

## The Effectiveness of the Use of Aldiko Book Reader in Indonesian Language Learning for Natural Sciences

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### ABSTRACT

**Background.** The use of technology in education is one way to improve the quality of learning. One of the applications used for learning is Aldiko Book Reader, which is expected to help students understand the learning material. This study was conducted to measure the effectiveness of the use of Aldiko Book Reader in Indonesian language learning at SMA Negeri 1 Sidrap, especially for students in grade XI Natural Sciences (IPA) 1.

**Purpose.** This study aims to explain the effectiveness of the use of Aldiko Book Reader in Indonesian learning for students in grade XI Science 1 SMA Negeri 1 Sidrap.

**Method.** This study is a quantitative research with a population of 35 students in class XI Science 1 SMA Negeri 1 Sidrap and a sample of 25 students. The data collection techniques used are documentation, tests, and questionnaires. The collected data was then processed using an effectiveness test measured based on four indicators.

**Results.** The results of the study show that the use of Aldiko Book Reader is effective in learning Indonesian. Of the four indicators of effectiveness, all of them qualified. First, the average score of students after using Aldiko Book Reader increased ( $68.5 < 82.5$ ). Second, the average score of students after using the application is 82.5, which is above the KKM standard (70). Third, the average score of student gain is 54.8, which is in the high category. Fourth, the completeness of classical learning reaches 100%.

**Conclusion.** Based on the results of the study, it can be concluded that the use of Aldiko Book Reader is effective in improving the Indonesian learning outcomes of students in grade XI Science 1 SMA Negeri 1 Sidrap, as evidenced by the significant increase in student scores and test scores.

### KEYWORDS

Aldiko Book Reader, Effectiveness, Indonesian Language Learning

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## INTRODUCTION

Education is a conscious effort to humanize humans. Through education, human beings are formed to have a dignified and dignified identity. In addition, education is an effort to become a human being who is beneficial to others. In the Islamic world, education is a mandatory thing for both male and female Muslims. An Arabic proverb explains that whoever wants the happiness of the world wants to master his knowledge. Whoever wants happiness in the hereafter should master his knowledge

Whoever wants happiness in the hereafter should master his knowledge. And whoever wants the glory of this world and the hereafter must master his knowledge. So, it is clear that science is very important for human life. The saying emphasizes the importance of learning. This is also stated in the 1945 Constitution which states that one of the goals of national development is to educate the nation's life. Based on this, the direction of nation development must be in line with the development of the world of education.

The current paradigm change in education is closer to information and technology-based learning (IT). The use of IT in the world of education is not new. However, it can be said that IT-based learning is now an absolute thing for every teacher and student.

The use of IT in learning can be done in various ways. Both online and offline. The tendency to use IT in learning is due to not only the change in the learning paradigm, but also influenced by the current students' habits with the IT world, especially mobile phones or androids. With android, the distance feels so close and the information is so fast.

Responding to this, of course, requires the skills of teachers to be able to adapt themselves as today's teachers. The trick is to utilize IT in the learning process. This is done so that students are motivated to learn. It is hoped that through this IT-based learning, it will facilitate the learning process both in the classroom and outside the classroom.

IT-based learning, especially in Negeri 1 Sidrap based on the results of the author's initial survey, is still lacking in teachers. Manual learning that colors the learning process a lot and almost everything is done in the classroom. Even though the real learning principle is "*every body is a teache and every place is a class*" everyone is a teacher and every place is a class.

The use of printed books also still colors learning in the classroom, even though the tendency of students to use androids every day has a fairly high presentation. This is a challenge as well as an opportunity in the world of education to make adroids one of the sources of learning. The advantage is that the use of android as a learning resource can not only be done in the classroom but also outside the classroom.

Currently, the average student has an android, as well as students at SMA Negeri 1 Sidrap. Therefore, teachers in this school should use adroids as one of the learning media. The purpose of using adroid is intended so that learning is not monotonous using book or whiteboard media and lecture methods only. However, it can be varied by using android as a learning resource.

