DEVELOPMENT OF INDONESIAN LANGUAGE TEACHING MATERIALS BASED
GAME INTERACTIVE EDUCATION FOR IMPROVING THE READING ABILITY OF BEGINNING CLASS II STUDENTS OF ELEMENTARY SCHOOL

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ABSTRACT

Interactive Educational Game is a game that aims to provoke children's interest in learning the subject matter while playing, so that with a happy feeling it is hoped that children can more easily understand the subject matter presented. This study aims to develop Indonesian language teaching materials based on interactive educational games to improve the early reading skills of second grade elementary school (SD) students. This study uses the Research and Development Research method using the Dick and Carey Model. The Dick and Carey model is one of the learning design models with a systems approach. Based on the results of the research on the Development of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" Class II SDN Mekar Jaya Serang Regency, it can be concluded several things as follows: (1) Development of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" was developed based on an analysis of teacher needs and students through a needs questionnaire provided by the developer, (2) The results of the validation of material experts, media experts, and design experts on the development product of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game with very feasible criteria to be developed, and (3) Based on the results Research on the development of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" can be concluded that the Digital Book learning media is used in developing abilities in designing creative, innovative and interesting learning.

Keywords : Teaching Materials, Educational Games, Reading Ability

INTRODUCTION

The first step in reading to students in elementary school (SD) begins with reading the beginning, as according to (Zulela MS, Reza Rachmadullah, 2017) that learning to read in elementary school functions strategically to improve human resources, not only that, early reading is the basic capital for students in order to know the various meanings of the various contents of the subjects studied at school.

Based on data obtained from the Central Statistics Agency (BPS), which has been carried out since 2012 has revealed that there are 17.66% stated that Indonesian children have an interest in reading, it is categorized as having very low reading interest, not only that in March 2016 that the Indonesian nation was declared to have been ranked 60th out of 61 countries related to reading interest, not only that that Indonesia could be said to be the lowest above Bostana which was ranked 61 in the reading interest category. Thus it is very necessary in the teaching and learning process in the classroom requires a lot of teacher skills, starting from the skills to recognize student characteristics, material characteristics lessons, characteristics of environmental conditions to skills in choosing media, teaching materials and learning resources. These
skills must always be honed by teachers in their efforts to improve the quality of the teaching and learning process some of which will appear in the learning outcomes obtained by students.

The function of learning media is as a teaching aid, which is to support the use of teaching methods that are applied or used by teachers (Aghni, 2018; Nurseto, 2012; Rifai, 2017). One of them is learning media that is Game, in this case can use mobile phones and computers as a complement to more interactive learning media. To make it more fun, the teacher can package the material into an interesting teaching material, by applying technology in the world of education, game-based learning media can be created. (Tanjug, 2019; Wibowo & Suyadi, 2021; Yolanda Br Sembiring, 2020).

**Interactive Educational Game is a game that aims to provoke** children's interest in learning the subject matter while playing, so that with a happy feeling it is hoped that children can more easily understand the subject matter presented. Anjani et al., (2016); Kuswanto, (2019); Wahyuningtyas et al., (2017) explains that educational games are one of the game themes that try to provide educational value in a game, so that games that initially only function as entertainment media, can eventually also be used as learning or training media. (Ansari & Rosnelly, 2020; Rebollo et al., 2021; Ropero-Padilla et al., 2021).

Game-based interactive multimedia was chosen for several reasons (Andari, 2020; Ansari & Rosnelly, 2020; Herfandi et al., 2020). First, almost all children nowadays are more active in playing games, both through cellphones and computers, because for children games are a fun thing and they really like it. Through something they like, it is hoped that students will be more interested in learning so that the learning process will be easier to understand, and second, by using interactive multimedia students can easily remember the material provided.

Given the importance of Indonesian language subjects for students as well as the obstacles experienced in learning related to media, it is very necessary to develop a media that can accommodate the needs of students in increasing their learning motivation, thus making students of Mekar Jaya Elementary School, Serang District, class II in participating in Indonesian lessons. Reading literacy materials can absorb the material taught well and learning objectives can be achieved and form a personality that is aware of the importance of learning Indonesian (Junaedi & Suardi, 2020; Keluanan, 2018; Rahayu & Fujiati, 2018).

**RESEARCH METHOD**

Research and Development Research uses the Dick and Carey Model. Dick and Carey's model is one of the learning design models with a systems approach where the systems approach views learning as a set of interconnected parts that all work together towards a predetermined goal. The systems approach to learning is most effective when the learning developer focuses his attention on "what the learner should know". The effectiveness of this approach lies in the accuracy in analyzing the learning components in the system. Therefore this model has ten stages, namely: (1) identify instructional goals, (2) conduct instructional analysis, (3) analyze learners and contexts, (4) write performance objectives, (5) develop assessment instruments, (6) develop instructional strategy, (7) develop and select materials, (8) design and conduct formative evaluation of instructions, (9) review instructions, (10) design and conduct summative evaluation.
Plot process development ingredient teach according to Dick and Carey with chart as follows:

*Picture 3.1 Chart Model Study and Dick & Carey Development (2009)*

The trial subjects in the development of this learning package consisted of: (a) Subject experts consisting of one content expert in the field of study, one media (design) expert, one linguist, (b) Individual trial consisting of 3 people students, (c) Small group trial consisting of 9 students, and (d) Field trial consisting of 21 students and 1 Indonesian teacher at Mekar Jaya State Elementary School, Serang Regency.

