

The effect of hybrid learning-based I-book media to improve language literacy in elementary schools

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Abstract

Literacy culture in Indonesia is an exciting issue to discuss. Related to this matter, a current study aimed to improve the language literacy skills in elementary school students based on the Hybrid Learning media I-book. Various kinds of exercises based on language literacy are provided in the I-Book. Thus, its use can save money when buying books. In addition, students are enthusiastic about answering the practice questions in the I-Book because of its attractive and colorful appearance. In this case, the I-book is a medium that can be applied in hybrid learning education in language literacy. The research method used in this study was quasi-experimental in the form of a non-equivalent control group design. In this case, the samples were selected using purposive sampling. The two sample classes used were III A (control) and III B (experiment). The results of the effectiveness of the N-Gain pretest and posttest of student learning outcomes in the control class obtained 0.30 in the low category, while the experimental class obtained 0.57 in the medium category. Furthermore, the results of the independent t-test on sig. (2-tailed) obtained 0.047 < 0.05, indicating a significant difference between the results of the control class and the experimental class learning process. The research results found that using the I-Book as a hybrid learning educational media in language literacy made it easier for teachers to improve the students' language literacy skills so that teachers and stakeholders can use the I-Book as a practical learning media.

Keywords: media I-book, hybrid learning, language literacy

Pengaruh media I-book berbasis hybrid learning terhadap peningkatan literasi bahasa

Abstrak

Budaya literasi di Indonesia menjadi persoalan yang sangat menarik untuk diperbincangkan. Berhubungan dengan hal ini, penelitian ini dilakukan dengan tujuan untuk meningkatkan kemampuan literasi bahasa pada peserta didik di sekolah dasar dengan berbasis pada Hybrid Learning media I-book. Berbagai macam latihan berbasis literasi bahasa disediakan di dalam I-Book, sehingga penggunaannya dapat menghemat biaya membeli buku. Selain itu, siswa juga menjadi semangat mengerjakan latihan soal yang terdapat pada I-Book karena tampilannya yang menarik dan berwarna. Dalam hal ini, I-Book adalah media yang digunakan dalam pembelajaran hybrid pada literasi bahasa. Metode penelitian yang digunakan dalam penelitian ini adalah metode eksperimen semu dalam bentuk nonequivalent control group design, di mana sampel penelitian diambil menggunakan purposive sampling. Dua kelas sampel yang digunakan adalah kelas III A (kontrol) III B (eksperimen). Hasil efektifitas pretest N-Gain dan posttest hasil belajar siswa pada kelas kontrol adalah 0.30 dengan kategori rendah, sedangkan kelas eksperimen mendapatkan 0,57 pada kategori sedang. Selain itu, hasil uji-t independent pada sig. (2-tailed) yang didapatkan adalah 0,047 < 0,05, yang berarti bahwa terdapat perbedaan yang signifikan antara hasil kelas kontrol dan kelas eksperimen. Berdasarkan hasil penelitian, ditemukan bahwa pembelajaran menggunakan I-Book sebagai media edukasi hybrid learning pada literasi bahasa memudahkan guru dalam pembelajaran sehingga para guru dan stakeholder dapat menggunakan I-Book sebagai pembelajaran yang efektif.

Kata Kunci: media I-book, hybrid learning, literasi bahasa

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INTRODUCTION

Literacy culture in Indonesia has become an exciting issue that is frequently discussed. Indonesia's low literacy culture has become firmly attached to Indonesian society. As popular culture spreads, the popularity of books decreases, and it is no longer a priority. It has been more accessible for the community to learn culture by speaking and listening instead of reading and writing. This further makes the Indonesian people dominated by an oral communication culture, where the community tends to enjoy using their phones more to update their social media status and watch television broadcasts than reading (Suswandari, 2018). Such development of technology makes it easier for people to obtain information in various forms and sources, such as text and broadcast forms (Daniela et al., 2018; Sukendro et al., 2020). Hence, it causes a lack of literacy, particularly reading, among the community, making them more attracted to audio and visual (Kusuma & Oktavianti, 2020).

The role of language cannot be separated from the aspect of education, where its application is significant during the learning and teaching process. In this case, language is necessary not only for teaching communication skills but also for science mastery. The reason is that humans learn various sciences in the world through language. Therefore, it is necessary to implement language learning well at school since it reflects one's personality, character, and education (Harlina & Wardarita, 2020). Literacy skills are essential indicators of improving youth achievement in reaching success. Instilling literacy from an early age must be carried out to be further used as primary capital to create an intelligent and cultured nation (Lamada et al., 2019).

