



Validity of Teaching Animal Media Booklet (Gastropods)

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Abstract

Education is an important element for developing knowledge and forming a person's character. The use of varied learning media has been proven to be able to increase student activity in class. Media in the form of booklets is suitable for Gastropod material which tends to require students to memorize. In Gastropod material, there is a lot of material whose application is difficult to find in life and has very broad learning objects. The aim of this research is to test the validity of the Gastropod booklet as an interesting learning resource that suits students' needs. This research uses the Research & Development method with the ADDIE development model, but is only carried out to the Develop stage, namely to the validity stage. The results of this research show that the Gastropod booklet learning media is included in the very valid category. It can be concluded that the booklet teaching media is very valid to use for learning science, animalia material, Gastropod sub-material.

Keywords: validity; booklet; animalia; Gastropods

INTRODUCTION

Education is an important element for developing knowledge and forming a person's character. Education is a conscious and systematic effort to acquire knowledge and develop students' attitudes and skills through a process of interaction. Education is a learning activity that provides provisions for students in everyday life. Efforts to improve the quality of education continue to be made to achieve national education standards. The aim of national education is to improve quality and produce successful human resources. Improving the quality of education can be done by paying attention to the curriculum that supports learning activities. The implementation of a relevant and quality national education system is one of the determining factors for our success in making the nation's life intelligent (Lesmana, 2018; Sujana, 2019; Puspitasari *et al.*, 2023).

In the 21st century, the development of science, technology and information is very rapid and full of competition. Sometimes in other countries there are bold applications of learning, so the Indonesian people have to prepare themselves by growing and developing many competencies. Therefore, education is very important so that students can act scientifically to solve problems (Jayadiningrat & Ati, 2018; Rahayu & Adistana, 2018; Supriadi *et al.*, 2021). The learning process is created when teachers and students are able to use learning media well and play an active role in participating in the learning process. Learning is an effort to teach students through a design, strategy, model and method that is prepared to achieve predetermined goals. Students succeed in learning if they understand and

master the material provided. Media in learning is a tool that can improve teaching and learning process activities, making it easier to instill correct, concrete, and realistic basic concepts that clarify understanding of concepts and facts in the learning material carried out (Hanifah *et al.*, 2020; Abraham & Supriyati, 2022; Wulandari *et al.*, 2023).

There is a relationship between 3 important components in learning, namely learning objectives, learning activities, and evaluation. These three components can then be broken down into more detailed components, namely objectives, materials or teaching materials, methods, media, and evaluation which are then called learning tools. The existence of teaching materials is very important to support teaching and learning activities so that they can run smoothly. Teaching materials will make it easier for students to understand the lesson material presented by the teacher. Teaching materials function to fully display the forms of competency that students will master in learning activities (Dolong, 2016; Aisyah *et al.*, 2020; Fadhila *et al.*, 2021). One effort that teachers can make is to choose methods and determine good and interesting learning media. Learning media are tools that can help teachers transfer knowledge to students. The aim of learning media is to stimulate students' interest in participating in the learning process (Tafonao, 2018; Saputra & Kuntjoro, 2019; Wini *et al.*, 2022). Learning media also functions as an intermediary in conveying information to students. Student interest is one of the keys to being able to receive knowledge well (Athiyah, 2018; Sofiyanti & Harahap, 2019; Aprijal *et al.*, 2020). Therefore, learning media that is varied, colorful, unique and interesting is needed so that the material presented can be well received. Especially in theoretical material such as gastropod material.

The use of varied learning media has been proven to be able to increase student activity in class (Harahap *et al.*, 2020; Basir *et al.*, 2021; Dwisa *et al.*, 2022). Learning media can be in the form of videos, images, bulletins, teaching materials, pop-up books, booklets and teaching modules. Media that is no less famous is booklets. A booklet is a book with a smaller and thinner size that contains illustrated writing (Nadhiroh & Pujiriyanto, 2020; Novianti & Syamsurizal, 2021; Gultom *et al.*, 2022). The structure of the booklet's contents is the same as a book in general, namely containing an introduction, body and conclusion. The booklet shape is practical to carry everywhere because it has a mini size. Apart from that, booklets can contain various images because students prefer learning media that contains lots of images (Magdalena *et al.*, 2021; Nomleni *et al.*, 2022; Imron, 2023).

