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DEVELOPMENT OF ANDROID TEACHING MATERIALS BASED ON LOCAL WISDOM FOR INDONESIAN LANGUAGE LEARNING IN JUNIOR HIGH SCHOOL

(*Pengembangan Bahan Ajar Android Berbasis Kearifan Lokal untuk Pembelajaran Bahasa Indonesia di Sekolah Menengah Pertama***)**

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Abstract

This research aims to develop android teaching materials based on local wisdom for Indonesian Language Learning in Junior High Schools in Tangerang City and describe the implementation of these android teaching materials into the classroom teaching and learning process. The approach used a mixed method of research and development (R&D) and quantitative data analysis. The data collection techniques researchers use are questionnaires, documentation, and achievement tests. The sample in this research included teachers, 50 students from two classes (control and experiment), seventh-grade students from junior high school, and lecturers as experts in this research. The result indicated that learning materials can be accessed by a smartphone running the Android operating system based on local wisdom, such as "Boen Tek Bio Temple" for descriptive text, "Laksa" as procedural text, and "Pintu Air 10" for narrative text. In addition to students' learning achievement, it was found that android teaching materials based on local wisdom positively impact teaching and learning (p-value < 0.05). Thus, it can be concluded that teachers using this Android product can easily access and use Indonesian language teaching materials at any time and from any location, which can help them assign homework and assess student progress. Examples of texts in teaching materials incorporate local wisdom values in line with the Indonesian language learning curriculum.

Keywords: *Android, Indonesian Language Learning, Local Wisdom, Teaching Materials*

Abstrak

Tujuan penelitian ini adalah mengembangkan bahan ajar android berbasis kearifan lokal untuk Pembelajaran Bahasa Indonesia di SMP Negeri di Kota Tangerang dan menjelaskan implementasi bahan ajar android ini dalam proses belajar mengajar di kelas. Pendekatan yang digunakan adalah metode campuran dengan metode penelitian dan pengembangan (R&D) dan analisis data kuantitatif. Teknik pengumpulan data yang digunakan peneliti adalah angket, dokumentasi, dan tes hasil belajar. Sampel dalam penelitian ini adalah guru, 50 siswa dari dua kelas (kontrol dan eksperimen) SMP Negeri dan dosen sebagai ahli penelitian ini. Hasil penelitian menunjukkan bahwa bahan ajar yang dapat diakses oleh smartphone yang menjalankan sistem operasi Android berbasis kearifan lokal adalah "Klenteng Boen Tek Bio" untuk teks deskriptif, "Laksa" untuk teks prosedural, dan "Pintu Air 10" untuk teks naratif. Selain prestasi belajar siswa, ditemukan bahwa bahan ajar android berbasis kearifan lokal

memiliki dampak positif selama proses belajar mengajar (nilai-p < 0,05). Dengan demikian, dapat disimpulkan bahwa guru yang menggunakan produk android ini dapat dengan mudah mengakses dan menggunakan bahan ajar bahasa Indonesia kapan saja dan dari mana saja serta dapat membantu mereka dalam memberikan pekerjaan rumah dan menilai kemajuan siswa. Contoh teks yang terdapat dalam bahan ajar memuat nilai-nilai kearifan lokal yang sejalan dengan kurikulum pembelajaran bahasa Indonesia.
Kata-kata kunci: Android, Bahan Ajar, Kearifan Local, Pembelajaran Bahasa Indonesia

INTRODUCTION

Learning is a purposeful, methodical process that an individual or group engages in to improve interest, talent, knowledge, and experience. Education should provide graduates with the maturity necessary to compete in the twenty-first century (Asrizal et al., 2017). Human ways of thinking, working, and other abilities for living and growing in the world are all necessary to enable someone to compete in the 21st century as it is today (Le et al., 2022; Paige et al., 2016). Thus, to help students develop the skills or competencies required to compete in the twenty-first century, instructors, in their capacity as educators, should offer high-quality instruction to students throughout the school day (Thornhill-Miller et al., 2023).

Learning in the 21st century, as implemented in the current educational environment, is an era oriented towards technology and uses technology to support classroom learning. So, a teacher must be able to apply digital technology as a means of communication or networking that can be used to access, manage, integrate, evaluate, and create information that can be used in the learning process (Uerz et al., 2018).

