SCHOOLAR: Social and Literature Study in Education
Vol. 5 No. 2 October 2025, Page. 96 - 104
E-ISSN: 2797-0299

Development of A Booklet on Medicinal Plant Diversity As A Learning Medium

Niken Koeswara Putri[1], Fatikhatun Nikmatus Sholihah[2*], Anggun Wulandari[3]
[123]Biology Education, KH. A. Wahab Hasbullah University
*Email: faiha.achmad@unwaha.ac.id

ABSTRACT
Learning in the classroom with less varied media causes students to tend to be bored in the learning process in the classroom. Students have never heard of the term booklet and have never used booklet learning media on medicinal plant biodiversity. This study aims to describe the results of the validation of booklet learning media material experts and the results of media expert validation of the use of booklet learning media on the diversity of medicinal plants in Peluk Hamlet as a learning medium. The type of research used is the type of development (Research and Development) with the ADDIE (Analayze, Design, Development, Implementation, Evaluation) model. This research is limited to the Development stage. The data collection instrument in this development research is in the form of a validation questionnaire. The validation of the booklet media instrument was carried out by two validators, namely material expert validators and media expert validators. The data analysis technique used is data obtained by researchers from expert validators and then analyzed qualitatively and quantitatively. The results of the study showed that the validation value by material experts was 91.25% declared very valid and the validation results of media experts were 92.5% declared very valid.

***Keywords**: Booklet; Learning Media; Medicinal Plants.*

INTRODUCTION
Education is a conscious effort to realize a cultural heritage from one generation to another. Education makes this generation a role model for the teaching of previous generations. Until now, education has no limit to explain the meaning of education in full because it is as complex as its target, namely humans (Cahyani Hidayah et al., 2023). Education is not only about the results of learning but also about the learning process. One way to achieve this is by using appropriate media (Hidayat & Sholihah, 2021)

Suryana (2020) stating that the problems faced by the world of education today are the weakness in the learning process. The inefficient and less effective learning process is one of the factors in the problem of education quality. In the learning process, students learn more in theory. While the theory that students learn lack application in daily life, this causes students to lack a deeper understanding of the subject matter (Nurrita, 2018). The learning process in the classroom that tends to be repetitive and unchanging is still a common concern in classroom learning (Hafinda & Armanisah, 2021). As a result, students become less focused and bored in classroom learning and have difficulty achieving learning goals (Susanti et al., 2024). This is due to less interesting learning media, so that students' lack of motivation to learn decreases. Therefore, teachers must use interesting learning media to motivate students in the learning process (Husna & Supriyadi, 2023). Learning media can be described as media that contains information or instructional messages and can be used in the learning process. Learning media is a media that conveys messages or information that contains learning purposes or objectives. Learning media is essential to help participants Educate Acquire New Concepts, Skills and Competencies (Hasan et al., 2021).

Booklet is one of the forms of learning media innovation in the form of print media. This media contains subject matter in a unique, attractive, and flexible physical form (Ardhyantama, 2022). Design Booklet which is full of color will increase the sense of interest in the learning process in the classroom. If you use a package book that students usually use, it seems that there are more pages and thicker, not to mention that it is dominated by long sentences that sometimes make students bored to read it, until Booklet appearing to share new nuances in reading (Azizah et al., 2022).

In this study, the media of the booklet of medicinal plant biodiversity was used as a learning medium. The learning outcomes of biodiversity class X which in the sub-chapter of biodiversity as a source of food and medicine include understanding the types of medicinal plants, their benefits for health, their classification and scientific names, and the relationship between biodiversity and human life. It aims to make it easier for students to understand the material. The concept of biodiversity is a concept that must be achieved before understanding the concept of medicinal plants (Khotimah et al., 2023).

After conducting an interview with the biology teacher, Mrs. Faradian at the Supreme Court Superior Court, K.H. Abd. Wahab Hasbulloh Tambakberas, the school uses the Independent Curriculum with various learning methods such as PBL (Problem Based Learning), PJBL (Project Based Learning) and Inquiry. In learning with the PBL method, students are given an example of real-life problems, then students are instructed to discuss and then present the results. In the PJBL learning method, students are given tasks such as making a herbarium.

Students at Islamic senior High School Unggulan K.H. Abd. Wahab Hasbulloh has never heard of and used booklets in classroom learning on biodiversity material, namely the diversity of medicinal plants. Superior Islamic senior High School students K.H. Abd. Wahab Hasbulloh has never carried out a practicum on medicinal plants. The researcher chose the location of the medicinal plant booklet data collection in Peluk Hamlet to be more complete than in the school environment, so that Peluk Hamlet is a potential location to be used as a source of learning about the biodiversity of medicinal plants. Therefore, the author chose material about medicinal plants because the medicinal plants that grow around us often have not been utilized optimally. By learning about medicinal plants, we can maximize nature's potential for health. Students will also learn about the morphology, classification, benefits, and how to use the medicinal plant.