One form of using android technology in learning is using Aldiko Book Reader. This application is an online book storage application so that students can read books through their android. Especially now, the Ministry of Education and Culture has issued online books for all subjects, both elementary, junior high, and high school that can be uploaded for free.

Aldiko book reader, is an application that can be used to search for books. The books obtained are then downloaded in pdf or DRM format. The appearance of this application is also quite attractive, making it easy to search for books quickly. This application is very suitable for those who have a love of reading, it is certain that in the world of education this application can support the learning process.

## LITERATURE REVIEW

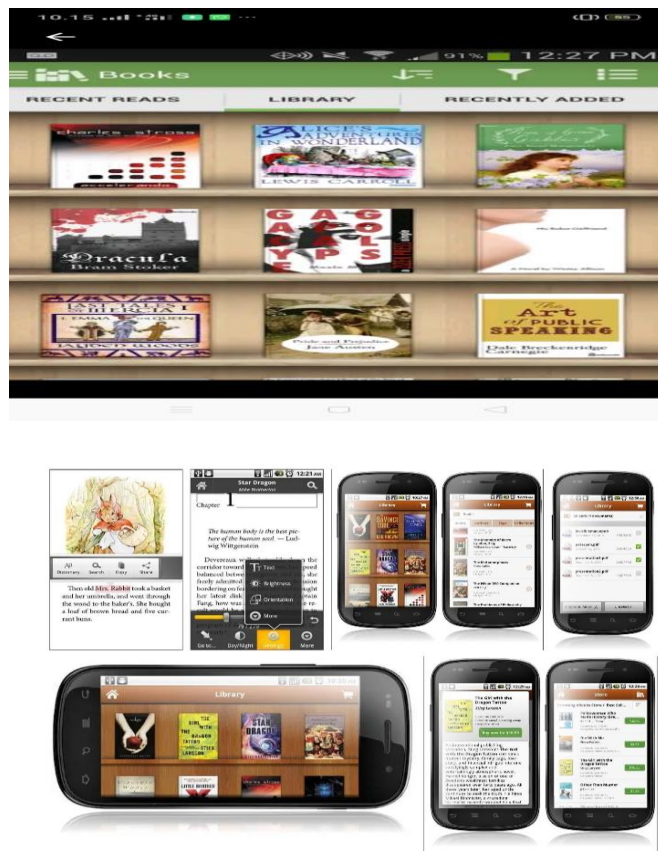
### *Aldiko book reader*

Aldiko book reader, is a form of application on Android that functions as a shelf or storage place for downloaded reading materials. This application can save and reopen reading materials, whether it is in the form of books or other readings in pdf or DRM format. The app's display is equipped with a quick search system.

Currently, the aldiko book reader application has reached the stage of refinement. There are many interesting changes in it. The changes are found in Aldiko book reader 2.0 as follows.

- the user** interface design is more attractive;
- supported** with EPUB and PDF formats;
- supported** adobe DRM-based;
- easy** access to new and best-selling books;
- Improved text typography** and rendering;
- there is** support for hyphenation;
- has a** text selection function;
- being able** to copy/paste;
- have** good import function;
- has** the function of knowing the reading limit;
- notification** of bar function when reading;
- and** so on.

Currently, the appearance of the aldiko looks more beautiful and attractive. Of course, this will increase the motivation of readers, including students, to use it as a reading medium. The following is a picture of the appearance of the aldiko book version 2.0.



**Figure 1.** Display of the aldiko book reader application on android

In addition to having advantages, of course every application has its durability. The same is true for the aldiko book reader version 2.0 application. This application has several weaknesses, especially in learning, including:

**Students** must bring androids to school, while some school policies still prohibit students from bringing androids/cellphones.

**requires** an adequate network because to access books into the application must be online even though reading them can be offline.

