



The Development of Electronic Pocket Book The Making Oshibana Creation Based Conservation to Train Creative Thinking Student Skill

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Abstract

The integration of conservation-based education in online learning through paperless. Students are also assigned to make oshibana creations that apply eco-green principles to train creative thinking skills. Student's creative thinking skills during Covid-19 decreased. This is caused by a reduction in learning hours and limited learning media. So it is necessary to develop an electronic pocket book for making oshibana creations based on conservation. The purpose of this study was to analyze the feasibility, practicality, and effectiveness of electronic pocket book for making oshibana based conservation creations to train students creative thinking skills. This research is development research using the 4D model (define, design, development, disseminate). The feasibility of electronic pocket books is determined based on the media and material expert validation sheets. The practicality of the electronic pocket book was determined based on the teacher's and students' response questionnaires in class X A PHP SMK 3 Kudus. The effectiveness of the electronic pocket book is determined based on the product assessment sheet and the student response questionnaire sheet on the use of the electronic pocket book. The results of the media expert's assessment was 95.83% (very feasible) and the material expert's assessment was 96.66% (very feasible). Teachers argue practical electronic pocket book. 20.5% of students think it is very practical, 73.5% practical and 5.8% quite practical. The number of students is very creative and creative 76.46%. 76% of students think very good, 21% good, and 3% less good about the use of electronic pocket books. This means that the electronic pocket book for making based conservation creations that has been developed is very feasible, practical, and effective to train students creative thinking skills

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INTRODUCTION

Conservation education is an effort to form humans who have a positive attitude towards the environment (Susilo, *et al.*, 2016). The integration of conservation education into online learning due to the Covid-19 pandemic can be done through *paperless* (Pramono, 2021). The application of *paperless* which is accompanied by the massive use of information and communication technology is one of the efficiency efforts towards natural resources as a form of caring attitude towards the environment (Maslikhah, 2014).

The pandemic conditions are driving the realization of 21st century learning. In realizing 21st century learning amid the Covid-19 pandemic, there are at least five skills that student's must possess, one of which is creative thinking skills (Salmia, 2020). Creative thinking skill is included in high-level competencies and can be seen as a continuation of basic competencies (Rudyanto, 2014).

Based on the results of interviews with teacher of SMK 3 Kudus, it is known that students creative thinking skills during the pandemic decreased. This can be seen from the creative products made by students as a form of assignment that do not meet the KKM score (75). In addition, Biology lessons are conducted every two weeks with reduced hours from 90 minutes to 60 minutes. Not all material that contains practicum activities and skill aspect assignments is provided by the teacher. The use of instructional media such as PPT and PDF is also considered by the teacher to be ineffective. Based on the results of student response questionnaires to online learning, it is known that 88.23% of students stated that learning during the pandemic limited their creative thinking skills.

Oshibana is the art of arranging dried flowers originating from Japan (Raghupathi, 2020). Making oshibana applies eco-green principles as a conservation effort (Datta, 2016). Making oshibana creations is an alternative for students to practice creative thinking skills (Rahayu and Hayati, 2020). In order to help students understanding of making oshibana creations, a learning media in the form of an electronic pocket book is needed. E-books that apply *paperless* considered environmentally friendly, does not require large space to store, and has high mobility because it is easy to carry anywhere (Mahendri, 2023).

Creative thinking skills need to be trained so that students can become superior and highly competitive human beings. There is a system implementation *paperless* during online learning and limited time and media used, so the teacher must explain the material, so it is necessary to develop learning media in the form of electronic pocket books for making oshibana based conservation creations to train students's creative thinking skills. The purpose of this study are to analyze the feasibility, the practically, and the effectiveness of electronic pocket books for making oshibana based conservation creations to train students's creative thinking skills.

RESEARCH METHOD

This research is an RnD study using the 4D model (define, design, development, disseminate). This research is limited to the development stage. The research was conducted at SMKN 3 Kudus. Respondents to this study were a Biology teacher and 34 class X students of SMK 3 Kudus in the Agribusiness Processing of Agricultural Products program for the 2021/2022 academic year. Data on the feasibility of electronic pocket book was determined using a questionnaire technique, using instruments in the form of material and media expert validation sheets. The material validation sheet consists of aspects of material relevance, aspects of organizing material, aspects of language, and aspects of learning strategies. The media validation sheet consists of aspects of language, aspects of effects for learning strategies, aspects of software design, and aspects of visual appearance. Data on

the practicality of electronic pocket books was determined using a questionnaire technique, using a questionnaire response sheet instrument given to teachers and students after viewing and studying electronic pocket books. Teacher and student response questionnaires consist of material aspects, aspects of language use, and aspects of book appearance. Data on the effectiveness of electronic pocket books were obtained using non-test techniques and questionnaire techniques. The instruments used were product assessment sheets to measure the achievement of students creative thinking skill levels and student response questionnaires to the use of electronic pocket books. The product assessment sheet consists of 3 assessment aspects, namely: accuracy of tools and materials, work according to instructions, and product design. Feasibility, practicality, and effectiveness data were analyzed by descriptive percentage. The electronic pocket book is declared feasible if it receives an assessment of media and material experts > 70% (very feasible, feasible). Electronic pocket books are declared practical if teacher and students respond its very practical and practical at least 70%. Electronic pocket book is effective if the number of students who are very creative and creative reaches 75% and students who respon its very good and good reach > 70%.