Indonesian students' achievement in PISA 2018 in literacy, reading, and mathematics is far from the expectation. It even indicates a decreasing trend compared to the results of PISA in the previous period. In PISA 2018, Indonesia was generally 72nd of 77 participants countries in the field of reading literacy; in this case, the abilities of Indonesian children obtained an average score of 371, far below the OECD average of 487 (Putrawangsa & Hashanah, 2022). Therefore, it positioned Indonesia at the five lowest rank. The achievement in mathematics is not really different either, where Indonesia was at 7th lowest with an average score of 379, far from the average OECD score of 487. This shows that the literacy abilities in reading and mathematics of Indonesian children are far below compared to the children of other countries (Putrawangsa & Hashanah, 2022).

During popular culture, the book is not a priority anymore. The community even finds it easier to absorb speaking and listening cultures, than reading and applying it in writing. Indonesia community is dominated by oral communication culture. They tend to enjoy using their phone to update their social media status and following television broadcasts more than reading (Suswandari, 2018). This causes low motivation for students to participate in literacy activities, which is due to their argument that reading activities are boring (Ekowati et al., 2019). Whereas students who have good basic literacy skills will help make the class more lively. Therefore, as the times get more developed, learning methods shall be designed as good so that the students can adapt well (Daroin et al., 2022).

The literacy skill of the students becomes a concern since the enactment of curriculum 2013 where the learning process is implemented through integrated literacy approach so that the students become more creative and innovative. In this case, the literacy learning in curriculum 2013 aims to develop attitude, skill, and knowledge of the students. Basic literacy skill consists of reading and writing as the main of the program (Fitriana & Ridlwan, 2021). In addition, language literacy is also related to problem solving on language. Without any problem solving, the benefits of learning become limited due to the low reading interest of the students in learning process (Pangesti, 2018).

Hybrid learning is a process of obtaining knowledge and skill (focusing on learning) that is developed through learning design that integrated digital class activities (internet and mobile), whether in printed, record, and planned traditional face-to-face meeting as practical pedagogic methods (Code et al., 2020). Hybrid learning also facilitates the students to direct their own learning process by choosing the available learning material that is most suitable with their characteristics and oriented on the need to reach the curriculum learning goals (Aristika et al., 2021).

One of the currently-developed learning media that implements the development of technology and communication through the users' interaction is *I-Book*. Digital book, or commonly called as I-Book, is a publication that consists of text, picture, and sound published in digital form, making it ready to be read in computer and other electronic devices such as android and tablet (Mentari et al., 2018).

Literacy is a social behavior of someone in accessing, understanding, and using information related to knowledge, language, and culture through various activities, including reading, watching, listening, writing, and speaking in order to build life well-being. In daily life, students encounter task and skill related to literacy. Meanwhile, language literacy enforces students to understand letters, including their abilities to read and write. The followings scheme shows the implementation of literacy strategy at school.

The objective of current research is to identify the effectiveness of *Hybrid Learning-Based I-Book* media so that the learning process becomes interactive and students are easier to discover various language literacy-based exercises and able to save money to buy book. In addition, students also become motivated to do the exercise provided in I-Book (Khikmawati et al., 2021; Eurboonyanun, 2021).

In this case, the technology that continuously develops further urges students to constantly stay in digital atmosphere. This indicates that students must master technology so that they can adapt to the new era. Furthermore, it was revealed that the respondents, in this case are the students, considered digital book in integrated Science content is easier to understand (9.2%) compared to traditional book. The reason is because digital book has many additional functions, where it does not only provide information but also being interactive to the users since it is equipped with various features such as video, sound, and quizzes (Muttaqin et al., 2019).

METHOD

The approach applied to conduct the current study is quantitative approach, particularly quasi-experimental research through nonequivalent control group design (Fraenkel et al., 2018). In this case, the dependent variable (y) is Language Literacy, while the independent variable (x) is the Hybrid Learning-Based I-Book users. This study was conducted in November at SDN 004 Pulau, where the population involved was the students of the third grade in the academic year of 2022/2023 and chosen through purposive sampling.

Furthermore, the research instrument used to collect the research data was question items to improve the students' language literacy. This instrument was chosen so that the research data collected are more accurate and efficient (Permana, 2021). In this case, the questions contain 13 items. The following Table 1 shows the research design applied.