**If** it is not dicopied, students are worried about opening other applications. Therefore, teachers need to supervise the use of android/cellphones in the learning process.

**Books** in this app cannot be printed/printed.

### Previous research

This research is based on several previous studies. This is done so that researchers can conduct research by taking pictures from other sides that have not been researched by previous researchers.

Research conducted by Mihye Kim (2015) with the research title *Analysis of User Preferences for Management and Search Features in E-book Reader Libraries in Smartphone Environments* revealed that large booksellers and online publishers are currently devoting their energy to the growth of the e-book market, this results in an increase in the use of e-books, and an increase in the number of e-books downloaded on e-book readers. Thus, he suggested the use of this application to manage the e-book library, thus allowing readers to browse more collections easily, thereby increasing the usability of e-book readers.

The next research was carried out by Muhammad Aji (2015) who wrote about "Development of Learning Media to Understand and Maintain a Conventional Type Starter System Based on Digital Electronic Publication (epub)". The results of the research showed an increase in student competency learning outcomes after using the digital book Understanding and Maintaining the Conventional Type Starter System. This can be seen from the results of the average score before using digital books of 68.84 which increased to 79.03 and the increase in the distribution of the percentage of completeness before and after implementing learning with digital books, which was 63.72%. Thus, it was concluded that there was an increase in student learning outcomes in the competence of understanding and maintaining the starter system in the subject of automotive electrical repair after using electronic publication (epub)-based digital book learning media.

Based on these two studies, it appears that the research was carried out to find out the amount of use of e-book applications in the market system. Meanwhile, the second research was carried out to determine the effectiveness of the use of e-pub applications on automotive learning outcomes. Thus, it is known that no researcher has conducted research on the effectiveness of the use of aldiko book readers in learning, especially in Indonesian subjects.

## RESEARCH METHODOLOGY

### Research Variables and Design

This study has two variables, namely the independent variable (X) and the bound variable (Y).

**The independent variable** in this study is the use of aldiko book reader

**The bound variable** in this study is the Indonesian learning outcome

This study was designed with a *quasi-experimental design* approach in the form of pretest and postes before and after treatment.

For more details, the research design is described as follows.

Tabel 3. Desain Penelitian

Pretest	Perlakuan	Posttest
Y1	X	Y2

Information:

X = Treatment with aldikobook reader

Y1 = pretest before treatment

Y2 = posttest after treatment

(Sugiono, 2010)

### Variable Operational Definition

In order for the research variables not to expand, each variable will be defined as follows.

**The use of *aldiko book reader*** referred to in this study is the use of *the aldiko book reader* application in learning Indonesian in class XI IPA-1 Negeri 1 Sidrap.

**The Indonesian learning** referred to in this study is the learning process and learning outcomes in the reading aspect of grade XI students of IPA-1 Negeri 1 Sidrap.

### Data Collection Techniques

The data collection techniques carried out in this study are as follows.

#### *Documentation techniques*

The documentation technique in this study was used to determine the number of students in grade XI of Natural Sciences (IPA) Negeri 1 Sidrap.

#### *Questionnaire Technique*

The questionnaire technique used in this study aims to find out several things related to the use of aldiko book reader in learning Indonesian in grade XI students of Natural Sciences (IPA) Negeri 1 Sidrap.

#### *Test technique*

The test technique used in this study aims to determine the learning outcomes of students before and after the use of aldiko book reader in Indonesian learning in grade XI students of State Science 1 Sidrap.