Media in the form of booklets is suitable for Gastropod material which tends to require students to memorize. Gastropods from Mollusc Phylum as well as the others animal pylum are important (Pertiwi & Lathifah, 2019; Ratih *et al.*, 2021; Triacha *et al.*, 2021; Fatonah *et al.*, 2023; Mufida *et al.*, 2023; Putri *et al.*, 2023). In gastropod material, there is a lot of material whose application is difficult to find in life and has very broad learning objects. Learning takes place directly, only explaining the material contained in the textbook. In fact, Gastropods have a lot of diversity that not many students know about. Therefore, in order to support the achievement of the designed learning objectives, it is necessary to provide booklet media that is light, practical, has an attractive design and is unique and can be understood by students. The term booklet is a combination of the words book and leaflet. This means that a booklet is a combination of a leaflet and a book with a small format (size) like a leaflet. A booklet is a small book measuring 14.8 x 21 cm which has at least five pages but no more than 48 pages excluding the number of covers (Novianti & Syamsurizal, 2021; Wahyuni *et al.*, 2022; Jalil, 2023).

Based on the analysis of the teaching materials used in the learning process in the form of Biology textbooks, there are several shortcomings, such as deficiencies in the suitability aspect of the material, in terms of presenting images so that they are clearer to facilitate students' understanding of the material being studied. Therefore, additional teaching materials are needed to complement the shortcomings of these teaching materials so that they are in accordance with the core competencies and basic competencies that have been determined. Based on the problems that have been described, a Gastropod guidebook was developed which is equipped with pictures so that students can imagine the original form of plant anatomy. The aim of this research is to test the validity of the Gastropod booklet as an interesting learning resource that suits students' needs.

METHOD

The type of research used is Research & Development with the ADDIE development model which consists of several stages, namely analysis, design, development, implementation and evaluation (Kusumawardani *et al.*, 2020; Fadhila *et al.*, 2021; Nurfitri *et al.*, 2022). The analysis stage is carried out to analyze the requirements and feasibility that need to be considered in developing learning media. After finding answers to these questions, the requirements and feasibility of developing learning media will be obtained. Then the design stage at this stage begins with designing the initial format of the booklet as a learning medium dominated by attractive images and colors and equipped with various supporting features such as info corners which are designed systematically and attractively to achieve the expected goals. The next stage is development, at this stage designing an attractive initial format and layout to make it easier for students to understand the material in the booklet. Each material in the booklet is equipped with supporting images to support the material presented.

The results of this initial design stage are a booklet design which will be tested by a team of validation experts (material experts and media experts). The media validation test was carried out by 2 lecturers and 1 teacher. Expert validation aims to determine the suitability of the gastropod material booklet learning media for use in field research. Next is the implementation stage, at this stage designing an attractive initial format and layout to make it easier for students to understand the material in the booklet. Each material in the booklet is equipped with supporting images to support the material presented. The analysis technique used is descriptive analysis which describes the validity of Riduwan's (2013) modification, which is as follows:

$$\text{Validity value} = \frac{\text{The total score obtained}}{\text{Highest total score}} \times 100 \%$$

Table 1. Validity criteria

No.	Score	Validity Categori
1.	81-100%	Very Valid
2.	61-80%	Valid
3.	41-60%	Quite Valid
4.	21-40%	Invalid
5.	0-20%	Very Invalid

RESULT AND DISCUSSION

The results of the research in the form of expert validation tests and high school students' readability tests on booklet teaching media development products can be presented as follows. The validated teaching media is teaching media with the title "Book of Gastropods Found on Tumbang Island, North Siberut District". The results of expert validation based on aspects of format, content/material and language of presentation can be seen in Table 1 below.

Table 2. Gastropod Booklet Validity Results found on Tumbang Island, North Siberut District

No	Grading Components	Validity Value (%)	Criteria
1	Content Eligibility	90%	Very Valid
2	Language	95%	Very Valid
3	Presentation	89%	Very Valid
4	Graphics	91%	Very Valid
	Average	91,25%	VeryValid

The results of the validation according to experts show that the developed booklet is very valid. This shows that the booklet is good and valid in terms of content feasibility, presentation and construct, as well as graphics. In the validation process, the booklet underwent several revisions based on the suggestions given by the validator.