In the process of learning and teaching the Indonesian language at the Junior School level using the newest curriculum design, it has been found that 75% of public junior high schools in Tangerang City have implemented the Merdeka Curriculum. This means the independent curriculum has been widely socialized and used in learning, especially in junior high schools. One of the characteristics of the Merdeka curriculum is the utilization of multimedia and technology as tools to assist teaching and learning activities in the classroom (Jääskelä et al., 2017).

Currently, amid sophisticated technological developments, teachers are expected to be able to innovate by creating relevant teaching materials according to current developments. According to Irawati and Saifuddin (2018), teaching materials play a vital role in teachers' learning activities because using appropriate teaching materials can increase the effectiveness of the learning activities and make learning more interactive. One of the uses of teaching materials that teachers can use to create practical and interactive learning for students is Indonesian, especially for junior high school students. Indonesian language learning in junior high schools currently uses the newest curriculum, the Merdeka Curriculum, as its foundation. In Indonesian language subjects, students are expected to have good literacy and be proficient in four language skills: listening, speaking, writing, and reading.

As educators, teachers need to create a productive learning environment for their students during the everyday learning process. This ensures that the learning process can deliver the desired results and give students a once-in-a-lifetime experience (Drude et al., 2019). Naturally, a lifelong learner is constantly driven to learn new things and take ownership of their learning process (Cunningham et al., 2018). Therefore, to develop a lifelong learning process, these people need an effective learning process in the classroom and high-quality education. Thus, to achieve lifelong learning, techniques covering every aspect found in schools are required (Savaget & Acero, 2018).

According to Wina, several aspects affect an effective learning process, including

environmental factors, student factors, teacher factors, and facilities and infrastructure considerations (Junaedi, 2019). One of the most important factors in the learning process is the teacher's role as an educator (Hajovsky et al., 2020; Timm & Barth, 2021). This is because educators, such as teachers, can set up the continuous learning process in a way that, depending on the teacher's behavior in the classroom, either facilitates or hinders the learning process (Fitria & Suminah, 2020). As a result, in addition to helping students grasp and absorb material more readily, providing them with the fundamental knowledge and abilities they need can also help them learn more effectively (Carlson, 2019).

The use of appropriate teaching materials, apart from being able to help students understand learning more quickly, can also make it easier for teachers to provide direct examples to students regarding the material or information given to students. Technology-based teaching materials are one of the demands of the times that teachers must face by considering various aspects such as 1) utilizing the advantages of computers, 2) utilizing multimedia technology, 3) utilizing electronic technology, 4) using independent teaching materials, and 5) utilizing exchange data (Sholeh & Sutanta, 2019). Thus, the researchers assumed that the development of application-based Indonesian language teaching materials that contain the local wisdom of Tangerang City as one of the teaching materials can significantly impact Indonesian language learning and can be utilized by teachers and students in the learning process in junior high schools.

The researchers intended to create technology-based instructional materials that combine text-based learning resources with traditional knowledge to pique students' interest in studying Indonesian. These materials are intended for use with class VII students. A previous study's findings showed a widespread lack of interest in learning Indonesian among students and the public. This is because teachers have not created engaging and successful teaching methods, and students are disinterested in Indonesian language courses because they find them uninteresting (Nurhasanah, 2017). Another factor behind developing this teaching material is the relatively new independent curriculum implemented in Junior High Schools, which is still being refined, and the limitations of relevant teaching materials. Based on the results of a questionnaire conducted by researchers on several Junior High School Indonesian language teachers in the city of Tangerang, the results showed that 75% of Junior High Schools in the city of Tangerang had implemented the Merdeka Curriculum in class VII and 100% of Indonesian language teachers used teaching materials to support the learning process.

This research objective is to develop local wisdom-oriented Indonesian language teaching materials based on Android as the implementation of the Independent Curriculum for junior high schools in the city of Tangerang. Based on the results of research exploration, there are articles related to developing this teaching material. However, researchers are trying to explore and find novelty in this development research. The novelty of this development research is that Android-based Indonesian language teaching materials were developed that contains the diversity or local wisdom of the typical culture of the city of Tangerang; the Indonesian language teaching materials developed are relevant to the curriculum currently used in class VII of Junior High School in Tangerang City, namely the Implementation of the Merdeka Curriculum; the Indonesian language learning material developed contains local cultural values, behavior, norms, habits of the local area which are integrated in the text; Indonesian language learning materials are developed in accordance with the Indonesian language learning achievements stated in the Decree of the Head of the Educational Standards, Curriculum and Assessment Agency of the Ministry of Education, Culture, Research and Technology No. 008/H/KR/2022 concerning learning achievements in Early Childhood Education,

Basic Education and Secondary Education levels in the Independent Curriculum.

