct students' attention so that it raises learning motivation [19]. And the results of this study are also in line with Arsyad's opinion that the use of learning media can arouse desire, interest, stimulate learning activities and generate student learning motivation [20].

#### 4. CONCLUSION

Based on the results of research and development, it has produced a product in the form of an Android-based Pocket Book through the ADDIE model, namely Analysis, Design, Development, Implementation, Evaluation. The products produced are based on the results of the eligibility of validation from material experts, evaluation experts, linguists, media experts and learning practitioners. Feasibility can be seen from the material presented clearly and in accordance with basic competencies, the questions are worth trying because they are in accordance with basic competencies and indicators, the language used is easy to understand and in accordance with the rules of good and correct Indonesian, Applications can be run in various smartphone specifications and an attractive pocket book display. After using the valid and practical Android-based Pocket Book media, it can increase student motivation in class XI Banking and Microfinance at SMK Negeri 1 Pasaman in the subject of Tax Administration.

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