



Power Point-Based Android English Learning Multimedia in Teaching Descriptive Text; Developing and Feasibility Study

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Abstract

This research aims to develop and produce interactive learning media based on android applications in English subjects. This type of research is research and development that refers to the 4D development model modified into 3D. The subjects of this research were first grade students of SMPN 3 Majene. The instruments used in this study were (1) media expert validation sheet to measure media feasibility, (2) product expert validation sheet to measure media feasibility, and (3) student response questionnaire to find out students' opinions on the attractiveness of the developed media. The results of the research are: (1) Development of interactive learning media based on android. (2) Learning media is declared feasible by media expert validators with a percentage of 92% in the very feasible category and experts with a percentage of 94% including the very feasible category. (3) The learning media is declared interesting based on the results of the analysis of student response questionnaires, which is 80%. At the end of this study, it can be inferred that Power Point-based Android English Learning Multimedia is feasible and ready to assist English teachers and students to gain better English learning.

Keywords: *Power Point, Interactive Learning Multimedia, Android, Descriptive Text*

Introduction

The importance of instructional technology in English teaching is highlighted in the abstracts. Technology has changed the dynamics of various industries and has influenced the way people interact and work in society (Pratiwi et al., 2021). Applying instructional technology in language teaching and learning makes learners more cooperative and participative, leading to improved performance and competence. Modern technology in English teaching methods has become the preferred choice of instructors as it enhances student engagement and incentivizes language learning. English teachers need to develop technology literacy themselves to effectively integrate technology into instruction and critically assess its potential for enhancing teaching (Christopher & Xing, 2019). Teachers must be able to use technology appropriately to help students achieve learning objectives and enhance their learning experiences. Existing curriculum in Indonesia also forces teachers to be very variative in teaching using ICT. This is related to the importance of using and integrating ICT in teaching by empowering several apps that can give positive vibes to the students and learning process (Zaid & Shehada, 2022)

Android-based systems can be applied in English teaching to enhance learning experiences. An Android application can provide interactive and thematic learning media for students, allowing them to answer questions in a more engaging and fun way (Wisnu Wijayanto et al., 2021). This application can also store test results, allowing parents to track their child's progress (LIU, 2018). Additionally, an English learning system based on the Android platform can provide resources for listening, learning, and communication activities. Furthermore, Android applications can be developed to improve English pronunciation skills. These applications can be designed with attractive visual images, dictionaries, and menus tailored to specific study programs. By utilizing Android-based applications, students can have access to English learning materials anytime and anywhere, leading to improved motivation and skills.

Developing Android applications for English teaching has its challenges. One of the main problems is the need for improvement in the user interface and layout design of the applications (Muslaini;2019). The availability of suitable and proper learning application in English teaching is necessary in order to enhance its

empowerment in English teaching. English teachers are expected to utilize those applications to attract students' motivation in learning English. Further, made et.al (2020) proposed another issue is the need to cater to the specific needs of primary school students, such as providing vocabulary practice, quizzes, and games. Additionally, there is a need for careful selection of tutorial apps from the Google Play store to ensure effective English language learning. Furthermore, the effectiveness of pronunciation applications in improving students' pronunciation skills should be considered for further development (rahmatika et.al.;2019). Lastly, the advantages of mobile-based learning, including collaborative, interactive, and problem-based learning, should be taken into account when developing Android applications for teaching grammar (Ana et.al.,2019).

One of the barriers experienced by teachers is the use of learning media. According to the teacher teaching in using the learning resources has been done but still using the book as the main learning source it is only used at the time of the learning process in the classroom with the instructions of the teacher (Pratama & Khotimah, 2019). Besides, students tend to prefer to play smartphones rather than study in class. From the statement, the researchers suggested that the need to develop learning media that can be used by students as a medium in the learning process.

Based on the problem, the researchers tried to develop an android-based interactive learning medium that focused on descriptive text material, because the material taught showed less satisfactory value and also the material required interactive understanding and explanation. Interactive relates to two-way communication. A thing that acts and reacts to each other, is active and connected and has interactive relationships with each other. This study aims to: (1) Develop Android-based interactive learning media on descriptive text materials, and (2) Explore the feasibility of developed android-based interactive learning media.