### Data Analysis Techniques

The effectiveness of learning media is a form of measurement tool that connects media/models with learning outcomes in a learning process. The effectiveness criteria in this study refer to:

**the average score** of learning outcomes after the use of media was higher than the average learning outcome before the implementation of *Aldiko Book Reader media*;

**the average score** of students' Indonesian learning outcomes is more or equal to the KKM score, which is 70;

**the average** normalized gain score is at least in the medium category; and classical completeness (85%).

## RESULT AND DISCUSSION

The data presented below is the result of data analysis based on four achievement indicators to measure the effectiveness of the use of *the aldiko book reader* application on the Indonesian learning outcomes of students in grade XI of Natural Sciences (IPA)-1 Negeri 1 Sidrap. Average

Score (R) before and after using *the aldiko book reader* application Based on the test results in the Indonesian subject, the following data were obtained:

**Average Score (R)** before and after using *the aldiko book reader application*

**Indonesian Language Score** for Class XI Natural Sciences (IPA)-1 SMA Negeri 1 Sidrap before the use of *the aldiko book reader application*.

No.	Sample Code	Value
1.	A.01	65
2.	A.02	60
3.	A.03	70
4.	A.04	70
5.	A.05	75
6.	A.06	65
7.	A.07	70
8.	A.08	70
9.	A.09	75
10.	A.10	70
11.	A.11	75
12.	A.12	70
13.	A.13	70
14.	A.14	70
15.	A.15	75
16.	A.16	65
17.	A.17	65
18.	A.18	60
19.	A.19	60
20.	A.20	70
	Sum	1.370

**Table 1.** Student Test Results Before Using *the Aldiko Book Reader Application*

Data source: Student test results

Indonesian scores of students of Class XI Natural Sciences (IPA)-1 SMA Negeri 1 Sidrap after using *the aldiko book reader application*

The results of the Indonesian subject test for students in grade XI of Natural Sciences (IPA)-1 SMA Negeri 1 Sidrap after using *the aldiko book reader application*, can be seen in table 2 below.

No.	Sample Code	Value
1.	A.01	75
2.	A.02	75
3.	A.03	75
4.	A.04	80
5.	A.05	85
6.	A.06	75
7.	A.07	85
8.	A.08	85



9.	A.09	85
10.	A.10	90
11.	A.11	85
12.	A.12	90
13.	A.13	90
14.	A.14	75
15.	A.15	75
16.	A.16	80
17.	A.17	90
18.	A.18	90
19.	A.19	80
20.	A.20	85
	Sum	1.620

**Table 2.** Student Test Results After Using *the Aldiko Book Reader Application*

Data source: Student test results

Based on tables 1 and 2, they are then juxtaposed to get the difference in average values from the two tables. The results of the comparison can be seen in the following table 4.3.

**Table 3** Comparison of Average Test Results of Students Before and After Using the Aldiko Book Reader Application in Indonesian Language Learning

No	Keterangan	Jumlah Siswa	Skor Keseluruhan	Nilai Rata-Rata
1.	Sebelum	20	1.370	68,5
2.	Sesudah	20	1.650	82,5

**Table 3.** Data source: Processed from tables 1 and 2.

**The average score of** students' Indonesian learning outcomes is more or equal to the KKM score, which is 70 after using the application;

Based on the results of the student test listed in table 2, the average score of the students is obtained as follows.

No.	Value	Frequency	Sum
1.	65	0	0
2.	70	0	0
3.	75	6	450
4.	80	3	240
5.	85	6	510
6.	90	5	450
	Sum	20	1,650
		Average	82,5

**Table 4.** Frequency and Grades of Students After Using *the Aldiko Book Reader Application*

Data source: Processed from table 4.2

Based on table 4, it can be explained that the average score obtained by students after using aldiko book reader media in Indonesian language learning is 82.5.

**The average normalized gain score** is at least in the medium category

The data presented below are the results of a student questionnaire related to the use of aldiko book reader in Indonesian language learning in class XI IPA-1 SMA Negeri 1 Sidrap.

