

## Smartphone-Based Anecdotal Text Learning Media

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**Abstract-** This study aims to develop a smartphone-based anecdotal text learning media for high school students using the DDDE (Decide, Design, Development, Evaluation) model. The background of the research is based on three main problems: (1) low interest in learning conventional anecdotal texts, (2) lack of teaching materials relevant to students' digital lives, and (3) suboptimal use of smartphones (4) internet access in schools that has not been optimized. This research aims to provide innovative media alternatives based on the contextual needs of schools. The research methods used are research and development with observation, interview and data testing techniques. The data was processed using mixed method data analysis techniques. Quantitative data was obtained from the results of product trials using questionnaires and learning outcome tests, while qualitative data was obtained from observations and interviews with teachers and students. The validity of the product is assessed by material experts, media experts, and practitioners with categories that are very suitable for Indonesian learning. The trial is divided into a limited trial in one class and a field trial involving two classes at the school. The results of the analysis of 26 student samples showed an average pretest score of 61.8 and a posttest score of 83.8, with an increase of 22 points. The paired t-test yielded a calculated  $t$  of 44.9 > a  $t$ -table of 2.06 ( $\alpha = 0.05$ ), so there was a significant difference between learning outcomes before and after using the learning media. The normalized gain value ( $g$ ) = 0.58 is in the moderate category, which indicates that learning media is effective in improving student learning outcomes. Thus, the media developed has proven to be very suitable for use in the learning process and has a positive effect on improving student understanding.

**Keywords:** *Learning media, anecdotal text, smartphones*

### I. INTRODUCTION

The digital era demands the adaptation of teaching methods to be in harmony with the habits of students who are familiar with their gadgets (Hasanah, U., Doriza, S., & Rahmadhani, 2021). Innovation in Indonesian language learning, especially anecdotal text materials, is crucial considering the lack of use of modern learning media by some teachers (Qulub, T., & Renhoat, 2020). The

development of mobile-based learning media is an effective solution to increase student learning motivation, considering the dominance of smartphone use in daily life. This phenomenon is supported by the fact that mobile phones have developed rapidly and can be used as a source and educational learning medium in various fields, including education. Studies have even proven that language learning via mobile devices is more effective than via computer (Sung, Y.-T., Chang, K.-E., & Yang, 2015). The use

of mobile technology, especially smartphones, in the learning process has shown significant potential to increase the effectiveness of teaching languages and other academic materials (Taruna, R. H., Sudrajat, K., & Sutanto, 2025). The shift from conventional paper-based media to the use of technology, such as Android applications on smartphones, allows the recognition of objects or materials that are difficult to bring directly into the classroom and offers ease of understanding (Fathurohman, A., Kurdiati, L. A., & Susiloningsih, 2022; Susanti, V. D., Suprpto, E., & Wardani, 2022; Taruna, R. H., Sudrajat, K., & Sutanto, 2025)

The teaching of anecdotal texts in the Indonesian curriculum aims to develop students' creative writing and critical thinking skills (2). However, some problems arise in his learning practice:

1. **Lack of Student Involvement:** Conventional learning tends to be monotonous, so students are less interested. The absence of learning media innovation causes the material to feel dry and less relevant to their everyday digital experiences, which ultimately reduces students' intrinsic motivation in understanding and analyzing anecdotal texts.
2. **Limitations of Teaching Materials:** Textbooks often do not present anecdotal examples that are relevant to students' digital lives. In addition, teachers also often face challenges in exploring better learning technologies, so the teaching and learning process still often relies on conventional methods (Azlina, F. dwi, Supriadi, S., Efriyanti, L., & Jasmienti, 2024).
3. **Untapped Potential of Technology:** 96% of high school students have smartphones, but their use has not been optimized for learning (BPS, 2023). In fact, the use of Android smartphones as a learning medium has a high level of flexibility and portability, allowing students to learn independently anytime and anywhere (Maivi, C. S., Ganefri, G., & Sukardi, 2021).
4. **Internet access that has not been maximized utilized.** This indicates the

need for the development of learning media that is able to optimally integrate internet access to support more interactive and comprehensive learning. Therefore, the development of smartphone-based learning media, especially Android applications, offers adaptive solutions to overcome these challenges and optimize the potential of students' devices as effective and interesting learning aids.