Method

This study was conducted using the Research and Development (R&D) method. R&D is a method of research with the end result of practical contributions that can be directly applied as answers to previously analysed problems. (Astuti et

al., 2017; Haviz, 2016). This study then adapted the 4D model development procedure (Thiagarajan & Sivasailain, 1974). which consists of the stages of Define, Design, Develop, and Disseminate (Husada et al., 2020; Teguh et al, 2019). But then it was changed to 3D: Define, Design, and Develop because of the limitations of the situation. This study basically was conducted in Majene in which expert judgement was administered in Universitas Sulawesi Barat and SMPN 3 Majene. In order to figure out students' responses on multimedia product, researchers conducted a product try-out toward 25 students in SMPN 3 Majene. This Research and Development (RnD) study was undertaken following several steps and procedures; Preliminary need assessment, competence analysis, concept analysis, learning objectives formulation, prototype development, prototype validation, prototype revision, try-out, and final revision. These procedures were followed consistently to obtain best quality multimedia product.

To obtain information needed for this study, questionnaire instrument was used to determine the feasibility of learning media. The questionnaire is an indirect data collection technique or method, the instrument contains several questions or statements that must be answered or responded to by respondents (Sukmadinata, 2010: 219). There are three questionnaire instruments used, namely: Material Expert Validation Questionnaire Instrument, Media Expert Validation Questionnaire Instrument and Student Response Questionnaire Instrument.

Validity is the level of accuracy of the instrument (measuring instrument), namely whether the instrument used is really right to measure what is to be measured. This Android-based learning media development used validity to test the feasibility and suitability of media with learning objectives to find out whether or not this media was feasible and feasible to use for learning.

The answer to the expert validity questionnaire uses a Likert scale. According to ((Sugiyono, 2016)) the Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena. The expert validity questionnaire contains a grid regarding the criteria for the learning media developed. As for the Likert scale measurement, the variables to be measured are translated into variable indicators. The score categories on the Likert scale according to Putra (2014: 182) are described in the following table:

Table 1. Lickert Scale Category

No.	Score	Information
1.	4	Strongly Agree
2.	3	Agree
3.	2	Disagree
4.	1	Strongly Disagree

Data analysis of student response questionnaires was analyzed using quantitative data to obtain information about student responses and the feasibility of the developed media. The validation criteria or achievement levels used in media development are described in the following table:

Table 2. Students Response on questionnaire

Achievement	Level	Level Qualification
81 - 100%	Very Good	Very proper, need no revision
61 - 80%	Good	Proper, need no revision
41 - 60%	Fair	Less proper, need revision
21 - 40%	Not Good	not proper, need revision
<20%	Really bad	really bad, need revision

Result

The following are the stages of development of interactive learning media based on Android:

1. Defining

At this stage the researchers perform the stage of definition or find out what is needed in the learning that will later be applied to the learning media by conducting analysis:

a. Early analysis; At the initial stage of analysis this observation is carried out in schools to obtain information about the problems in learning. In addition, the researchers conducted interviews with three English teachers at SMPN 3 Majene

The results are as follows: 1) Lack of availability of modern learning media that utilizes technology. 2) Teachers still use printed books as learning media. 3) Students tend to prefer learning using smartphones rather than using printed textbooks. 4) Students have difficulty learning English

b. Learning Analysis; At this stage, the researchers perform observations with eighth grade students who are about 14-15 years old to understand the problems in learning English. According to Jean Piaget's theory that the cognitive development of high school students belongs to the formal operational stage at the age of about 12 years and over, so in this group children can be assumed abstractly and complexly.

Based on the observations, it was found that students need interactive and exciting media in learning. Students are happy if learning utilizes technology so by developing interactive learning media based on Android Apps, researchers can optimize learning needs and enable students to master and learn descriptive text to the maximum.

2. Design

The objective of this stage is to design an interactive learning medium based on android according to the indicators and learning objectives that have been defined because a good design multimedia with better robustness. (Zhao, 2020; Zheng & Perez, 2019) The result of this research was the creation of an interactive learning medium with an animated design of text, buttons and backgrounds. The creation of this learning media using power point, iSpring suite and web 2 apk builder became an android application in which *power point* has been found as interesting and effective media in English teaching. (Anyan et al., 2020; F. Huda & Huda, 2022; Wasisno, 2023) As for the visual display of the interactive learning media based on android this is as follows:

- a. Development of learning Material contained in the Android application is from KI, KD Descriptive text Curriculum 2013. This analysis produces a concept map that is then used to determine the correlation of a given achievement indicator.
- b. Media selection; The media selection produced in this study are Power

point, iSpring suite 10 and Website 2 APK builders used to create interactive learning media based on Android applications. Power point was chosen to make Android application designs more interesting and interactive by providing some content, such as videos, learning materials, and others. iSpring suite 10 is used to create quizzes and also publish media outputs that are already made so that they become HTML. While the website 2 APK builder pro is used for changing the format from HTML to Android applications.

