

## Development of a Digital Book Based on the ARCS Model (Attention, Relevance, Confidence, Satisfaction)

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### ABSTRACT

*The issue of low student motivation in learning Indonesian language from the limited availability of learning resources, making it necessary to develop more varied learning media. This study aims to assess the effectiveness of a digital Indonesian language book based on the ARCS learning model, which focuses on enhancing students' learning motivation, particularly in the anecdotal text material for Grade 10. It also seeks to determine the feasibility of using the digital book in the teaching and learning process through expert validation (by subject matter and media experts) and practicality testing by both practitioners and students. This research is categorized as effectiveness research and involved a sample of 34 Grade 10 students at SMA Negeri 3 Padang. Data collection was conducted using a test instrument. The results indicate that the developed digital book is both valid and practical. The content validity of the book was rated at 78.96%, while the media aspect reached a validity percentage of 80.76%. Additionally, the ARCS-based digital book was found to be highly practical, with final practicality scores of 82.81% and 83.71%, based on questionnaire analyses completed by teachers and Grade 10 E 8 students at SMA Negeri 3 Padang.*

**Keywords:** *Digital Book; ARCS Model; Student Motivation; Instructional Media; Learning Effectiveness.*

### INTRODUCTION

Textbooks are among the most common learning resources used in education. Books serve to satisfy readers' curiosity, providing important information such as knowledge, history, and more. Their use in education has long been established, and they are considered highly suitable as student learning tools. However, textbooks must continue to evolve in accordance with the times—not only in terms of content but also in design and format. This development is not without reason; continuous enhancement of learning resources is essential to improving the quality of education. Integrating technology into education is crucial and must be optimized to meet the learning needs of today's students, who exhibit different tendencies and characteristics from previous

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generations. Influenced by the rapid pace of technological advancement, today's learners are typically tech-savvy, enjoy engaging with technology, think practically, and tend to multitask. Therefore, educators must design learning strategies that are relevant to these changes to help students navigate the challenges of modern education.

One way to implement technology in education is through the use of digital books. This innovation addresses the lack of variety in presenting learning materials and resources. Digital books are considered highly suitable for today's generation, who are closely connected to smartphones, tablets, and computers. These devices are used almost constantly—for communication, entertainment, social media, and even learning. A 2019 study by the Digital Yearbook Report revealed that Indonesians spend an average of 3 hours and 26 minutes daily on social media via smartphones, far exceeding the global average of 2 hours and 16 minutes. A survey of 314 respondents aged 15–18 in Surabaya showed that frequent smartphone use is closely tied to social media addiction. Additionally, Statista's July 2020 data showed smartphone penetration in Indonesia grew from 56.2% in 2018 to 63.3% in 2019, and is projected to reach 89.2% by 2025.

Given these data, the integration of digital books into education is highly relevant. Digital books, accessible through smartphones, tablets, or computers, can significantly support the learning process and address the issue of limited resources. They may also help reduce the negative impact of social media addiction by redirecting screen time toward educational use. As interactive learning media, digital books offer numerous advantages. According to Tompo (2017), digital books excel in usability, readability, and ease of use in daily life. They can be designed with appealing visuals, layouts, images, and even audio-visual elements, making learning more engaging and less monotonous—thereby boosting student interest and motivation. Moreover, digital books are highly accessible and eliminate the burden of carrying heavy printed textbooks.

Initial observations at SMA Negeri 3 Padang in the Indonesian language subject revealed that students often lacked motivation to participate in lessons. Various factors contributed to this, including underdeveloped materials and monotonous textbooks. Therefore, a motivational learning model is needed. The ARCS model (Attention, Relevance, Confidence, Satisfaction) is deemed a suitable solution, as it is specifically designed to foster student motivation. According to Li and Keller (2018), this model emphasizes capturing students' attention, aligning material with their learning experiences, and fostering both confidence and satisfaction. By applying the ARCS model, teachers can develop learning strategies tailored to students' needs and characteristics, ultimately increasing their motivation.

The effectiveness of the digital book in this study will be focused on the anecdotal text material. Anecdotal texts are chosen because, while they are interesting and important, students have not yet been able to study them optimally due to the challenges mentioned above. In addition to improving literacy skills, anecdotal texts also contribute to character development. Anecdotes are humorous narrative texts or dialogues, often based on the life experiences of well-known individuals, with purposes ranging from entertainment to satire and implicit critique.