No	Statement	Scale				
		SS	S	R	TS	STS
1.	The content of the aldiko book reader is according to the learning objectives	10	5	5	0	0
2.	The Aldiko Book Reader used is easy to apply	12	5	3	0	0
3.	The Aldiko Book Reader used can understand abstract and concrete things	8	8	4	0	0
4.	Aldiko Book Reader Can Increase Learning Motivation	15	5	0	0	0
5.	The appearance of the aldiko book reader is like the real thing	10	10	0	0	0
6.	Aldiko Book Reader helps in understanding concepts correctly	15	5	0	0	0
7.	Aldiko Book Reader helps in improving concepts and reality (contextual)	10	5	5	0	0
8.	Aldiko Book Reader is used to help in carrying out learning practices correctly	15	5	0	0	0
9.	Aldiko books can arouse new desires and interests	18	2	0	0	0
	Aldiko Book Reader provides a meaningful learning experience	20	0	0	0	0
	Shoes	133	95	17	0	0

**Table 5.** Results of Student Questionnaire

Data source: Processed from the results of the student questionnaire

Calculation results based on the table of gian values

$$SS = 133 \times 5 = 665$$

$$S = 95 \times 4 = 380$$

$$R = 17 \times 3 = 51$$

$$TS = 0$$

$$STS = 0$$

$$\text{Total Score} = 1,096$$

$$Ng = \frac{Skor}{N}$$

$$Ng = \frac{1,096}{20}$$

$$Ng = 54.8$$

**Classically** completeness is 85% of the KKM, which is 70

The data presented below is the classical completeness of grade XI students of IPA-1 SMA Negeri 1 Sidrap after using *an aldiko book reader* in learning Indonesian.



No.	Value	Sum	Percentage
1.	< 70	0	0
2.	> 70	20	100%
	Sum	20	100%

**Table 6.** Classical Completeness 85%

Data Source : Processed from table 4.4

## Discussion

Indonesian language learning, especially in the reading aspect, was carried out in Negeri 1 Sidrap previously using conventional media, namely printed books. The obstacle faced at the school is the limited number of printed books so that not all students can have or take home.

Based on this, the researcher provides a solution in the form of the use of *an aldiko book reader* that can be used in Indonesian language learning for both teachers and students in Negeri 1 Sidrap.

*Aldiko book reader*, is one of the book storage applications that can be read through android. Through this application, students no longer need to borrow, buy, or bring printed books to school or home because previously downloaded textbooks are stored on the bookshelf through this application.

Based on the results of the research conducted to test the effectiveness of this media, the following data were obtained.

A comparison of the average score of students' test results before and after using the *Aldiko Book Reader* application in learning Indonesian shows that the average score before using the application is 68.5. Meanwhile, the average score after using the application was 82.5 ( $68.5 < 82.5$ ). Thus, this first indicator meets the requirements for effectiveness.

The average score of Indonesian learning outcomes after using the application was 82.5. This means that this average score is greater than the KKM value determined, which is 70 ( $82.5 > 70$ ). Thus, this second indicator meets the effectiveness requirements.

The average score of gain is 54.8. This value is in the high category, which means that it exceeds the limit of the medium category. Thus, this third indicator meets the requirements for effectiveness.

Classically completeness is 100% complete. Thus, this fourth indicator meets the requirements for effectiveness.

Based on these four indicators, it is known that all four indicators meet the effectiveness requirements. Thus, it can be said that the use of *the aldiko book reader* application is effective in learning Indonesian in class XI IPA-1 SMA Negeri 1 Sidrap.

## CONCLUSION

Based on the results of the research carried out, it can be concluded that the use of *the Aldiko Book Reader* application is effective in learning Indonesian in class XI of Natural Sciences (IPA)-1 SMA Negeri 1 Sidrap. This is based on the results of data analysis which shows that of the four indicators of effectiveness, all of them are eligible, namely: (1) the average score of students after using *Aldiko Book Reader* is higher than the score before using the application ( $68.5 < 82.5$ ); (2) The average score of students after using *Aldiko Book Reader* is 82.5 which means above the KKM standard of 70; (3) The average gain score is 54.8, which means it is in the high category; (4) Classically completeness is 100%.

## AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

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