- c. Initial design; at this stage, researchers prepare the format and design of the developed Android application creation instruments before validation and testing. As for the early design stages, include: 1) Format selection at this stage researchers ensure that android application development uses the following formats: a. The initial part, covers the title page, the media name and starts b. The content section covers materials, learning videos, examples of exercises, and evaluations. c. The final part covers developer profiles.

The next stage, researchers design the initial format of the product to be made. The design of the original product format was as follows:



Figure 1. Opening Page

Opening page of this multimedia shows an animation that was designed as interesting as possible for the students based on their level (Senior High School). This page is consisted of title of this learning multimedia so the students will be enthusiast while using the application. This page also conveys some important

information about the multimedia; the major and the class which this multimedia is aimed to and topic to be learnt. This opening page was designed, basically, by using *Power Point* application. Researchers designed this opening page considering psychological level of students, Senior High Schools students, as the user of this application.



Figure 2. Menu Page

Moving to the next page, users will find a menu page in which consisted of some menus to be entered by the users. Here, as Figure 2 shows, the users may choose some features to be clicked and inserted; Competence/Learning Objectives, Learning Material, Learning Videos, Examples/Practices, Evaluation, and information. This page was designed also by using power point as the basic design. Psychologically, interface of this page is suited with potential users; students on Junior High School. Besides, this menu page has interesting animation to support students keep their mood and motivation in using the apps. Every single menu on this page is clickable that ease teachers and students to set their English learning design and planning.

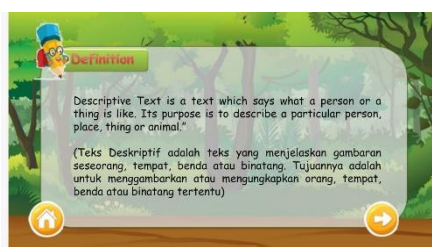


Figure 3. Material Page

Every single feature on menu page will guide students to understand and comprehend material on this multimedia. Simply figure 3 shows the instance of how the contents of this multimedia are. Basically, students will have interesting experience when the access this multimedia. This multimedia has several kinds of contents there; definition, explanation, pattern, and other pages. Assisting students/users to explore this multimedia, the navigation button has already appeared on this page. These buttons are expected to ease students to go on to the other part. Content of this learning multimedia also involved any kind information and instruction needed. Besides, users also show their capacity while using this apps.



Figure 4. Learning Video Page

Figure 4 shows an example of learning video page that students may access when they use this application. Videos on this page were developed based on needs. Video interface was designed to let students to connect their learning with videos. Videos attached on this multimedia were suited with students' real daily life. Realizing that the potential users for this multimedia are students, researchers decided to insert animation video instead of documenter videos or other kinds of videos. The content on this part were suited with students' daily life, circumstances, or culture.

3. Developing

Android app developed was validated or evaluated by the validator team. The validator was asked to advise on the interactive learning media developed. The validator gave the rating twice with some improvements. Once repaired, it can be

declared worthy of use or tested to the student.

1) **Materials Expert Validation;**

Validations by experts intend to review the contents contained in the android application and provide value related to the conformity presented. Instruments submitted to experts are statements containing content components and learning quality components. The results obtained are listed below:

Table 1. Material Experts Validation toward Developed Apps

No	Assessed Aspects	X (obtained scores)	X1 (ideal scores)
1	Materials compatibility with core competencies	4	4
2	Materials conformity with standard Competences/ Basic competencies	4	4
3	Material compatibility for learning purposes	4	4
4	Indicator compatibility to standard competencies/ Basical competencies	4	4
5	Consistency between basic competencies, indicators, materials and evaluations	4	4
6	Accuracy of material coverage	4	4
7	Material authenticity	4	4
8	Up-to-date Materials	4	4
9	useful Materials	4	4
10	depth of material	3	4
11	Interest of material (overlapping)	3	4
12	Designation of material	4	4
13	Facilities of submission of material	4	4

14	<i>Assessment to measure the ability of students</i>	3	4
15	<i>Continuous evaluation of each sub-material</i>	4	4
16	<i>Use of language on media</i>	3	4
17	<i>Quality of material</i>	4	4
Total		64	68
Validity		94%	

The above data is the result of the calculation process using the following formula:

$$p = \frac{x}{x1} \times 100\%$$

Information:

P : Percentage

X : Obtained Scores

Xi : Ideal value in one item

100% : Constant

Counting result of table 1 is: $p = \frac{64}{68} \times 100\% = 94\%$

Based on the results of the validation or expert qualification tests, then the interactive learning media based on the android app is in the category eligible to be tested on students with a 94% percentage and reached very eligibility category according to the expert.