From the facts above, researchers are interested in developing teaching materials oriented to the local wisdom of the city of Tangerang. Local wisdom needs to be introduced to the people of Tangerang City from an early age so that the integration of local wisdom in Indonesian language teaching materials for class VII junior high school students in Tangerang City is considered important. Local wisdom is the ethnic identity of a local community that utilizes local resources to develop local potential. Therefore, local wisdom that will be integrated into the development of Indonesian language teaching materials for class VII, semester 1, includes historical buildings of the city of Tangerang in studying descriptive texts, folklore of the city of Tangerang in studying narrative texts, and typical food of the city of Tangerang in studying procedural texts as implemented in Merdeka Curriculum.

This research is about developing android-based local wisdom-oriented Indonesian teaching materials to implement the independent curriculum for junior high schools in Tangerang City. Based on the results of the research exploration, some studies explore the development of these teaching materials; however, researchers are trying to explore and find uniqueness in this development research. The novelty of this development research is that the android-based Indonesian teaching materials developed contain matters of diversity or local wisdom of the typical culture of the city of Tangerang. In addition, the Indonesian teaching materials developed are relevant to the curriculum currently used in class VII of public junior high schools in Tangerang City, namely the Implementation of the Merdeka Curriculum (IKM), which emphasizes adaptive meaningful and contextual learning.
The younger generation can help preserve the potential of their region by instilling positive and developing character in society through local wisdom integrated into learning, especially among junior high school students, to shape their characteristics, create peace, and improve community welfare. Therefore, it is necessary to carry out a need analysis study to determine the teaching materials needed by junior high school teachers, especially in Indonesian language subjects for junior high school level teachers in Tangerang. So, later, the results of these initial needs will become an illustration for researchers to develop teaching materials that suit the concrete needs of teachers and students.

THEORETICAL FRAMEWORK

Android Teaching Materials

The development of information and digital technology does not only affect how easily students can access linguistic resources (Zhang, 2021). Based on the characteristics of 21st-century learning and the independent curriculum that requires students to think critically, have empathy, respect others, and have a sense of nation and state, the learning applied in the classroom must be creative and innovative (Khasanah & Muthali'in, 2023). Teachers must carry out creative improvisation in order to create engaging and enjoyable learning. One of the creative improvisations carried out by teachers in learning is compiling and developing interesting teaching materials following learning objectives, learning achievements, and student characteristics (Karim et al., 2023). Teaching materials that utilize technology when applied to learning are considered more practical, making it easier for students to gain knowledge and learn anywhere and anytime (Alwi et al., 2020).

The most popular and most widely used mobile operating system in the world today is Android. Android can function as an operating system for various digital devices, including smartphones, televisions, and digital glasses (Higginbotham & Jacobs, 2011). As a result, everyone can benefit from knowing and understanding the technology behind the Android operating system, especially application developers, scientists, technology professionals, educators, and

students who want to create educational resources.

Android is a mobile device operating system built on the Linux kernel. Many different mobile devices can take advantage of the free and open development environment provided by Android (android 5). The human-like robot is called "Android" in English (Chikaraishi et al., 2017). Therefore, Android can be used on various devices, including smartphones, tablets, e-book readers, netbooks, personal computers, smart TVs, cameras, refrigerators, and watches (Susilawati & Al Ayubi, 2022). It is not impossible for education and learning to use this Android base as a media or teaching material, considering how often Android appears and is used on several devices to make it easier for its users.

The advantages and disadvantages of Android are a comprehensive Android strategy, its open-source nature, a free platform, and a popular operating system, while the disadvantages of Android are that it must be connected to the internet, ads often appear, and the battery is wasteful (Ibrahim & Ishartiwi, 2017). Another opinion also says that the advantages of Android are better multitasking and switching, more space for various widgets, better copy-paste functions, Chrome being a faster browser, and notifications with clear audio. Moreover, improved multitouch and drag and drop, while the disadvantages of Android include continuous internet access and lots of annoying ads (Fadhlillah et al., 2021). Some advantages of other Android operating systems include that Android is open source, and anyone can make it because it is based on Linux (Mos & Chowdhury, 2020). Namely, the ease of accessing the Android market is already available on Android devices, all Google services are supported, and the Android operating system allows multitasking, which allows the use of various programs simultaneously (Xian et al., 2021).