Data analysis techniques consist of 2 kinds, namely (a) Qualitative descriptive analysis is used to process data collected from the results of product reviews and trials. Qualitative descriptive analysis techniques were used to process data from interviews and discussions with experts as well as the results of individual and small group trial questionnaires. Qualitative descriptive analysis was carried out by classifying information in the form of input, criticism and suggestions for improvement contained in the questionnaire. The results of this analysis are then used as the basis for product revision, and (b) Descriptive statistical analysis obtained from expert test questionnaires, individual tests and small group tests is processed using descriptive statistical analysis techniques in the form of percentage descriptive.

The formula used to calculate the percentage of each expert test subject and individual test is as follows:
F: the frequency of subjects who chose the alternative
N: the total number of test subjects

To give meaning and make decisions in revising the product, a level qualification that has the following criteria is used:

Table 3. Percentage of Each Test Subject

<table>
<thead>
<tr>
<th>Scoring scale</th>
<th>Classification</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>81%-100%</td>
<td>Very good</td>
<td>No Need to Revise</td>
</tr>
<tr>
<td>66%-80%</td>
<td>Well</td>
<td>No Need to Revise</td>
</tr>
<tr>
<td>56%-65%</td>
<td>Not good</td>
<td>Need Revision</td>
</tr>
<tr>
<td>0%-55%</td>
<td>Very Not Good</td>
<td>Need Revision</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSION

Content Expert Validation
Expert Validation of Content / Material Development Products as Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game. The "PEBI" Interactive Educational Game- Based Indonesian Teaching Material Product is submitted to the learning content expert for feedback/assessment. Content expert who validates content in Indonesian-Based Teaching Materials This "PEBI" Interactive Educational Game is a lecturer at the State University of Jakarta. Data retrieval is done by the questionnaire method.

Figure 2 presents data analysis of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game tested by learning content experts. Input and suggestions from content experts regarding Indonesian Language Teaching Materials Based on Educational Games Interactive “PEBI” is very feasible to use for learning both online and offline.

The results of the validation of the calculation of the average percentage of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game are 97 % Very good qualification, no need to revise. Very good qualification, no revision needed. His suggestion of improvement in the image should be interesting.

Design Expert Validation
Expert Validation of product development design as Indonesian Language Teaching Materials Based on Interactive Educational Games. "PEBI". The product of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game is submitted to the learning design expert for feedback/assessment
The design expert who validated the design in Indonesian Language Teaching Materials Based on the Interactive Educational Game "PEBI" is a lecturer at the State University of Jakarta. Data retrieval is done by the questionnaire method.

Figure 2 presents data analysis of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" tested by learning design experts. Input and suggestions from design experts regarding Indonesian Language Teaching Materials Based on the “PEBI” Interactive Educational Game is very feasible to use for learning both online and offline.

The results of the validation of the calculation of the average percentage of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" are 94 % Very good qualification, no need to revise. Very good qualification, no revision needed. His suggestions for improvements to the image should be interesting.

**Media Expert Validation**

Expert Validation of media development products as Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game. The "PEBI" Interactive Educational Game-Based Indonesian Teaching Material Product is submitted to the learning media expert to obtain feedback/assessment. The media expert who validated the media in Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI" is a lecturer at the State University of Jakarta. Data retrieval is done by the questionnaire method.

Figure 2 presents data analysis of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game tested by learning media experts. Input and advice from media experts regarding Indonesian Language Teaching Materials Based on the “PEBI” Interactive Educational Game is very feasible to use for learning both online and offline.
The results of the validation of the calculation of the average percentage of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game are 86% Very good qualification, no need to revise. Very good qualification, no revision needed. His suggestions for improvements to the image should be interesting.

**Product Trial**
**Small group**

The results of the revision were based on suggestions from subject matter experts, design experts and learning media experts, the developer conveyed the results of the product revision to nine students as respondents in a small group test at the State University of Jakarta with a questionnaire. Learning to do a small group test on March 30, 2022. Respondents filled out the questionnaire the results were used as material for improving data on the feasibility of Indonesian Language Teaching Materials Based on Interactive Educational Games "PEBI".

Figure 2 presents data analysis of Indonesian Language Teaching Materials Based on the Interactive Educational Game "PEBI" tested in small groups. Inputs and suggestions from small groups regarding Indonesian Language Teaching Materials Based on Interactive Educational Games “PEBI” is very feasible to use for learning both online and offline.
The results of the validation of the calculation of the average percentage of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game are 90.69% Very good qualification, no need to revise. Very good qualification, no revision needed.

