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Development of Contextual-Based Booklet as Learning Media to Improve Student's Motivation in MA Al-Qodiri Kalipuro Banyuwangi

Ifa Muhimmatin[1]✉, Zihan Elmira Putri, Iis Ni'matul Jannah

[1]Biology Department, FKIP, Universitas 17 Agustus 1945 Banyuwangi, Indonesia

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Abstract

Interviews with biology teachers at MA Al-Qodiri Kalipuro, Banyuwangi found that they need a printed learning media about biodiversity to support student's motivation on learning process. On the other hand, the school environment has a diversity of plants, so this diversity can be used to develop a contextual-based booklet learning resource. This research aims to determine the quality of contextual-based booklet as a learning media for students in MA Al-Qodiri Kalipuro. This is a Research and Development that using the 7 steps of the Borg and Gall research method which has been modified. The 7 steps of the research method are: potential and problems, data collection, product design, design validation, design revision, product testing, product revision. The research results from the material expert validation results obtained a percentage of 97.27% in the very valid category, or can be used without revision. The assessment from media experts obtained a percentage of 98.18% in the very valid category, or can be used without revision. The user response test by students obtained a percentage score of 80.75% in the very appropriate category. Meanwhile, the user response test by the teacher obtained a percentage score of 80% in the appropriate category. Thus it can be concluded that Booklet media can be used as a learning medium that is able to motivate students to learn, so that it can make a positive contribution in increasing the effectiveness of biology learning in schools.

✉Correspondence Address:
Jl. Adi Sucipto No. 225, Tukangkayu, Banyuwangi Sub-District, Banyuwangi Regency, East Java, 68416, Indonesia
E-mail: ifa.muhimmatin@untag-banyuwangi.ac.id

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INTRODUCTION

Merdeka curriculum in Indonesia is a curriculum with diverse learning and focuses on essential content so that students have enough time to explore concepts and strengthen competencies. Merdeka curriculum directs students to develop their potential and competencies, so that the learning process is designed in a relevant and interactive way (Khoirurrijal et al., 2022). Teachers have the freedom to choose various teaching tools so that learning can be adjusted to the learning needs and students interests (Fauzi, 2022).

MA Al-Qodiri Kalipuro is one of the high schools in Banyuwangi Regency, Indonesia that has implemented Merdeka curriculum since 2021. Merdeka curriculum at MA Al-Qodiri is applied to all subjects, including biology lessons on the material about biodiversity. Naturally, biodiversity has limited distribution, so that each region shows its uniqueness in displaying its biodiversity (Suwarso, et. al. 2019). So, students can recognize this natural knowledge in their daily lives (Iskandar et.al. 2023). Biodiversity material can be taught to students by taking students to the surrounding nature, or bringing the surrounding nature into the classroom.

The results of interviews with biology teachers of class X MA Al-Qodiri Kalipuro obtained information that the main methods used in learning biology are lecture and practicum methods. The practicum method in biology lessons is a method that can motivate students to actively learn. However, learning biology with the lecture method makes students unmotivated. In fact, motivation is an important factor in the success of students (Ekici, 2010).

Observations of the learning process at MA Al-Qodiri concluded that students were not interested in listening to the teacher's explanation, and there was no learning media that could be accessed by students. This causes students to be less motivated to participate in learning and feel sleepy. Interviews with teachers stated that teachers had not provided teaching media, and the school prohibited students from bringing smartphones. Learning media is an important aspect to support the success of curriculum implementation. So, students' learning motivation needs to be maintained by providing interesting learning media (Wulandari & Muhimmatin, 2024).

Learning media is anything that can be used to convey messages, so that it can stimulate students' attention, interest, thoughts, and feelings in learning activities. Media contains information from the internet, books, films, television, and so on (Kristanto, 2016). Learning media is one of the things that teachers can use in helping the learning process (Nisa et al. 2021). One form of printed visual learning media is a booklet. Booklets contain pictures and summaries of material that create interest in learning. The information contained in the booklet is written concisely, clearly, and easily understood in a short time. The booklet is also attractively packaged, printed on practical paper and easy to carry anywhere (Christie & Lestari, 2019; Octiana et al. 2020). Also, booklet has potention to increase students' achievement (Yani et al., 2018).

MA Al-Qodiri environment has a large yard and is a place for various plants to grow. Initial observations showed that there were more than 20 species of higher plants with herbaceous to tree habitus. The diversity of plants can be used as material for compiling a booklet on plant diversity. Booklets that are compiled based on plant diversity in the student's environment will be easier to understand and contextual. Contextual is a learning concept that assumes that students will learn more meaningfully if they "experience" what they are learning themselves (Kadir, 2013).