In addition, Android is safe for devices and makes it easy for users to customize the ROM. The disadvantage of the Android operating system is that it cannot be used without an internet connection. It takes a while for developers to update the latest Android version, and the application has many advertisements so that user comfort can be disturbed (Fatahillah et al., 2023). Therefore, Android is an operating system that, with its advantages and disadvantages, can be used to make teaching materials for students.

Local Wisdom

Each region owns its cultural heritage, known as "local wisdom." There is no way to isolate local cultural practices and wisdom from any place. Because local wisdom also functions to describe the history of the region. Maintaining local wisdom is a form that can shape the character of the community, especially the local population (Rinda Fauzian et al., 2021). With the values of local wisdom, honesty, responsibility, caution, tolerance, and creativity can be developed, as well as the spirit of cooperation. If these qualities are not fostered and developed in students, they will deteriorate over time. Local wisdom and culture will foster a sense of togetherness among fellow human beings.

Afif (2022) defines local wisdom as human intelligence obtained through community experience held by certain ethnic groups. This means that local wisdom is the result of the experience of a particular community and is not necessarily owned by other communities. These values have a long history since the culture's founding and will closely relate to a particular community. The use of names, mythology, buildings, leadership systems, traditional arts, crafts, customs, traditional clothing, traditional medicine, regional languages and writings, typical foods, local folklore, environmental management, and works are some examples of local wisdom (Najiyah et al., 2023).

Local wisdom is characterized as a diverse outlook on life, knowledge, and life strategies in the form of activities carried out by local communities in responding to various problems related to daily needs. Their system of fulfilling their needs covers all aspects of life, including religion, science, economics, technology, social structure, language, and art (Suwarlan, 2020). They know how to meet needs by considering available human resources and local natural resources, and they have programs, activities, and implementations related to maintaining, developing, and meeting these needs (Syarif et al., 2023).

Based the explanation above, Indonesian language learning involves the application of the following ideas: (1) language should be seen as text, not just a list of words or linguistic rules; (2) language use is the process of choosing linguistic forms to express meaning; (3) language is functional, namely the use of language that is never separated from context because the form of language used reflects the ideas, attitudes, values, and ideologies of its users; and (4) language is a social construct (Zahrotunnisa & Ruja, 2022).

METHODOLOGY

The researchers use a research and development (R&D) approach. Research and development, or R&D, is the process of creating a new product, refining an old one (Gustiani, 2019), and evaluating the finished product's efficacy by assessing the quasi-experimental method (Sugiyono, 2011). In this study, researchers created, produced, and validated the educational products produced, as well as evaluated the effectiveness of these products. The development model used is the Analysis, Design, Development, Implementation, and Evaluation (ADDIE). This model emerged in the 1990s, developed by Reiser and Mollenda. This model was chosen because the ADDIE model is often used to describe a systematic approach to instructional design (Widyastuti & Susiana, 2019). The five stages contained in the ADDIE Model include analysis, design, development, implementation, and evaluation. Based on the problems that have been formulated, researchers have proposed a strategy to develop local wisdom-oriented Indonesian language teaching materials based on Android using the ADDIE development model to produce useful digital teaching material products.

The subjects of this research were purposively chosen, including two experts in materials, two experts in media, 2 Indonesian Language teachers, and two classes (VII-A as the control class consists of 25 students and VII-B as the experiment class consists of 25 students). The instruments used in this research were questionnaires and tests of learning achievement. A questionnaire for teaching materials by a material expert is given to a lecturer with specific expertise in the material and media being developed. This questionnaire determines the validity value of teaching materials developed based on competency, material content, and conformity. This teaching material assessment sheet by a media expert is given to a lecturer with specifications in the media field. This instrument aims to determine the validity value of teaching materials developed based on aspects of language, presentation, and graphics. The instruments of teaching material and media assessment in the form of questionnaires are prepared with five alternative answers, namely Very Poor (VP), Less Suitable (LS), Adequate (A), Suitable (S), and Very Suitable (VS). Another instrument is the test of learning achievement. The tests (pretest and post-test) are given to students at the end of the learning process to determine the completeness of students' understanding after learning has been completed. The test results determine the average percentage of student learning achievement test scores. From the test results, the percentage of students' classical completion will be obtained to determine the effectiveness of the teaching materials.