## LITERATURE REVIEW

Learning must be technology-oriented, one of which can be achieved through the use of digital books or electronic books (e-books), which are digital versions of printed books. The difference lies in the format—digital books are packaged digitally, containing text and images, and can be produced and accessed entirely via digital devices such as computers or other digital tools (Marselina & Muhtadi, 2019). Andina (2011) states that a digital book is a book produced and published in digital form so that it can be accessed through various electronic devices such as smartphones, tablets, computers, and other electronic tools. Digital books contain text and images. According to Prasetya (2015), a digital book or e-book is a book compiled in a digital format that can be accessed through digital devices. It can include various multimedia elements—not only text and images but also audio, animation, video, and more—accessible using digital devices.

Digital books are divided into two types commonly known to the public: electronic books (e-books) and audiobooks (Andina, 2011). E-books are typically digital books in file format with various extensions, such as Portable Document Format (PDF), which can be opened with programs like Acrobat Reader. There are also digital books in Hypertext Markup Language (HTML) format, which can be accessed through web browsers like Google Chrome or Internet Explorer without needing an internet connection. According to (2017), based on compatibility, digital books can be divided into two types: first, digital books that can only be accessed using specific devices or programs such as Amazon Kindle; second, digital books that can be read without special equipment, meaning they can be accessed across various electronic devices.

Ruddamayanti (2019) explains that digital books have various advantages and disadvantages. The advantages include: first, digital books are more practical as they are easy to carry anywhere; second, they are eco-friendly, as they eliminate the need for paper printing; third, they are long-lasting or even permanent since they are stored as digital files; fourth, they are inexpensive as production and publishing costs are low; fifth, they are highly portable and can be accessed anytime and anywhere; sixth, they do not require large storage space; seventh, they are easy to process; eighth, they are accessible for people with reading difficulties through audio features; and ninth, they are easy to procure and distribute.

ARCS stands for Attention, Relevance, Confidence, and Satisfaction. It is an instructional model that focuses on capturing students' attention, aligning learning materials with students' learning experiences and backgrounds, achieving meaningful learning by building students' self-confidence, and fostering a sense of satisfaction (Li & Keller, 2018). According to Jamil (2019), ARCS is a learning model centered on motivation. It is designed to structure both motivational aspects and the learning environment with the aim of enhancing students' motivation to learn. The ARCS learning model is closely related to student motivation and the learning environment. In terms of motivation, ARCS concerns students' drive to acquire new knowledge, while in terms of the learning environment, it considers whether or not the environment can effectively foster student motivation. Maidiyah & Fonda (2013) state that the ARCS model is a motivationally grounded instructional model developed to activate students in the learning process. Similarly, Putri et al. (2019) state that ARCS is a model that can be applied to improve students' motivation and enthusiasm for learning.

## METHOD

This study falls under the category of research and development (R&D). Research and development is a research method used to produce a specific product and to test the effectiveness of that product (Sugiyono, 2015). In this study, the product developed is a digital Indonesian language book based on the ARCS model, focusing on anecdotal text material for Grade 10 students.

There are various models that can be used in conducting R&D studies. The researcher identified three models suitable for research and development: first, the ADDIE model; second, the 4-D model; and third, the Kemp model. For this study, the researcher chose the 4-D model, as it is considered highly appropriate for the development of an ARCS-based digital Indonesian language book for teaching anecdotal texts in Grade 10.

### Development Procedure

The ARCS-based Indonesian language digital book was developed using the 4-D development model, which involves several stages. The development stages are described as follows:

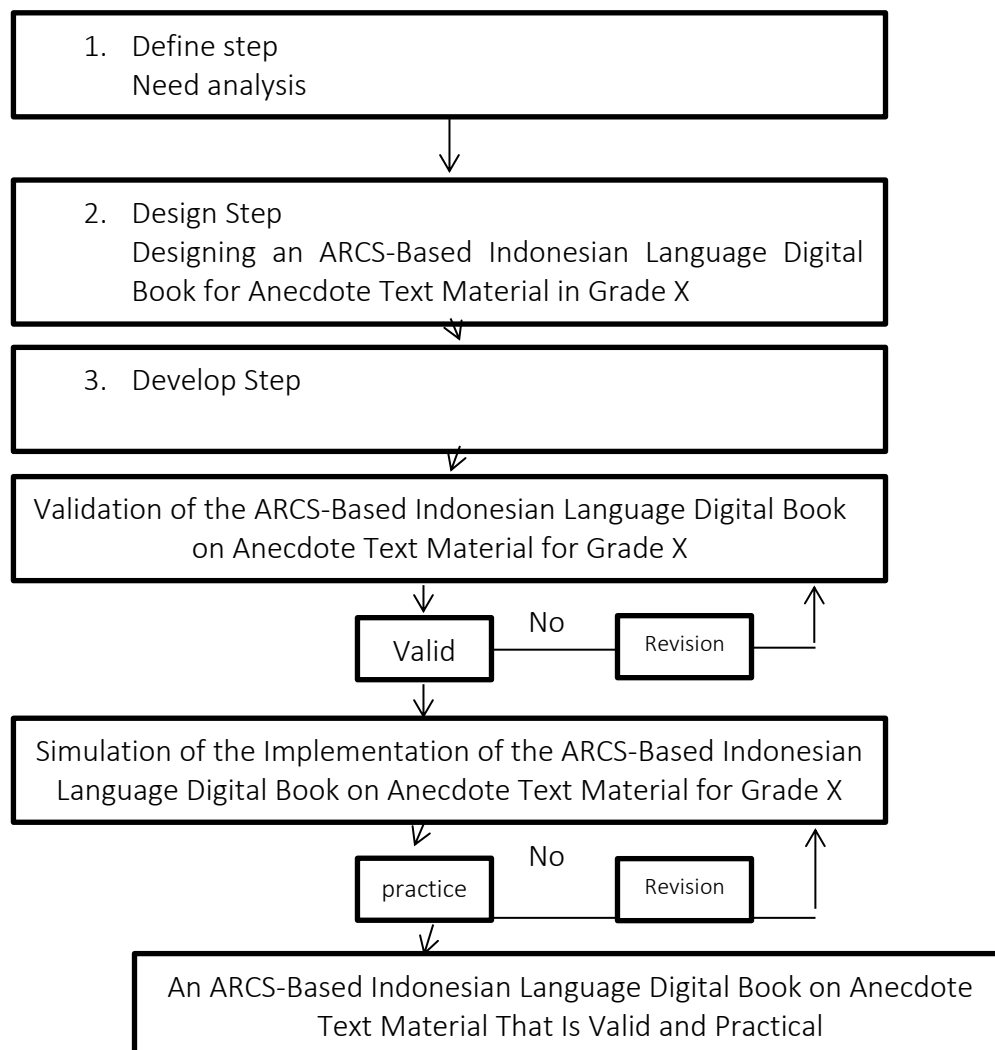


Figure 3.1. Flowchart of the Development Procedure

## RESULT AND DISCUSSION

The ARCS-based Indonesian language digital book focusing on anecdotal text for Grade 10 is a teaching material designed to assist both students and teachers in learning Indonesian, particularly the anecdotal text topic for high school students. This digital book was developed to help enhance students' interest and motivation in learning. Furthermore, it is expected to serve as a model of instructional media that educators can refer to in developing other innovative teaching tools. Thus, this digital book is designed to be usable not only by students but also by teachers.

Based on the analysis of validation data, practicality data, and product testing, the designed digital book is categorized as valid and practical. Given its validity and practicality, it is recommended that further research be conducted by implementing this book in actual Indonesian language instruction to examine its effectiveness. As a supplementary material in the learning process, this digital book can help improve students' understanding of Indonesian, particularly anecdotal texts. Additionally, it may serve as an example for other teachers or researchers in developing learning media for different content. However, before creating a digital book, several aspects must be considered.

Developing a digital book requires attention to its components and adherence to all stages of development, including definition, design, and development phases. Before being implemented in school instruction, the digital book must be validated and tested for practicality. The validity and practicality results are discussed as follows:

### 4.1. Validation of the ARCS-Based Digital Indonesian Language Book on Anecdotal Text for Grade 10

According to the validation sheets assessed by material and media experts, the digital book developed is categorized as valid. The content validity score reached 78.96%. All three content-related aspects—content feasibility, presentation, and language/readability—were deemed valid based on the validation scale.