RESULTS AND DISCUSSION

The results of this study were the development of an electronic pocket book with a 3D display entitled " Buku Saku Oshibana Sebuah Kesenian Berbasis Konservasi untuk Melatih Keterampilan Berpikir Kreatif". The book was created using PDF flip *Corporate*. The page size of the book is 17 x 11 cm with total of 42 pages. The book can be accessed through the link provided by the teacher using *smartphone* or laptops.

1. Electronic Pocket Book Feasibility

Based on the analysis of the validation sheet by media and material experts it is known that the electronic pocket book developed is very feasible to train students creative thinking skills. The feasibility assessment of electronic pocket books by experts is presented in Table 1.

Table 1. Feasibility Evaluation of Electronic Pocket Book by Experts

Validator	Max Score	Score	Percentage (%)	Criteria
Media Expert	72	69	95.83	Very feasible
Material Expert	60	58	96.66	Very feasible

Based on Table 1 its known that the percentage of the feasibility of electronic pocket book given by media expert is 95.83%. The percentage of the feasibility of electronic pocket book given by material expert is 96.66%. Media expert consider that graphically the layout or appearance of the electronic pocket book and its operation are good. The aspect of the proportion of the image is in accordance with the design, the appearance of the image and the design used is attractive. This is in accordance with Awaludin's research (2020), that electronic pocket books are presented with an attractive appearance, the appropriate size and type of letters, attractively presented colors will encourage student attention to read. Material experts consider that the material aspects presented in the electronic pocket book are in accordance with KI, KD, and learning objectives. Material aspects are presented in accordance with the truth of the facts and written in language that is easy to understand. This is in accordance with Rahmawati's research (2013) that good learning media is media that is written using clear and easy to understand language, presented in an attractive way and equipped with pictures and descriptions.

2. Practicality of Electronic Pocket Book

The results of the teacher's response questionnaire analysis revealed that the electronic pocket book that was developed was practically used to train students creative thinking skills. The teacher's assessment of the practicality of electronic pocket books is 82.50%. The results of the teacher's response to the practicality of electronic pocket books revealed that the presentation of material in electronic pocket books was systematic; the media makes it easier for teachers to deliver material; the display of pictures in the book is clear and accurate; the general appearance of the book is attractive; book is easy to apply. In accordance with Kamal's (2021) that electronic books are practical to use when considering the needs of teachers and students with material designed according to learning objectives using an attractive design so it will motivate students to learn.

The results of the student response questionnaire analysis show that electronic pocket book was practically used to train students creative thinking skills. Students assessment of the practicality of electronic pocket books are known that 20.5% of students think it is very practical, 73.5% practical, and 5.8% quite practical. The material presented by electronic pocket book is easy to understand, the presentation of images/material/video were very good and help them to understand the material. Electronic pocket book is more interesting to use than ordinary learning media and it can be used easily. An electronic pocket book that looks like opening a book in 3D makes it attractive. In addition, book that accessed via website link that can be opened at any time without having to download an application make it easier to use. In accordance with Indriana (2011) that the advantages of pocket books include their practical that can be accessed anywhere and it has an attractive appearance accompanied by illustrations.

3. Effectiveness of Electronic Pocket Books

The results of the classical completeness analysis of Oshibana creations show that the level of students creative thinking skills varies. The majority of students are in the creative category. The analysis results of students creative thinking skill levels are presented in Table 2.

Table 2. The analysis results of students creative thinking skill level

Category	The number of students	Percentage
Very creative	3	8.82%
Creative	23	67.64%
Creative enough	4	11.76%
Less Creative	3	8.82%
Not Creatve	1	2.94%

Based on Table 2 it is known that the classical completeness of student skill at SMK 3 Kudus is 75%. This means if the number of students who are very creative is 8.82% and creative is 67.64%, then this number is already greater than the indicator set, $76.46\% > 75\%$. So the electronic pocket book is effective to train students creative thinking skills.

Based on the classical completeness analysis of Oshibana creations, it is known that students are able to make various kinds of products based on their creativity. Students can fulfill creative thinking indicators: fluency, flexibility, elaboration and originality. Students can modify tools found around them as tools for making oshibana creations. Students can use thick books as a substitute for press tools. Students can combine flowers and recycled materials (paper, straws, jars) to create products that have aesthetic and economic value. This is in line with Sulastri's research (2017) which states that oshibana activities are effective in developing students creative thinking abilities.

The results of the analysis of student responses to the use of electronic pocket books revealed that 76% of students gave very good responses, 21% responded good, and 3% responded less good. Students who gave poor responses explained that oshibana was new material learned so it was

difficult to understand without direct guidance. from teacher.

Based on the results of the analysis student responses to the use of electronic pocket books, it is known that all students think that the design of the book is attractive and is able to train creative thinking skills. 97% of students think the writing in the book is legible and the material is easy to understand. In line with the opinion of Asyhari (2016), the language that used in pocket books is simple according to the level of students understanding so they can easily understand the material. 94% of students think that electronic pocket books use communicative language; illustration images used by representatives; appropriate and practical to use as a learning medium As many as 88% think that electronic pocket books support the independent learning process. This can be seen from the classical completeness of students' skills >75%. This is in line with Thenu's research (2019) which states that oshibana activities get a good response from students in increasing motivation and learning achievement. 76% of students think electronic pocket books are easy to operate.

CONCLUSION

Based on the results and discussion, it can be concluded that the electronic pocket book the making oshibana creations based conservation is very feasible, practical, and effective to train student's creative thinking skills.

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