Tabel 1. *Research Design*

Class (n)	Pre-Test	Treatment	Post-Test
R1 (30)	O1	X	O2
R2 (30)	O1	X	O2

Based on the research design applied (Table 1), R1 is the experimental class, R2 is control class, X is hybrid learning-based I-Book learning, O1 is the pre-test, while O2 is the post-test (Sugiyono, 2013). In this case, the experimental class applied a learning process that used I-Book media, while the control class applied learning media provided by the school, which is thematic book. Furthermore, the question items used as the research instrument were multiple-choice that have been tested to have good *validity, reliability, differentiation, and difficulty index*. The validity test of these 13 question items were

carried out by experts. Before the learning process, both classes received pre-test, while at the end of the learning process, they received post-test. Data that have been collected during the learning process were processed using n-gain and hypothesis tests. The N-gain calculation was obtained from the pre-test and post-test scores of each experimental class (class that used I-Book module) and control class (class that used printed module or subject printed-book). The formula of g-factor (N-gain) according to Meltzer 2017 is.

$$g = \frac{\text{posttest score} - \text{pretest score}}{\text{ideal score} - \text{pretest score}}$$

The criteria for the calculation of N-Gain score can be seen in the following Table 2.

Table 2. *Score Categories*

Benchmark	Category
$g > 0.7$	High
$0.3 \leq g \leq 0.7$	Medium
$g < 0.3$	Low

After determining the N-Gain, the researchers carried out normality test, followed by *independent t-test*. Normality test is a test carried out to evaluate the data distribution in a data group or variable. The test will answer whether the data distribution is normal or abnormal. After the data distribution was categorized normal, independent t-test was carried out. Independent t-test was a difference test of unpaired two samples. In this case, unpaired samples are same object but received different treatment (Sunyono & Meristin, 2018).

Independent t-test was carried out by comparing the average scores of the post-tests of students' language literacy skill between group A (control class) and group B (experimental group). Therefore, the researchers created research hypothesis as follow:

- Ho : No different N-Gain score between the students' learning outcomes of group A (control class) and group B (experimental class).
- Ha : There is different N-Gain score between the students' learning outcomes of group A (control class) and group B (experimental class).

In the research to overcome the learning loss, results can be obtained based on the learning outcomes gained, in which the characteristics of students who experienced learning loss are those who experienced decreased learning outcomes (Jojo & Sihotang, 2022). In order to determine the t-count and independent t-test, IBM SPSS Statistic software was applied based on the significance (Sig) value, in which:

- If the significance value is below 0.05, then Ho is rejected
- If the significance value is above 0.05, then Ho is accepted

RESULTS AND DISCUSSION

Result

Assessment on the effectivity test results on large scale experimental test was done to obtain the N-Gain test results. This result can be obtained by giving both pre-test and post-test to both control and experimental classes. During the learning and research process, control class used traditional printed book, while the experimental class used I-Book as the hybrid learning media in language literacy. The pre-test and post-test questions used to measure the students' learning outcomes were adopted from the previous research, totaling 8 valid and reliable question items. Based on the calculation of *N-Gain*, the pre-test and post-test calculation results were obtained as shown in Table 3.

Table 3 above shows the results of pre-test and post-test scores for both control and experimental classes using formula. In this case, the control class obtained N-Gain of 0.30, which was categorized as low. Meanwhile, the N-Gain obtained from the experimental class with pre-test score of 30 and post-test score of

70 is 0.57, which is categorized medium. It can be concluded that the I-Book media applied in the experimental class is more effective.

Table 3. *Result of Pre-test and Post-test from the Control and Experimental Classes*

Groups	Score		N-Gain	Description
	Pre-test	Post-test		
Control Class (30)	30	60	0.30	Low
Experimental Class (30)	30	70	0.57	Medium

After obtaining the N-Gain result, the researcher conducted normality test to determine whether the data distribution is normal or abnormal. The results are provided in the following Table 4.

Table 4. *Normality Test of Control Class and Experiment Class*

Score	Group	Df	Sig
	A	30	0.47
B	31	0.10	

Table 4 above shows the normality test score using IBM SPSS version 26 software application. The sig value in the column refers to significance or probability score. In this case, the significance values obtained were 0.47 and 0.10, which is above 0.05, indicating that the data or the N-gain was distributed normally.

Since the data was normally distributed, independent t-test was carried out to see the significant difference between the control class and experimental class. The N-Gain result on the pre-test and post-test on the students' learning outcomes was obtained using IBM SPSS version 26 software application as explained in Table 5.