**Field Group**

The results of the revision were based on suggestions from subject matter experts, design experts and learning media experts, the developer conveyed the results of the product revision to twenty-one students as respondents in a field group trial using a questionnaire. Learning to conduct field group trials on March 30, 2022. Respondents filled out the questionnaire results as material for improving data on the feasibility of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game.

Figure 2 presents data analysis of Indonesian Language Teaching Materials Based on the Interactive Educational Game "PEBI" tested in small groups. Inputs and suggestions from field group trials relating to Indonesian Language Teaching Materials Based on Interactive Educational Games “PEBI” is very feasible to use for learning both online and offline.
The results of the validation of the calculation of the average percentage of Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game are 91.31% Very good qualification, no need to revise. Very good qualification, no revision needed.

Indonesian Language Teaching Materials Based on the “PEBI” Interactive Educational Game intended for Class II students of SDN Mekar Jaya, Serang Regency thanks to being a companion book for learning resources that the author has compiled with the content of the material in accordance with syllabus for Indonesian subjects. Topics for Beginning Reading Skills is the initial material for students to recognize and understand Indonesian subjects. By referring to the theoretical basis that the "PEBI" Interactive Educational Game program is a one of the internet-based learning that can increase the intensity of learning using cell phones which is owned. On the concept of learning the “PEBI” Interactive Educational Game bring benefit availability Theory just which can be accessed at any time and the visualization of interesting material via telephone devices handheld. Furthermore, Dwiyogo (2013) stated that the "PEBI" Interactive Educational Game as enrichment (enrichment) if participant educate with fast master or understand the subject matter delivered by the teacher face-to-face. Advances are given the opportunity to access the “PEBI” Interactive Educational Game which is true developed for student, so that will the more steady the level of student mastery of the subject matter delivered by the teacher in class.

Use of information and communication technology in education constantly evolving with various strategies that can basically be grouped to in system Electronics Learning (E-Learning) as form learning by utilizing the "PEBI" Interactive Educational Game. The term “PEBI” Interactive Educational Game can also be said as a form of learning that utilizes mobile devices and technology, “PEBI” Interactive Educational Game is the development of E-Learning. The term “PEBI” Interactive Educational Game refers to handheld and mobile IT devices can be PDAs (Personal Digital Assistant) , phone mobile, laptops, tablet PC, and etc. Interactive Educational Game “Ms. GEBI” can make it easier for users to access learning content in anywhere and
when course, without having to visit a certain place on time certain. “PEBI" Interactive Educational Game related to learning mobility, in the sense of students should be able to engage in educational activities without having to do a specific physical location. (Banji Vishnu Wirawan, 2011: 22-23). From source information the is base from writer for To do development learning media Interactive Educational Game "PEBI", “PEBI" Interactive Educational Game Program is one of learning based Internet which could increase intensity study student by using your cell phone . In the learning concept, the "PEBI" Interactive Educational Game brings the benefit of the availability of materials that can be accessed by everyone moment and visualization Theory which interesting through phone device handheld.

Meanwhile, the results of media trials were carried out on 33 people Class II students at SDN Mekar Jaya, Serang Regency, turned out to give a response positive to use of the “PEBI” Interactive Educational Game as learning Media.

By looking at the results of the questionnaire answers and comments on 33 students, it can be said “PEBI” Interactive Educational Game has an attractive appearance and is more practical than books in physical form. Students become motivated to read because of the “PEBI” Interactive Educational Game has the advantage that it is connected directly to the internet so that students can access deeper information if students still need information addition.

“PEBI” Interactive Educational Game also writer complete with practice question varied which cover question objective and subjective. So that student could train moment at home as Duty which given to student. Writer could take evaluation current activity activity at home, for example, students identify early reading skills . Results observation which carried out by students will produce data variations diverse. “PEBI” Interactive Educational Game which the author compiled works as well as an interesting learning resource.

From the data from the recapitulation of students' answers to the questionnaire, a percentage of 93% individual trials, 90% small group trials and 91% field trials, so it can be concluded that the material in the digital book prepared by the author can foster student interest in reading, because attractive appearance and different from the package book. Students also think that the “PEBI" Interactive Educational Game more efficient because without having to buy expensive package books, and practical because it is easy to carry, and is connected to the internet so that it can be read anywhere via Smart Phone .

CONCLUSION

Based on results study The Development of Indonesian Language Teaching Materials Based on the "PEBI" Class II Interactive Educational Game at SDN Mekar Jaya Serang Regency can concluded several things as following: (1) Development Indonesian Language Teaching Materials Based on Interactive Educational Games “PEBI” was developed based on needs analysis teacher and students through questionnaire needs which given by developer , (2) Results validation expert Theory, expert media, and expert design on product development Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game with very criteria worthy for developed, and (3) Based on results study development Indonesian Language Teaching Materials Based on the "PEBI" Interactive Educational Game drawn conclusion that media learning Digital Book used in develop ability in designing creative, innovative and interesting learning.
REFERENCES