First, the content feasibility scored 81.25%, categorized as very valid. This score was calculated from all items rated by four validators, indicating that the anecdotal text content in the digital book for Grade 10 meets the criteria for use in schools. Second, the presentation aspect scored 79.46%, categorized as valid, suggesting that the book is appropriate for instructional use. And, third, the language and readability aspect scored 75.96%, also categorized as valid, meaning the language follows proper Indonesian linguistic norms and is easy to understand.

In terms of media validity, the book achieved a validity percentage of 80.76%. The breakdown includes: Media efficiency: 83.33% (valid), Button functionality: 50% (fairly valid), Visual design: 87.5% (very valid), Multimedia use: 87.5% (very valid).

These results indicate that the ARCS-based digital book on anecdotal text for Grade 10 is valid and can proceed to practicality testing.

#### **4.2. Practicality of the ARCS-Based Digital Indonesian Language Book on Anecdotal Text for Grade 10**

The practicality test was conducted after the book had been validated by material and media experts. It involved Indonesian language teachers and Grade 10 students at SMA Negeri 3 Padang. The data were collected using a questionnaire.

##### **4.2.1. Practicality Assessment by Teachers**

According to analysis, the practicality score given by the Indonesian language teacher at SMA Negeri 3 Padang was 82.81%, categorized as very practical. This score was derived from 16 indicators, including: "The digital book is creative and innovative": 75% (practical), "The digital book has an attractive layout": 75% (practical), "The digital book is better than other media": 100% (very practical), "It is simple and easy to operate": 100% (very practical), "Can be used anywhere, anytime": 100% (very practical), "Usable without an internet connection": 100% (very practical), "Visual and audio elements support the material": 75% (practical), Other indicators mostly ranged from 75% to 100%, except for "reduces teacher dominance" which scored 50% (fairly practical).

This confirms that the book is understandable and easy to use by teachers and can be applied in classroom learning, especially in teaching anecdotal text.

##### **4.2.2. Practicality Assessment by Students**

Based on data from students in Class X E8 at SMA Negeri 3 Padang, the digital book achieved a practicality score of 83.71%, categorized as very practical. Highlights include: "Anecdotal text material is more interesting": 86.76%, "Easier to understand anecdotal texts": 83.82%, "Language used is easily understood": 83.08%, "Steps are presented sequentially": 85.29%, "Easy to install on smartphones": 87.5%, "Proper size": 83.82%, "Visually appealing": 79.4%, "No lag when operated": 76.4%, "Easy to store and transfer": 86.02% and 78.67% respectively, "Usable offline": 89.70%, "Easy to manage": 83.82%.

This indicates that the digital book is easy to use and well-understood by students.

##### **4.2.3. Effectiveness of the ARCS-Based Digital Indonesian Language Book on Anecdotal Text for Grade 10**

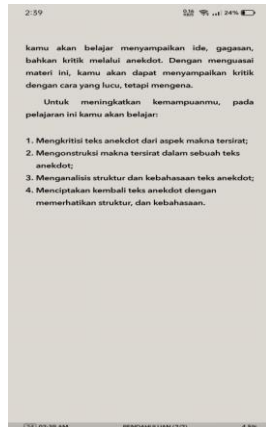
Due to time constraints, the effectiveness test was not conducted in this study. Assessing the effectiveness of a digital book covering four core competencies requires a longer period. Therefore, this research only covered the validation and practicality tests. The effectiveness test will be conducted in future studies.

#### **Product Revisions**

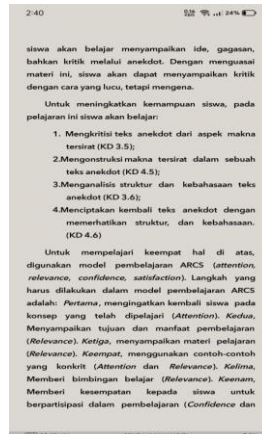
This digital book is focused on the learning of anecdote texts. In addition, it will be based on the ARCS learning model (Attention, Relevance, Confidence, Satisfaction). The development process of this ARCS-based Indonesian language digital book for anecdote text material in Grade X has undergone both validity and practicality tests. To assess the validity of the developed digital book, it must be validated by expert validators and media validators. During the validation process, the validators provided numerous suggestions for improvement before the digital book was tested.