DISCUSSION

The researcher described the findings of the development of the Indonesian language learning materials based on Tangerang City's local wisdom in this part according to the lesson plans for class VII junior high school students. The characteristics of Indonesian language learning as it has been implemented thus far in junior high schools in the Tangerang City area, where the respondents work. The explanation of the instructional materials used is divided into five stages: analysis, design, development, implementation, and evaluation. The explanation for each stage is as follows.

Stage I: Analyze

The first stage in the ADDIE development research methodology is to assess the need for developing new instructional materials and the need for and viability of doing so. The need analysis aims to determine the condition of Indonesian language learning in junior high schools and the urgency of developing teaching materials to improve the quality of Indonesian language learning so that students' language skills also improve by conducting interviews with teachers and students and collecting data by filling out teacher and student needs analysis questionnaires. This need analysis is carried out by first analyzing the condition of teaching materials as the primary information in learning and the availability of teaching materials that support the implementation of learning. At this stage, teaching materials that need to be developed to help students learn will be determined. The shortage of an already-existing or implemented product may serve as the idea for a new product's development. Current or existing products of Indonesian learning materials in printed texts seemed no longer relevant to target needs, learning environments, technology, student characteristics, and other factors, which can lead to problems. The findings also revealed that the teaching materials available in schools are adequate but not yet optimal because textbooks are still the primary teaching material in learning, while other teaching materials or reading materials can support Indonesian language learning in junior high schools. Implementing the Independent Curriculum in schools is also the beginning of the digitalization of schools, so it cannot be denied that it integrates various learning platforms as learning media. Implementation of the Independent Curriculum is also the first step in digitalization, so the teaching materials must utilize technology to be relevant to curriculum demands. Another need analysis conducted by the researcher is the curriculum analysis. It is carried out by paying attention to the curriculum characteristics used in a school. This is done so that the development carried out can be by the demands of the applicable curriculum. Then, the researchers examined competencies and learning achievements to formulate indicators of learning achievements.

The overall results obtained from the need analysis, namely 33% of Indonesian language teachers used textbooks, 29% of Indonesian language teachers used learning sheets, 17% of Indonesian language teachers used PowerPoint modules and slides, 4% of Indonesian language teachers used E-modules and 0% of Indonesian language teachers used handouts. These results show that most Indonesian language teachers use textbooks as Indonesian language teaching materials. The results obtained were that 75% of Indonesian language teachers in Tangerang Junior High School stated that the Indonesian language teaching materials used were adequate. However, it would be better if other teaching materials supported them. Therefore, there is a need for teaching materials other than textbooks relevant to the Implementation of the Independent Curriculum. Furthermore, based on the results of interviews conducted with Indonesian language teachers at Junior

High School in the city of Tangerang, information was obtained that the obstacles in learning Indonesian were related to the use of teaching materials, namely that the existing teaching materials were not by the needs and characteristics of students and the presentation was less attractive. In contrast, most teachers have limited time to develop their teaching materials following the learning outcomes of the Independent Curriculum.

Stage II: Design

The second stage is design. According to the ADDIE research and development model, design activities are a methodical process that begins with concept and content design for the product. Plans are written for every product content. The product design is still conceptual and will guide the development process in the following phase. At this stage, indicators are determined, materials are compilated, and parts of Indonesian language teaching materials are referenced under the independent curriculum. At this stage, researchers design learning material designs that will be included in teaching materials, design product designs and develop product instruments for validation by experts, teachers, and students.

In the design stage, the researchers determined the elements needed in the worksheet, such as preparing a map of teaching material needs and a framework for teaching materials. Researchers also collect references that will be used in developing teaching materials. Next, the researchers also developed instruments to assess the teaching materials being developed.

The instrument was prepared by considering aspects of teaching material assessment, namely aspects of the appropriateness of the content, the language, the presentation, graphics, and suitability to the approach used. The instruments prepared are teaching material assessment sheets and response questionnaires. Next, the instruments that have been prepared will be validated to obtain a valid assessment instrument.