Table 3. Validator's Suggestions and Follow-ups on Booklets

No	Name	Suggestion	Description
1	Drs. Nurhadi, M.Si	<ul style="list-style-type: none"> • Add reproductive studies to the description of Gastropods so that they match KD • List the sources used for classification 	Already repaired
2	Zikra, M.Pd	<ul style="list-style-type: none"> • Add and refine learning objectives • Repair the front and back covers 	Already repaired
3	Karolina, S.Pd	-	-

Based on the results that have been validated by the validator, it is known that in general the booklet is declared very valid. The validation carried out by a Biology lecturer at PGRI University of West Sumatra includes four aspects, namely appropriateness of content, language, presentation and graphics. The validity test on the content feasibility aspect aims to see that the content and substance of the product being developed is truly capable of measuring the concept (knowledge and skills) to be achieved (Ghazali, 2016; Putri, 2020; Asri & Dwiningsih, 2022). The content feasibility aspect states that this booklet is very valid, meaning that the material in the booklet is in accordance with the curriculum and in accordance with the demands of the Core Competencies and Basic Competencies described through the Competency Achievement Indicators. Very valid criteria also show that the truth of the substance of the material in the booklet is good. Thus, the Animalia Sub-Material Gastropod material booklet, which was developed as a learning supplement, is suitable for use in the learning process.

The linguistic aspect states that the booklet is valid. This shows that the sentences used in the booklet are good, clear, communicative, and do not cause confusion, so that the material in the booklet is easy for students to understand. One of the criteria for a good learning supplement is having language that is clear and easy for students to understand (Magdalena *et al.*, 2020; Bursan & Fatimah, 2021; Arsanti *et al.*, 2022). The presentation or construction aspect is an aspect related to sentence structure and simplicity of use. In the presentation or construction aspect it is declared valid. This shows that the booklet clearly contains indicators of competency achievement and learning objectives. The material in the booklet is also presented simply and systematically according to competency achievement indicators. From a graphic perspective, this book is very valid. This shows that the booklet design developed is good and attractive, including appropriate font type and size, appropriate and attractive color selection, and the images presented are clear and relevant to the material. Making teaching materials must pay attention to things such as color composition, appearance, and type and size of writing in order to increase student motivation in the learning process.

Aspects of media design such as the proportion and color composition used in the booklet, the booklet design looks consistent, the appearance of the cover, images and writing on the booklet are quite attractive, and the choice of size and font is quite good. suitable so it is easy to read. The proportion and composition of the colors used in the booklet are appropriate, the appearance of the booklet is consistent, the appearance of the cover, images and writing in the booklet are quite attractive, and the choice of appropriate size and font makes it easier to read. Readability is influenced by the contrast of the font color with the background color used. The power of color can have a psychological effect on everyone who sees it. Aspects of media convenience in learning practices such as the efficiency of booklets in terms of usage time, manufacturing costs, energy use, and safety for students. The advantages of booklets are 1) they are cheap and easy to obtain because booklets are made using printed

media so at that time they can be cheaper than audiovisual media, 2) the process of conveying information using booklet media to targets can be rented at any time and adjusted to the target's conditions, 3) booklets it contains text and visuals (images) to create a sense of beauty and increase understanding and enthusiasm for learning, more detailed and clear, easy to understand and does not cause misunderstandings, 4) booklets are a practical information medium so they can be distributed directly to targets, 5) booklets is a print media that does not require electricity and can be taken anywhere. The validator assessment states that the booklet developed is valid, proving that the booklet is suitable for students to use in the learning process (Octiana *et al.*, 2020; Maisyura *et al.*, 2021; Wahyuni *et al.*, 2022). This booklet will be beneficial to human as well as these research products (Istiana *et al.*, 2019; Saputri *et al.*, 2020; Pertiwi & Saputri, 2020; Saputri & Pertiwi, 2021).

CONCLUSION

Booklets are a learning medium with a much shorter presentation of material compared to teaching materials, making it easier for students to store and carry them. The research that has been carried out produces the Gastropod book Animalia material for class X SMA/MA with very valid criteria. These criteria are based on the results of an analysis of the overall average validity value of 91.35% in the components of content, language, presentation and graphic appropriateness. The development of Animalia material booklets can be used as additional learning media besides textbooks and LKPD for students in the learning process. Teaching materials are suitable for use if they meet the basic guidelines for preparing teaching materials. Therefore, the booklet developed is suitable for use in the learning process by class X SMA/MA students. This research is useful for the nation, especially teachers, because it can be a reference for creating learning media in schools.

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