The researcher made revisions based on the suggestions given by the expert validators. These improvements were made in the areas recommended by the validators. The following section explains the product revisions after the validity testing of the ARCS-based Indonesian digital book for anecdote text material in Grade X.

## 1. Adding Core Competencies (KD) and ARCS Learning Steps



Before revision



After revision

The addition of Core Competencies and the steps of the ARCS learning model was carried out in accordance with the suggestions given by the validators. The content expert validators not only recommended including the Core Competencies but also provided the detailed steps of the ARCS learning model. These steps serve as a guide for Indonesian language teachers in the teaching and learning process, especially when using this digital book as a teaching resource.

## 2. Adding User Instructions



Before revision



After revision

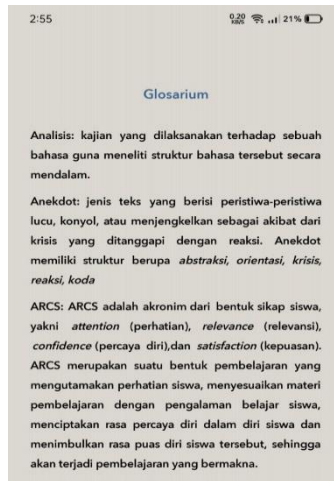
Previously, the digital book did not include usage instructions. However, following the suggestions from experts, usage instructions were added. These instructions provide

information about the buttons that appear when accessing the digital book via a smartphone, along with the functions of each button.

### 3. Adding a Glossary



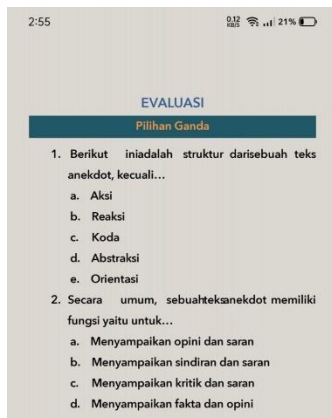
Before revision



After revision

The revision made was the addition of a glossary to the digital book, based on the validator's suggestion, as there was no glossary section included previously.

### 4. Linking the Digital Book to Google Forms for Assessment



Linking the digital book to a Google Form for the evaluation section was a suggestion from the media expert. Before the revision, the evaluation could not be completed directly via smartphone. After the revision, users of the digital book simply need to click on the "click here" button in the evaluation section to be redirected directly to the Google Form page.

### CONCLUSION

The development of the ARCS-based Indonesian digital book on anecdotal text for Grade 10 has proven to be a valid and practical instructional medium to support Indonesian language learning in high schools. Designed to enhance student motivation



and engagement, this digital book integrates the ARCS motivational model (Attention, Relevance, Confidence, Satisfaction) and is tailored to meet both student and teacher needs in delivering and understanding the material. Based on expert validation, the book achieved strong results in terms of content feasibility, presentation, language, readability, and media elements such as efficiency, multimedia, and display design. The overall validity results confirmed that the book is suitable for use in classroom instruction.

Furthermore, the practicality tests involving both teachers and students from SMA Negeri 3 Padang demonstrated that the book is not only easy to use but also effective in presenting the material clearly and engagingly. Teachers found the book beneficial in facilitating instructional delivery, while students reported increased comprehension and enthusiasm in learning anecdotal texts through the digital format. Revisions made after expert suggestions—such as the inclusion of learning objectives, user instructions, a glossary, and Google Form integration for assessments—further enhanced the book's usability and instructional value.

Although the effectiveness of the digital book was not tested in this study due to time constraints, the promising results of the validation and practicality tests indicate strong potential for its future application in classrooms. Follow-up research is recommended to measure its effectiveness in improving student learning outcomes. Overall, this ARCS-based digital book serves as a valuable instructional tool and a model for future digital learning material development in Indonesian language education.

#### **Declaration of Conflicting Interests**

There is no conflict of interest regarding the article publication

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