Table 1. Storyboard Overview of Android-based local wisdom-oriented Indonesian language teaching materials

No.	Visual	Specifications
1	a. Frame Intro b. Logo Application c. Indonesian Language Teaching Materials for Junior High Schools	The intro frame first appears when opening the teaching material application. The name of the Indonesian language teaching material application is displayed on the intro page.
2	a. Main Frame b. Sign up c. Log in d. (username, password)	The main frame is the beginning before entering the Home Frame, which contains the name of the material in the Indonesian language learning application. What is contained in this central frame is a username, password, Login, and Register to start the teaching material application.
3	a. Dashboard/ Home b. Moving Images of Local Wisdom Objects of Tangerang City c. Descriptive Text d. Narrative Text e. Procedural Text f. About	The Home Frame contains the names of the materials in the Alinea Indonesian language learning application studied by the seventh-grade students of junior high school in the first Semester. This Home Frame is also equipped with an About Menu, which contains instructions for using the learning application and the identity of the teaching material developer.
4	a. Name of the Text studied b. (Descriptive, Narrative, Procedure)	In the Material Frame, the name of the text studied in the learning is listed, and boxes are included that include the content of the learning material. This frame is also equipped with a

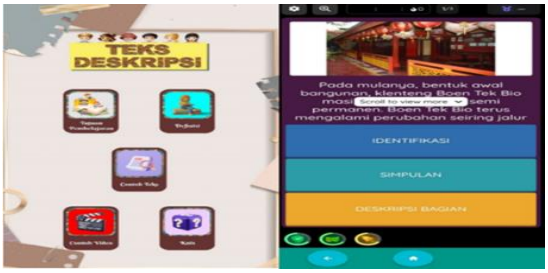
			Home menu image navigation that can be clicked to return to the Home Frame to select which text students will learn.
5	a. b. c. d. e. f.	Learning Material Content Frame Learning Objectives Definition of The Text Content Textual Material Example of Text Video Example	The Learning Material Content Frame contains moving images that refer to the local wisdom of the city of Tangerang to strengthen the design of local wisdom-oriented teaching materials accompanied by an explanation of learning objectives after clicking the Learning Objectives Menu on the home frame.
	a. b. c. d. e. f.	Quiz Using Quizziz Start Question Setting Reading the text aloud	In the Quiz menu, Practice Questions will appear along with answer choices and Scores to determine the student's score after completing the Quiz for evaluation material.
6	a. b. c. d. e.	Developer Profile Frame Developer Name Developer Photo Master Number Study Program/Concentration	In the Developer Profile Frame, a photo and profile of the developer of the Indonesian language teaching material will be displayed, which is the last slide of the local wisdom-based Indonesian language learning application.

This research is designed to produce Android-based local wisdom-oriented Indonesian language teaching materials. The teaching materials developed in this development research are Indonesian language teaching materials for class VII of State Middle Schools in Tangerang. Local wisdom is integrated into technology-based teaching materials developed by researchers, namely the culture in Tangerang City. Tangerang is a city located in Banten province, Indonesia. The original tribe of the people of Tangerang City is the Sundanese Banten tribe. In reality, most people living in the city of Tangerang are heterogeneous people from various ethnicities. In fact, in Tangerang, there is an ethnic Chinese settlement which is nicknamed "Cina Benteng." The name "Cina Benteng" comes from the word "Fortress," which is the old name of the city of Tangerang. This fact illustrates that Tangerang is a city with a substantial cultural variation. Therefore, the cultural values and social norms in Tangerang are very diverse, so it is not uncommon for some people not to know the local wisdom of Tangerang City itself.

Stage III: Development

The third stage is development. Within the ADDIE research and development methodology, development was taken to bring previously developed product designs to life. A conceptual framework for implementing the new product was created in the earlier phase. After that, the conceptual framework is turned into a finished product prepared for use. A tool to gauge the product's performance must also be developed at this point. The development stage is the product realization stage. At this stage, teaching materials are developed according to the design. Three types of texts are developed in the android teaching materials: (1) Descriptive text using "Boen Tek Bio Temple" as A Place of Goodness That Remains. This ancient temple is located in the middle of the Chinatown village that became the forerunner of Tangerang City. (2) Procedure Text using "How to Make Laksa" Laksa is a type of noodle dish in a spicy soup typical of Peranakan culture, which combines Chinese, Malay and various ethnic elements typical of Tangerang., and (3) Narrative Text using "The History of Pintu Air 10" Cisadane River in Tangerang City, it was built in 1927 and began to be used in 1932 during

the Dutch colonial period until now it become of Tangerang city's landmark.



Picture 1. The initial development of Android Teaching Materials for Descriptive Text

After initiating the design, the design to be tested is first validated by experts. After the product design is valid, a trial is carried out. Product trials are carried out to obtain data that will be used to determine the weaknesses of the product being developed as a basis for revising the product in the form: (1) one-to-one try out, (2) small-scale try out, and (3) followed by medium-scale try out. The results of this trial are expected to be a reference for obtaining input from experts used to improve truly valid products.