The development of a contextual-based booklet for grade IV students was carried out by Diki et al. (2022) and produced valid teaching media that can be used in learning. Therefore, to increase learning motivation at MA Al-Qodiri Kalipuro Banyuwangi, it is necessary to develop a booklet on plant diversity in the school environment as a contextual teaching media.

RESEARCH METHOD

This research is a Research and Development (R&D). Research and Development is a research method used to produce certain products and test the effectiveness of these products. The product from this

research is a booklet about plant diversity in school. The development model used refers to the Borg and Gall development model modified by Sugiyono (2014) with 7 steps, namely: potential and problems; data collection; product design; design validation; design revision; product trial; and product revision.

The data collection technique used a validation questionnaire by experts and a product trial questionnaire by students. The types of research data obtained from the questionnaire are qualitative and quantitative data. Quantitative data were obtained from the results of the validity test by experts, the validity test by teachers, and the results of the student response questionnaire. The results of the quantitative data analysis were used to determine the validity/feasibility of the booklet. Qualitative data in the form of descriptions of suggestions and input for improvements given by the validator.

The data analysis technique for the validation questionnaire of material experts and media experts was calculated using a Likert scale (Akbar, 2013) with a range of 1) very poor, 2) poor, 3) sufficient, 4) good, 5) very good. Meanwhile, for the user response test using a Likert scale (Nafsiyah, 2019) in the form of a range of 1) Disagree, 2) Less Agree, 3) Quite Agree, 4) Agree, 5) Strongly Agree. The results of the scales from the validation questionnaire then analyzed with percentage. The basis for making decisions on validity with the assessment criteria (Akbar, 2013) as in Table 1 below.

Table 1 Media Expert Validation Assessment Criteria

Presentase (%)	Criteria
81% - 100%	Very valid, can be used without revision
61% - 80%	Valid, can be used with minor revisions
41% - 60%	Less valid, recommended not to use because it needs major revision
21% - 40%	Invalid, or may not be used
0% - 20%	Completely invalid, should not be used

RESULTS AND DISCUSSION

The stages of booklet development consist of the potential and problem identification stage; data collection stage; product design stage; design validation stage; design revision stage; product trial stage; and product revision stage. Potential and problem identification was carried out by conducting interviews with grade X biology teachers. Based on the interview results, printed media with many pictures or booklets were needed for biology learning on biodiversity material. Based on the observation results, it was found that the school environment has a diversity of plants so that it can be used as material for making booklets.

Data collection for booklet making materials was carried out in the school yard, by documenting plants in the form of photos and finding the classification of each plant. The results of data collection in the MA Al-Qodiri Kalipuro neighborhood showed that 20 species of Spermatophyta were found, from herbaceous to tree habitus. The use of plant images taken from the student's neighborhood aims to make it easier for students to recognize the diversity of plants around them, as well as to support the contextual learning process.

The booklet developed is entitled "Plant Diversity at MA Al-Qodiri Kalipuro Banyuwangi". This booklet contains a front cover, foreword, table of contents, booklet contents (material), motto, bibliography, back cover. The pictures of plants displayed in the booklet are plants found in the MA Al-Qodiri Kalipuro area. The booklet was developed using the Canva application. The booklet is printed using A5 art paper, full color with 30 pages. Figure 1 below is the front cover and content of the booklet.

Figure 1 Initial Design of the Front Cover and Content of the Booklet (personal documentation)

Media Expert Validation

Validation by media experts aims to determine the accuracy of the booklet design that has been designed. This validation is carried out by one validator who has a final education of Masters in learning technology, teaches learning media courses, and is experienced in developing learning media. The media validation assessment items are the quality of the title, booklet design, layout, presentation of each page, readability of text or sentences, font size, attractiveness of letters, able to express the meaning of the object, presentation, attractiveness, and creative and dynamic. The assessment criteria used are Likert scale assessments and then converted into percentages. Table 2 below shows the results of validation by media experts.

Table 2 Validation Results by Media Experts

Aspect	Score	Max. Score	Percentage (%)	Category
Appearance	39	40	98,18%	Very valid, can be used without revision
Illustrations	15	15		

The results of the media expert validation showed a percentage of 98.18% with a very valid category, or the booklet can be used for the next validation stage without revision. The suggestion from the media expert is to change the font color on the title to a color that contrasts more with the background, and to change the font size and color on the plant subtitle by changing it to be larger. Both suggestions are from the aspect of readability.