Table 5. *Result of Independent T-Test on Control and Experimental Classes*

Score	Levene's Test for Equality of Variances		t-test for Equality of Means	
	Sig.	df	Sig. (2-tailed)	
Score	Equal variances assumed	0.62	59	0.001
	Equal variances not assumed		57.261	0.001

Based on Table 5 above, the results of independent t-test obtained Sig. Levene's Test for Equality of Variances of 0.62, which is above 0.05. It indicates that the data variance between group A and B is homogeneous or the same. In addition, Table 5 also shows that Sig. value (2-tailed) obtained 0.001, which is below 0.05. Hence, the decision making that can be made in the independent t-test is that Ho is rejected and Ha is accepted. Therefore, there was a difference in the N-Gain result of the students' learning outcomes between group A (control class) and group B (experimental class). It was eventually obtained that the experimental class is better than the control class due to the use of I-Book as the learning interactive media.

Discussion

Current research is supported by the previous research concerning the use of I-Book that has been validated as an assessment media in Hybrid Learning (Nurfillaili et al., 2016; Azzahri et al., 2017). In addition to meeting the validity criteria, I-Book that is used during the Hybrid Learning to improve the language literacy should have high validity (Efendi & Widodo, 2019; Wales et al., 2017). Those statements support the results of the current research so that the use of I-Book as the assessment instrument of the students is considered valid and feasible for further use in research concerning the use of I-Book (DeVon et al., 2007).

In addition, Kuzu & Yalçın also supported this study through their previous study that discovered that the hybrid learning method had higher statistical effect ($d=1.032$) on random effect model (Kuzu & Yalçın, 2022). In this case, heterogeneous distribution was obtained from the sub-group analysis sample using ANOVA analog, showing that only discipline variable has high effect. Furthermore, the results obtained in this study were also discussed by the previous research conducted by Hwang, et al., (Hwang

et al., 2020) that students who experienced hybrid learning process obtained higher performance in science class compared to traditional learning process. Such result shows that hybrid learning has provided positive effect on science education. And our current research provided contributes to the perception concerning the students' science achievement in between hybrid learning design and traditional learning design.

Therefore, the use of I-Book media in hybrid learning applied in this study to improve the students' language literacy, particularly to evaluate the use of I-Book on students, has been tested and believed feasible to be used in a research project concerning the measurement of I-Book learning media feasibility on students. This statement is further supported by other research projects that stated validity and feasibility criteria must be met by the evaluation instrument used in order to ensure the research results' quality (Souza et al., 2017; Suratno et al., 2016; Pinilih et al., 2013). In addition, this study also involved quite a lot respondents, where two classes were involved, including experimental and control classes consisting the third grade students, in which each class contains 30 students.

In this research, the implementation of hybrid learning needed three supporting elements that researcher must take into account when using such design. The first supporting element is the face-to-face meeting, where the learning and teaching process is an interaction process between the teacher and the students. The second supporting element is e-learning, in which internetion technology-based learning activities occurred in the interaction process between the teacher and students. The last supporting element is M-learning that enables the use of information technology device, either mobile or not, such as Personal Digital Assistant (PDA), mobile phone, laptop, and PC tablet in teaching and learning process (Afidah, 2020). This is in avvordance with the syntax of Hybrid Learning of demonstrating, where teacher gives assistance to the studentd in order to be able to use e-learning portal that has been designed by the teacher for the students to access the learning materials (Putra, 2018)

I-Book media develops students' reading interest or literacy skill since the use of I-Book enables students to read while playing games (Fitriyant, 2021). Students who learned using I-Book are more motivated in learning compared to those who only used lesson book. This is proven in the previous research project (Chen & Jang, 2017) that the use of e-book has a significant value in the learning process and its use is able to explore the students more (Kusumatuty et al., 2017)

Furthermore, the presence of I-Book assists the teacher in the learning process. The reason is because Hybrid Learning-based I-Book can also be used at home. This further supported the results that this learning media succesfully improved the students' language literacy skill. It is in line with the previous research that revealed I-Book significantly affects the students in improving their language literacy (Elizabeth, 2018).

CONCLUSION

The results of the current study obtained that the use of I-Book as a hybrid learning-based media significantly helps the teachers to assist the improvement of students' language literacy. Such media develops the students' interest in teaching so that the students enjoy reading and learning more. In addition, hybrid learning-based media can also be used at home. The effectivity test applied by the researcher in the control class obtained N-Gain of 0.30, which is categorized low, while the experimental class obtained N-Gain of 0.6, which is categorized as medium. In addition, significant difference on the post-test results of the students between the control and experimental classes are also found based on the results of *independent t-test*, where the *Sig. value (2-tailed)* obtained is 0.001, lower than 0.05. Hence, the decision making in the independent t-test concluded that H_0 is rejected, while H_a is accepted. Therefore, the presence of I-Book helps the teacher more even at home and its use succesfully improves the language literacy skill of elementary school students.

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