The validator uses instruments prepared in the previous stage of the validation process. Validation was carried out to assess content and construct validity. Validators are asked to provide an assessment of the teaching that is developed based on aspects of teaching appropriateness and provide suggestions and comments related to the content of the teaching material, which will later be used as a benchmark for revision and improvement of the teaching. Validation is carried out until the teaching is declared suitable for implementation in learning activities. Below are the results of product validations.

Table 2. Result of Product Validation

No.	The subject of the Research	Try out	Result of Validity Questionnaires (Mean)	Category
1	Expert of Material	One-to-one	3,95	Adequate
2	Expert of Media	One-to-one	4,25	Very Good
3	Subject Matter Teacher	One-to-one	4,10	Adequate
4	Students Responses (3-5)	Small-group	3,28	Adequate
5	Students Responses (8-15)	Medium-group	3,01	Adequate

Revisions were made after validating experts in material, media, subject matter, and students. The researchers then revised the product three times. Suggestions and input from material experts, media experts, and linguists are used as studies and reference materials to improve the content of teaching material products until they become a final product. The final product is the result of the development of android-based local wisdom-oriented Indonesian teaching materials which are final. The Indonesian teaching material product developed is ALINEA in the form of a learning application, which will be available on the *Google Plays Store* and can be uploaded by teachers and students in grade VII SMP.

The researchers also carried out data analysis on the results of the teaching material assessment obtained from the validator. This is done to obtain the validity value of the teaching materials. Android-based local wisdom-oriented Indonesian language teaching materials are developed at this stage by realizing product designs and text-based Indonesian language learning materials. Apart from that, we also validate products with material experts, media experts, and language experts through expert validation questionnaires. Below are some of the recommendations after administering the questionnaires.

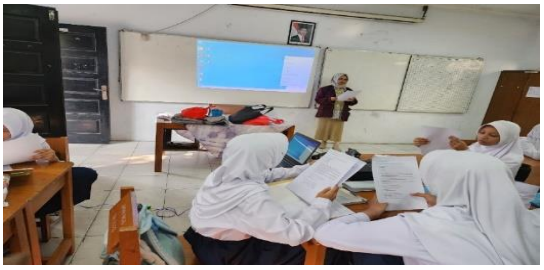
Table 3. Several Recommendations from Experts in Materials and Media

No.	Expert of Material	Expert of Media
1	Clarifying the contents of the material and	Correcting spelling errors, fonts, font

	images in the product so that they are by the material, as well as improvements in fonts and neatness of image placement.	sizes, and punctuation
2	Core Competencies, Basic Competencies, Indicators, and learning objectives are not yet clearly visible.	Correcting sentences in products and covers

Stage IV: Implementation

The fourth stage is implementation. Using products in the ADDIE research and development model aims to get user input on the products produced or generated. The researchers can get early feedback by posting inquiries about product development objectives. The application regarding the developed product design is completed. At this stage, a trial of the revised product is carried out based on the assessment of material experts, media experts, and language experts on a small and medium scale to determine the feasibility of the developed teaching material product. After that, data will be collected to determine the practicality of the teaching materials developed using response questionnaires filled out by teachers and students. At this stage, researchers revised the product based on the results of product trials and teacher and student response questionnaires. Then, at the end of the lesson, students are given a test to measure the effectiveness of the teaching materials developed and students' understanding of text-based Indonesian language learning materials.



Picture 2. The Researchers Implemented the Android Teaching Materials Based on Local Wisdom Into The Classroom

The picture above describes that the researcher serves as an observer and records everything on an observation sheet, which can be used to improve teaching materials. After completing the learning process, students take a test using the questions provided. These questions have been prepared based on competency achievement indicators to see the level of effectiveness in using the teaching materials developed. The researchers also distributed response questionnaires to teachers and students containing statement items regarding using teaching materials in learning. This was done to obtain data on the practical value of using teaching materials. Teachers and students were also asked to provide comments as a reference for the second revision according to teacher and student responses. After distributing questionnaires and conducting student learning tests, researchers carried out data analysis. The first analysis is based on the results of the response questionnaire. This analysis was carried out to determine the practical value of the developed teaching materials. Apart from the practical value, an assessment of the effectiveness of the teaching materials is also carried out at this stage. Effectiveness data is obtained from student learning outcomes test scores by calculating the percentage of classical completeness based on minimum completeness criteria at school.