2) Validation of media experts;

Media experts aim to assess visual clarity, accuracy of image selection, aesthetics, and more. In addition to evaluating, also writing suggestions and comments as a reference to revise the product before being tested to students. The results obtained are listed below:

Table 2. Media Experts Validation toward Developed Apps

No	Assessed Aspects	X (obtained scores)	X1 (ideal scores)
1	Selected font types	4	4
2	Selected font size	4	4
3	Color brightness	4	4
4	Graphic design accuracy	4	4
5	Sound clarity	4	4
6	Background color suitability	4	4
7	Media content quality	4	4
8	Easiness of media usage	4	4
9	Layer efficiency	4	4
10	Text efficiency	3	4
11	Validation rapidity	3	4
12	Buttons consistency	4	4
13	Material content accuracy	4	4
Total		48	52
Validity		92%	

The above data is the result of the calculation process using the following formula:

$$p = \frac{x}{x1} \times 100\%$$

Information:

P : Percentage

X : Obtained Scores

Xi : Ideal value in one item

100% : Constant

Counting result of table 1 is: $p = \frac{48}{52} \times 100\% = 92\%$

Based on the media expert's validation or qualification test results that the interactive learning media based on the android app is in the category eligible to be developed and tested on students with a 92% percentage which means that this learning media belongs to the category of highly eligibility according to the media experts.

3) Product Try Out

To optimize the validity of this interactive learning, media product was tested on students of the eighth grade of high school through a student response lifting instrument containing 18 questions to see the attractiveness of an Android application-based interactive Learning Media that has been declared worthy by the experts. The result of this try out can be displayed as follow:

No	Obtained Scores (X)	Ideal Scores (X1)
1	56	72
2	57	72
3	49	72
4	51	72
5	50	72
6	65	72
7	57	72
8	59	72
9	56	72
10	64	72
11	66	72
12	58	72
13	48	72
14	65	72
15	63	72
16	48	72
17	61	72
18	65	72
19	57	72
20	65	72
21	51	72
22	54	72
23	60	72
24	54	72
25	56	72
Total		1435
Validity		80%

The above data is the result of the calculation process using the following formula:

$$p = \frac{x}{x1} \times 100\%$$

Information:

P : Percentage

X : Obtained Scores

Xi : Ideal value in one item

100% : Constant

Counting result of table 3 is: $p = \frac{1435}{1800} \times 100\% = 80\%$

Based on the results of product trials in students, interactive learning media based on android apps are in the interesting category for use in learning. with a presentation of 80%.

4. Learning Media

The final result of this study is an interactive learning medium based on an android application on valid descriptive text and worthy of use during learning. This interactive Learning Media contains basic competences, indicators, objectives, examples of learning videos, exercises, and evaluations. Generated learning media as the result of this RnD study has been assessed as a feasible learning media that need to be developed more on the next research.

Discussion

The aim of this research is to create an interactive learning medium based on android applications on descriptive text. The aim of this study is for researchers to see how the Android-based interactive learning media is feasible and how students respond to it. The interactivity learning multimedia has been stated as a crucial factor to improve the quality and the impact of multimedia. (Anyan et al., 2020; F. Huda & Huda, 2022) This interactive learning media is made in two languages namely English and Bahasa. The involvement of Bahasa as the instruction language, besides English as Medium Instruction (EMI), on this android application is necessary to embed the multiculturalism and fulfil students' need in understanding the instructions raised through this application. (Mukminin et al., 2019; Wardani &

Puspasari, 2022) The images in the module are presented with relevance so that learning is more interesting for students. The existence of images/pictures as one of features empowered on this android application meet students' need on a media that fulfil their interest on learning English. The proper pictures empirically attract students' attention in learning English. (Li & Zhang, 2021; Ramadani, 2022; Sihombing et al., 2022) The involvement of android in English learning, empirically, was effective and able to motivate students. (Wijaya et al., 2019; Huda et al., 2020; Lin & Tsai, 2021). The existence of varied components and features in English learning multimedia is important to accommodate the vary of students learning style in the class. Students' learning style in a homogeneous class has researched as varied. (Arif et al., 2021)