We need to follow up on these problems with relevant scientific research. Therefore, there is a need for research to see the phenomenon that occurs even in a small sample. As a question in this study, how is the feasibility of the media? and how the results of the use of media in learning?.

Despite existing efforts to develop digital learning media aimed at improving students' anecdote text writing and comprehension skills (for instance, through character-based video media, blog-based media, or stand-up comedy videos), there remains a significant research gap concerning the in-depth exploration of the potential of Smartphone-Based Anecdotal Text Learning Media.

Previous research has successfully demonstrated the effectiveness of various digital media (such as videos and blogs) in anecdote text learning (Mascita & Rosmayati, 2018; Sari, n.d.; Zulaiha et al., 2025). Furthermore, there are findings that the use of smartphones and applications like WhatsApp has the potential to support learning activities in a flexible and interactive context (Montag et al., 2015). However, the majority of existing studies tend to focus on media with standardized formats (e.g., videos, digital teaching materials, or general applications) and have not explicitly developed, tested the validity, practicality, and effectiveness of a learning medium specifically designed and fully integrated into the smartphone platform for anecdote text material.

This research gap lies in the limited exploration of anecdote text learning models and features that capitalize on the unique characteristics of smartphones, such such as high interactivity, accessibility capabilities, notification features, and the potential for personalized learning tailored to students'

needs in analyzing the structure, linguistic elements, and writing of anecdote texts that contain subtle social critique. The development of smartphone-based media for anecdote texts requires a more detailed investigation into interface design, the type of anecdote content relevant to students' current social contexts, and adaptive feedback mechanisms. A study with this title aims to fill this gap by developing and testing a medium that utilizes a device highly dominant in students' daily lives to address the problem of students' low ability in writing and comprehending anecdote texts (Widyastuti et al., 2024; Zulaiha et al., 2025).

The core innovation of the research titled Smartphone Based Anecdotal Text Learning Media lies in the full integration of the dominant and familiar smartphone platform, transforming the device from a mere communication tool into an interactive, contextual, and highly portable Anecdotal Text learning ecosystem. This medium innovates beyond traditional static digital media by leveraging smartphone features like notifications and intuitive interfaces to offer flexible and personalized learning based on student progress, providing contextually relevant anecdote content through popular social media formats (such as memes or chat simulations), and embedding specific interactivity (such as a drag-and-drop feature for structuring or a critique writing simulation) complete with instant feedback mechanisms, all presented through a user-friendly interface design.

## II. METHODS

This research is in the form of research and development through qualitative and quantitative. This study only used one class with 26 samples that were tested before and after the experiment at one of the schools in Pekanbaru. This study developed a smartphone-based anecdotal text learning media for high school students using the DDDE (Decide, Design, Development, Evaluation) model from Ivers, K. S., & Barron (2022). The Decide stage identifies the needs of interactive media based on students' digital contexts. Students and

teachers were interviewed to identify learning problems, including the lack of media variety and limited use of digital teaching materials. Design produces mobile app designs with video features, interactive exercises, and discussion forums. This planning also includes the selection of applications to be used for development that allow the integration of multimedia elements and high interactivity to create an engaging and effective learning experience (Amalia, C., Alamsyah, T. P., & Pamungkas, 2022). In Development, prototypes were developed using Canva, Mobile App Design and WordWall Applications. Evaluation looks at expert assessments and student understanding based on trials.