Stage V: Evaluation

The final stage is evaluation. In order to make necessary adjustments based on assessment results or needs that the product cannot fulfill, the evaluation stage of the

ADDIE model development study is conducted to get input from product consumers. The evaluation's ultimate objective is to gauge how healthy development objectives are met. This stage was carried out to study the resulting data collection in the form of documentation of learning activities and final language test results, as well as to develop Indonesian language teaching material products. The data is analyzed and evaluated, and improvements are made to obtain the final teaching material.

Table 4. Result of Paired Sample Test (Pretest-Post-test)

Paired Sample Test				
		N	Correlation	Sig.
Pair 1	Descriptive Pretest & Descriptive Post-test	50	.287	.043
Pair 2	Procedure Pretest & Procedure Post-test	50	.127	.013
Pair 3	Narrative Pretest & Narrative Post-test	50	.180	.024

The second purpose of this research is to explain the implementation of local wisdom-oriented Indonesian language teaching materials for junior high schools in Tangerang. In the experimental class using local wisdom-oriented Indonesian language teaching materials based on Android with a sample size of 50 students. While in the control class, which had a sample size of 50 students. Furthermore, researchers can determine the initial ability conditions of students so they can provide an initial test or pretest. The product of the local wisdom-oriented Indonesian language teaching materials using Android-based local wisdom was used as a teaching medium in the experiment class. Finally, at the end of the teaching and learning process, both classes, experimental and control classes, did the post-test using three different topics, namely descriptive, procedure, and narrative text.

The results of the data that researchers obtained and have been processed using the SPSS program showed that from the test of descriptive text pretest and posttest, the result is 0.043 < 0.05, while in procedure text pretest and posttest, the result is 0.13 < 0.05, and last from narrative text pretest and posttest the result is 0.024 < 0.05. All three pairs indicated that there was a significant difference in the effect of local wisdom-oriented Indonesian language teaching materials based on Android as an implementation of the independent curriculum for junior high schools in Tangerang City.

In this research, teaching materials are included in Android based on the local wisdom that has benefited the learning situation in the classroom; it is effective and helps students understand the material given by the teacher in the classroom. Android-based teaching materials with local wisdom contain sound and image elements that can be seen through video recordings and others (Agustian et al., 2021). The role of teaching materials will also be seen if the teacher can use them well and be a facilitator accompanying students in the learning process (Arif Muadzin, 2021; Nuñez Enriquez & Oliver, 2021).

Using android-based teaching materials with local wisdom can help the learning process in two-way communication (Ardiansyah & Wicaksono, 2022). This learning paradigm shift is inextricably linked to the adoption from offline to online classes (Munoto et al., 2021), which makes use of readily available Android devices as the primary means of guaranteeing that education is accessible to and enjoyed by every student without any exception (Abidin et al., 2023). Students can access learning resources at any time and from any location, without being limited by time or distance, during the learning process both inside and outside the classroom (Hajovsky et al., 2020). This makes learning more flexible and effective by enabling students to follow their

learning style and rhythm (Agustian et al., 2021).

To conclude, the teaching and learning process using the local wisdom-oriented Indonesian language teaching material based on Android for Junior High schools in Tangerang has a positive impact since it facilitates students' learning needs (Quratul Aini & Adiyono, 2023). To maximize the learning results, teachers must constantly upgrade themselves and enhance their expertise to avoid falling behind as sophisticated technology advances (Sánchez-Cruzado et al., 2021). Teachers can experiment with various learning methods and media, including digital innovations like Android Digital (Nurchintyawati, 2022). Digital learning advances are supposed to foster an enjoyable learning environment (Lee & Lee, 2021). Interesting digital learning innovations with an interactive nature that prioritizes cooperation and communication and can promote interaction between students are games, which could create motivation in learning and successfully increase the learning process.

CONCLUSION

This research has successfully developed the local wisdom-oriented Indonesian language teaching materials based on Android as an implementation of the independent curriculum for junior high schools in Tangerang City. Based on the results of the study. The research has been successfully integrating local wisdom from the city's diverse cultural backgrounds. The result also revealed significant improvement in students' learning outcomes, indicating the effectiveness of the developed teaching materials. Tangerang's rich cultural diversity underscores the importance of preserving and promoting local wisdom in education, especially within a heterogeneous community.

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