In producing a good android learning multimedia, a deep preliminary analysis and observation was conducted in order to obtain a precise data about students need. The researchers conducted interviews with English teachers at SMPN 3 Majene. They found that students tend to feel bored and have difficulty digesting descriptive texts, because students think that descriptives are difficult to understand, so teachers need supportive media in teaching, such as interactive learning media that are obnoxious and use technology. Students' boredom in English teaching makes an inconducive learning environment and situation. Basically, students felt boredom in English learning due to several condition, mostly because they did not find the challenge and new things in English learning. (Kruk et al., 2021; Pawlak et al., 2020) The second stage is student analysis. The researchers conducted an analysis of students' needs through observation. Students' observation data indicated that students have not yet understood descriptive text. Need assessment and current condition of students gave good basic perspectives and views of students. A prospective need assessment can give best perspective for teachers in understanding students' conditions.(Singh et al., 2022)

The third stage is task analysis. The researchers examined the tasks assigned to the students in order to their learning goals. The tasks presented in the Android-based learning media include exercises, quizzes or evaluations (interactive games), independent activities and group activities. The fourth stage is concept analysis.

The proper task is very important in supporting learning multimedia to be effectively used and empowered specially in English learning. Some studies found that task became an important factor to determine the success of multimedia in teaching. (Zou & Teng, 2023) This study also identified the components contained in accordance with the KI and KD in the 2013 curriculum. The fifth stage is the formulation of learning goals. Researchers formulate learning goals aligned with indicators that have already been set.

The next step is the Design phase, which includes three phases. The first phase is to organize learning loaded in an interactive learning medium. The second stage is media selection. Researchers chose an interactive learning media based on an Android app that contains some content, such as learning videos, quizzes and other features. The third stage is the initial design. The researchers choose the format and design of the instruments to be used. The initial format design includes the beginning, the content, and the closing parts.

Next in the Development phase, the researchers produced an interactive learning medium based on an Android app that was evaluated by experts and tested on students. The expert assessment of the material covers the content component and the quality of learning. The expert validation result obtained a score of 94% with criteria that are very good. This indicates that the material is in line with the KI and KD. Besides, there are features that encourage students' curiosity. The media validation score obtains 92% with the criteria very well. It indicates that a combination of colors, pictures, inscriptions and animations is developed according to the student's characteristics.

Based on expert judgment, the app developed was declared worthy as a learning medium. It is also supported by the Rizki Dkk (2013) statement that application validity can be reviewed from material validity and media validity. Material validity covers media content compatibility with learning purposes. Based on the validity of both these aspects, interactive multimedia is produced that is theoretically suitable and suitable for use in the learning process. Once the product is qualified by the expert, the interactive learning media based on the android app is tested on the students. This product was tested on 25 students of SMPN 3 Majene in the eighth grade. To determine the appeal of this application, there are several

product evaluation components available, namely software aspects, learning aspects and visual communication aspects. The product test results in students obtained a score of 80%, which means this interactive learning medium is attractive. Attractive learning multimedia is basically needed to improve students' motivation in using that multimedia application in English learning. (Kohnke, 2020; Lozano-Lozano et al., 2020; Muhfiyanti et al., 2021)

The final result of this study is an interactive learning medium based on an android application on descriptive text worthy of use during learning. This interactive learning media contains basic competences, indicators, learning objectives, learning video examples, exercises, evaluations, and library listings. This interactive learning media presentation is made interesting with colored images so learning is not boring. The advantage of this interactive learning medium is that it can be used anytime and anywhere because it does not require an internet network to access it. The disadvantage of this interactive learning media is that it only supports Android, so it cannot be used on iOS.

Conclusion

Android application products in their development apply the 4-D model by Thiagarajan which includes four stages, namely define, design, development, and dissemination. However, in this case it only focuses on the development stage due to time and financial limitations of the researchers. The media was developed using the help of power point software, iSpring suite 10 and web 2 apk builder pro. The developed media contains descriptive text.

Based on the validation results of material experts and media experts, the development of interactive learning media based on android applications is very feasible to use with the results of the validation of material experts with a percentage result of 99% entering the "Very feasible" category, and the validation results of media experts with a percentage result of 94% entering the category "Very feasible". This means that this interactive learning media is valid and feasible to be tested on students.

Based on the test results of student responses to the attractiveness of learning media, students obtained a score 91%. With a very interesting category. That

means it can be applied in learning

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