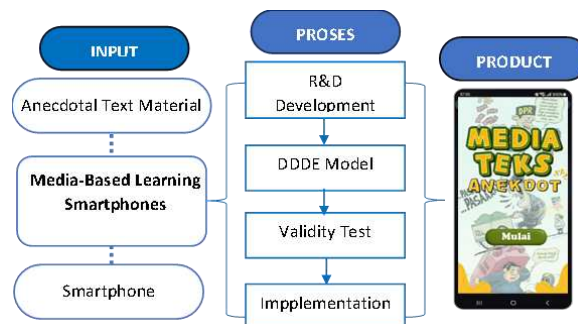


Figure 1. Research Flow Diagram

## III. RESULT AND DISCUSSION

**Decide Stage** In the analysis stage, the urgent need for innovative learning media for anecdotal text materials was identified, based on initial surveys that showed a lack of student involvement and the limitations of relevant teaching materials. Classroom observations further corroborate these findings, showing that the dominant teaching method is still centered on limited lectures and discussions, so it has not been able to facilitate independent or interactive learning. An in-depth needs analysis also revealed that 86% of students showed interest in learning using apps on their smartphones, with 62.8% approving of online learning using the app. This indicates a clear preference for digital media that is interactive and accessible through their personal devices. Interviews with grade 3 teachers also confirmed the

lack of variety of learning media and the lack of use of digital teaching materials, such as e-books that can increase student learning effectiveness (Andrianti, T., & Widiyono, 2025). This is in line with the needs identified in other studies regarding the development of valid and practical mobile-based interactive learning media for use by students. This creates a gap between the potential of technology and practical implementation in the classroom, underscoring the urgency of developing media that can bridge the gap. Therefore, the analysis stage serves as a crucial foundation to ensure that the products developed are not only technologically innovative, but also relevant and functional in a pedagogical context.

**Design Stage** In this stage, the initial design of learning products is carried out that integrates the results of needs analysis, including the preparation of the syllabus, the identification of basic competencies, and the determination of specific learning indicators and learning objectives. The preparation of this conceptual framework ensures that the learning media to be developed is in harmony with the curriculum and able to meet student achievement targets. The design also includes a selection of user-friendly features and interfaces, focusing on visualizing dynamic and interactive anecdotal text material, as well as the addition of audio-visual elements to enrich the learning experience (Rismawati, R., Saputra, H. N., & Fajriani, 2025). These elements are designed to enable students to understand anecdotal text material more deeply through simulation and visual context, as similar research shows that multimedia integration can improve student engagement and learning effectiveness (Andrianti, T., & Widiyono, 2025). In addition, this planning stage considers a simple yet compelling media design, as well as gathering relevant subject matter, background, videos, and animations to support the development of interactive media (Elfiranur, E., & Hariyani, 2025). Start with the perception section followed by material explanations, anecdotal examples, and formative evaluations to measure student understanding. Scheduling and resource

allocation are also an important part of this planning stage, ensuring a smooth development to implementation process. At this stage, an initial prototype of the learning media was also designed that included the navigation structure and layout of the content, in accordance with expert recommendations to ensure the effectiveness of the pedagogy. Stand-up comedy videos are key in an effort to increase the appeal and relevance of the material to the student experience. The development of this media considers pedagogical and technological aspects to ensure that anecdotal material is delivered effectively, utilizing interactive features that support independent exploration of the material by students.

**In Development**, media starts to be created with the Canva application. At this stage, the creation of media displays is the focus of researchers using this application. This is much more effective and efficient because of the many features that can be used and the choice of interesting icons that Canva offers. The Canva app allows designers to combine various visual elements such as images, videos, and animations, which can help explain abstract concepts in anecdotal text material in a more concrete and engaging way for students.



Figure 2. Anecdotal Text Media Products

**Evaluation** At the evaluation stage, the learning media that has been developed is then tested for validity and practicality by experts and also through limited trials to students to get comprehensive feedback (Kurniawan, B., K., I. B., Widiastuti, N. P. K., & Ahmad, 2021; Rismawati, R., Saputra, H. N., &

Fajriani, 2025). This evaluation process is important to ensure that the developed media is not only visually appealing, but also functions pedagogically to achieve the set learning objectives (Cahyani, Y. F. D., Fatayan, A., & Amaliyah, 2025). Validation of the quality and feasibility of animated video-based animation media is carried out by experts to ensure product reliability (Ningsih, M., Pudjiastuti, S. R., & Mukaddamah, 2023). The first result is the validation results of media experts. Furthermore, validation is carried out by material experts to evaluate the suitability of the content and the accuracy of the concept, as well as ensure that the material presented is accurate and relevant to the learning objectives (Hafni, F., Azhar, A., & Nasir, 2022). The results of the overall are in the form of a feasibility test of learning media. After validation by media and material experts, the media is then implemented and evaluated for effectiveness through a questionnaire to assess user response. These results were then analyzed to measure the level of satisfaction and effectiveness of the media in improving students' understanding of anecdotal text material, as well as to be the basis for further improvement before dissemination (Oktoberiansyah, O., Maharani, S. D., & Syarifuddin, 2024).