Material Expert Validation

The developed booklet was then reviewed by a material expert using a validation questionnaire. Validation by a material expert aims to determine the suitability of the contents of the contextual-based

booklet material in the biodiversity chapter. The assessment was carried out by an expert who had the last education in biology education and mastered the material on biodiversity.

The assessment items for material validation include the completeness of the breadth and depth of the material; accuracy of concepts, images, descriptions, symbols and punctuation; suitability of the material with the development of science; consistency of the presentation system; suitability of the presentation of illustrations with the material, presentation of images and classification; accuracy of numbering and naming of images, bibliography, sentence structure; students' understanding of the message; ability to motivate students; accuracy of grammar, consistency of use of terms, accuracy of writing scientific/foreign names. The assessment criteria used are Likert scale assessments and then converted into percentages. Table 3 below shows the results of validation by material experts.

Table 3 Results of Validation by Material Experts

Aspect	Score	Max. Score	Percentage (%)	Category
Suitability of material to learning outcomes	15	15	97,39%	Very valid, can be used without revision
Accuracy of material	14	15		
Novelty	15	15		
Presentation	24	25		
Linguistics	44	45		

The results of the validation by material experts showed a percentage of 98.18% with a very valid category, or the booklet can be used for the next validation stage without revision. The suggestion from the media expert is that the writing of the scientific name of the plant needs to be adjusted to the rules of plant nomenclature. This is because there are several species names that have not been italicized.

Booklet Revision

The results of the validation by media experts and material experts show that the booklet is included in the very valid category and can be used for the next validation stage without revision. However, in this study, the booklet was revised according to input from both experts. Revisions were made, among others, to the color and style of the letters. This is in accordance with the opinion of Hakim and Hidayat (2021), that contrasting colors will make it easier for students to read and understand the learning explained by the teacher. Choirina et al. (2023) stated that the use of font style and font size is easy to read and the use of font types in the booklet is not excessive.

Variations in font types are only used to distinguish chapter titles from chapter contents. This variation can attract students' attention and make the description better, so that the learning content is conveyed well. The writing of Latin in the scientific name of plants has also been revised, namely adjusted to the rules for writing scientific names of plants according to International Code of Botanical Nomenclature. This is in accordance with (Sofiyan et al. 2020) which states that the classification of living things has been established in the binomial nomenclature system. So, the revision made was just to italicize all scientific names of plants in the booklet.

Potential User Responses to the Booklet

The users of the booklet developed are students and biology teachers of MA Al-Qodiri Kalipuro, so in the process of making the booklet it is necessary to get opinions from both of them. User responses to the booklet were obtained using a response questionnaire. The response questionnaire for teachers contained 22 closed statements about the material, language, and presentation of the booklet. There was one grade X biology teacher and 20 students of MA Al-Qodiri Kalipuro who contributed to this activity. The results of teacher and student responses are in Table 4.

Table 4 Responses from Teacher and Students of MA Al-Qodiri Kalipuro

No.	Subjects	Percentage (%)	Category
1	Students	80,75%	Very Valid
2	Teacher	80%	Valid

Based on the results of the percentage of student response tests, it shows that the development of plant diversity booklet media is in the very feasible category. Based on the student response questionnaire, the material in the booklet can be easily understood, can add students' information and knowledge, the language used is easy to understand, and the presence of images makes it easier for students to understand the material better. The use of images is one effort to increase understanding and foster student learning motivation to be more active (Wardani et al. 2013). This can be interpreted that the student response to the booklet media is very positive.

The response from the biology teacher obtained a percentage of 80% of the maximum value, so the booklet media has met the eligibility criteria. This can be interpreted that the biology teacher's response to the booklet media is a positive response. According to Prameswati & Saifuddin (2022), booklets are a learning media that widely used by teachers. According to biology teacher, this booklet also can be used as support media for discovery-based learning in MA Al-Qodiri Kalipuro by having students go around the school environment.

CONCLUSION

In the research of developing contextual-based booklet learning media on biodiversity material for class X MA Al-Qodiri Kalipuro Banyuwangi, it was stated to be very feasible and very valid to be used as a learning media with a percentage score of media expert validation test results of 98.18%, a percentage score of material expert test of 97.39%, and a percentage score of user test by students of 80.75% and a percentage score of user response by teachers of 80%. Thus, it can be concluded that the developed booklet can be used as a supporting tool for biology learning for teachers and students and is able to motivate students in learning.

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