The results of the evaluation from media experts and material experts show that smartphone-based anecdotal text learning media is in the very feasible category. Media experts gave an assessment of 92%, which included aspects of appearance, navigation, and ease of use, while material experts gave an assessment of 93.3% which emphasized the suitability of content, accuracy of the material, and relevance to basic competencies. A high percentage of these two experts prove that the product has met the standards of content validity and good learning media design, so that it can be implemented in high school learning. This evaluation also involves collecting qualitative and quantitative data to identify areas that need improvement, so that learning media can be optimized for different contexts of use and student needs (Kurniasih, E., Leksono, I. P., & Rohman, 2023). The final step in the evaluation

phase includes broader field testing to test the effectiveness of media in real learning conditions, identify contextual factors that might influence its use, and collect empirical data on improved student learning achievement (Iskandar, B., Razilu, Z., & Fajriani, 2025).



Figure 3. Implementation of Anecdotal Text Media

Table.1 Pre and Post Test Results

Variabel	Total	Mean	General Category
Pretest	1606	61.8	Enough
Posttest	2179	83.8	Good
Gain	573	22.0	High
Media Response (1-5)	115	4.42	Very Positive

Table.2 Media Effectiveness

Aspects	Value	Description
Average Increase	22.0	Very High
t-count	44.9	Larger than t-table (2.06)
Significance	p < 0.001	Very Significant

Results of implementation in schools involving teachers and students. Based on the results of data analysis of 26 student samples, the average pretest score was 61.8 and the posttest was 83.8, with an average gain of 22 points. These results show that there is a considerable increase in learning ability after the use of learning media. The paired t-test was used to test the significance of differences in learning outcomes before and after treatment. The t-calculated value of 44.9 with the degree of freedom (df) = 25 is greater than the t-table of 2.06 at a significance level of 5%. Thus,  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a significant difference between learning outcomes before and after the use of learning media.

$$g = \frac{83,8 - 61,8}{100 - 61,8} = \frac{22}{38,2} = 0,58$$

In addition, the effectiveness of the media is calculated using a normalized gain (g) with the formula, resulting in a value  $g = (Posttest - Pretest)/(100 -$

*Pretest*) of  $g = 0.58$ . Based on criteria Hake (1999), This value is included in the medium category, which shows that learning media is effectively used in improving student learning outcomes. In general, the results of this statistical analysis prove that the use of learning media has a positive and significant impact on improving student understanding, and can be recommended to be applied in learning in a wider classroom after going through the revision and improvement stage. Evaluations show that smartphone-based learning media has great potential to increase student engagement and learning effectiveness. The use of this media is essential at the elementary school level, where students begin to develop thinking skills and need visual, audio, and interactive stimuli to maintain focus and make the learning process more enjoyable and effective.

Several recent studies have proven the vital role of smartphones and digital applications in learning. Research by Lestari and Budi (2021), through a systematic review, indicates that M-Learning significantly enhances user experience and overall learning effectiveness, highlighting flexibility and accessibility as key advantages. Furthermore, there is research discussing how content design needs to be adapted to be mobile-friendly, for instance, by optimizing text presentation for small screens to maintain the focus of easily distracted smartphone users (Dewi, 2025). This support strongly justifies the selection of the smartphone as the primary platform, as it aligns with modern pedagogical trends requiring portable and universally accessible media.

Innovation in digital media specific to Anecdotal Text demonstrates a strong need for technological solutions. Although the focus varies, existing research provides an important foundation. For example, UNJ Jurnal (Sari, 2021) developed an Android-based Game Trivia for Anecdotal Text material, showing that the use of gamification elements on mobile devices has proven viable. Furthermore, Muchson and Widyartono (2023) successfully developed the Android application "Janaka" to improve

Anecdotal Text writing skills, which includes materials and exercises. This innovation is further reinforced by the trend of audiovisual media development (e.g., motion graphics by Setiawan & Cahyo, 2024), which, although not always fully implemented as a mobile application, provides examples of how digital visualization can be applied to anecdotal material. These studies support that Anecdotal Text is suitable material for packaging in an interactive mobile application format.

Despite the existence of current Android applications (Muchson & Widyartono, 2023), previous research has not yet comprehensively integrated and tested innovative smartphone-specific features, such as advanced personalization, adaptive feedback mechanisms, or the full integration of mobile app gamification features into Anecdotal Text material. Therefore, this proposed research aims to fill that gap, leveraging the strong support for M-Learning (Lestari & Budi, 2021) and existing trends in digital Anecdotal Text media.

The main weaknesses of the research on developing a Smartphone-Based Anecdotal Text learning medium can be classified into three fundamental aspects that should be the focus of future studies. First, in terms of technical aspects and media validation, the research is often hampered by the limited scope of the trials, which generally only involve a small scale. Consequently, the validity of the media's effectiveness has not been consistently tested across diverse regions, network conditions, and varying device specifications. Furthermore, the content provided tends to be limited, not yet covering all aspects of anecdotal texts, and lacking sophisticated interactive features, animations, or visuals necessary to maintain student engagement. Second, regarding accessibility and infrastructure, the major challenge encountered is the access gap, where not all students possess a smartphone device or stable internet connection, potentially exacerbating learning disparities. The reliance on internet signals and the media's compatibility across various operating

systems or device versions also present serious technical constraints. Third, from the perspective of student learning and behavior, the use of smartphones introduces the risk of disturbances (distractions) from non-learning applications. Additionally, there is a need for further exploration into how the medium effectively helps students overcome difficulties in articulating ideas and structuring anecdotal sentences. Moreover, the majority of the research only measures short-term impact, meaning the long-term retention of knowledge and skills has not yet been identified.

Based on these weaknesses, future research is strongly recommended to focus on Large-Scale Comparative Studies across various socioeconomic backgrounds for stronger validation. Technologically, there is a need for the Integration of Advanced Features such as Artificial Intelligence (AI) to provide real-time feedback and the enhancement of Gamification elements to boost motivation. Equally important is the Development of an Offline Version to minimize reliance on the internet and address accessibility issues, followed by In-Depth Qualitative Research to design effective features or strategies for reducing potential distractions during the learning process.

#### **IV. CONCLUSION**

Thus, the development of smartphone-based anecdotal text learning media is feasible and can improve student learning outcomes. This medium offers innovative solutions to overcome the challenges of conventional learning and improve the quality of education through a more dynamic and interactive approach. The application of this media also has the potential to develop teachers' digital literacy, in line with the need to improve competence in the implementation of technology-based learning. The successful implementation of this media can be a model for the development of other learning materials, encouraging student-centered pedagogical innovation and optimal use of technology. Further studies are needed to quantitatively measure the

effectiveness of these learning media products on students' learning outcomes, motivation, and digital literacy. In addition, exploration of the integration of personalization features and learning adaptation in other application-based media can be the next direction of research to accommodate students' individual learning styles.

Key recommendations for future research concerning the Smartphone-Based Anecdotal Text learning medium focus on external validation efforts and the measurement of long-term impact. Firstly, it is advised to conduct Large-Scale and Cross-Regional Comparative Studies, involving the testing of the medium in a minimum of three schools that possess significant differences, both geographically (urban vs. rural) and in terms of students' socioeconomic backgrounds. The main purpose of this scale expansion is to validate and test the consistency of the media's effectiveness when facing variations in infrastructure, network conditions, and diverse learning environments. Secondly, subsequent research must include Long-Term Retention Testing, where researchers design studies with a delayed post-test (e.g., 3 to 6 months after the initial treatment). This focus is crucial for going beyond the measurement of immediate impact and ensuring that the students' skills and knowledge in writing anecdotal texts, facilitated by the medium, can be retained and are not effective only over a short period of time.

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