Based on these problems, it is necessary to develop learning media in the classroom, so that students use the right learning media. One of the efforts that researchers can make is to develop a learning media for the biodiversity of medicinal plants in Peluk Hamlet. The purpose of this study is to find out the results of material validation and media validation of the biodiversity of medicinal plants in Peluk Hamlet by material experts and media experts.

METHOD

The type of research used in this study is the type of development (Research and Development). This research aims to produce a product, namely, in the form of a booklet learning media on medicinal plant diversity in biodiversity materials in Class X High School/ Islamic senior High School students.

Research design and development of learning media Booklet which the researcher does this using the ADDIE development model. The planning process is divided into several steps and each step is organized into a logical sequence. The output and the previous step are used as inputs in the next step. The ADDIE model consists of five stages, namely Analyze, Design, Development, Implementation and Evaluation (Rachma et al., 2023). In this development research, it is limited to the stage of Development. The steps of the media development procedure Booklet Medicinal plant biodiversity as follows:

- Analysis Stage

This stage of analysis is the stage of finding information in the field or the location to be researched, which can be used as a reason for the need to develop a media. The analysis carried out by the researcher includes needs analysis, student characteristics analysis and work plan analysis.

- Design Stage

At this stage, the researcher makes a design or design of a learning media product that will be developed from the results of the analysis in the previous stage. The product developed is a learning media for the Medicinal Plant Diversity Booklet.

- Development Stage

This stage is improved through validation tests on the products that have been prepared. The validation test was carried out by the validation of material experts and the validation of media experts. The purpose of validation is to make the resulting product better and suitable for use by students.

The types of data in this development research are descriptive (qualitative) and numerical (quantitative). Descriptive (qualitative) data in the form of a description of the results of responses and suggestions to material experts, media experts on booklet learning media. Meanwhile, numerical (quantitative) data is in the form of data resulting from validation by material experts and validation by

media experts. The data analysis technique used to calculate the value given by expert validation using the likert scale was then analyzed using validity test criteria.

The percentage calculation technique is adapted by Akbar (2017:82) with the following formula:

$$V - ah = \frac{Tse}{Tsh}\ x\ 100\ \%$$

Information:
V-ah : Expert validation
Tse : Total empirical score obtained from expert assessment
Tsh : Total expected score
Akbar (2017:81)

Table 1 Validity Test Criteria

Validity Criteria	Validity Level
≥86%-100%	Very valid
≥71%-85%	Valid
≥56%-70%	Quite Valid
≥41%-55%	Invalid
≥25%-40%	Invalid

Akbar (2017:81)

RESULT AND DISCUSSION

1. Material Expert Validation Results

The results of the booklet media feasibility test based on the material expert validation questionnaire conducted by the material expert were obtained results that can be seen in table 2.

Table 2 Data on Material Expert Validation Results

Yes	Assessment Items	Score			Information
		Tse	Tsh	%	
Content Aspect					
1	Ease of material to understand	5	5	100	Highly Valid
2	The truth of the material concept is reviewed from a scientific perspective	5	5	100	Highly Valid
3	Completeness of material in the media	5	5	100	Highly Valid
4	Harmony of content with material concept	4	5	80	Valid
5	Clarity of material in the media	4	5	80	Valid
6	The relationship of the material to the conditions in the surrounding environment	5	5	100	Highly Valid
7	The content of the material shows variations in cognitive levels, namely aspects of knowledge, understanding, and application	5	5	100	Highly Valid
		33	35	94,5%	
Language Aspects					
8	Word selection in the description of the material	4	5	80	Valid

9	Language suitability with the use of the language of the students	5	5	100	Highly Valid
10	Use of words that do not contain double meanings and misinterpretations	4	5	80	Valid
11	Clear readability of the material	5	5	100	Highly Valid
		18	20	90%	
Learning Aspects					
12	Media in accordance with the intellect of students	4	5	80	Valid
13	Media according to the emotions of students	4	5	80	Valid
14	Easy-to-understand messages or information	5	5	100	Highly Valid
15	Effectiveness of visual message/information delivery	5	5	100	Highly Valid
16	Media is in line with the real life of the students	4	5	80	Valid
		22	25	88%	
Sum		73	80		
Eligibility Percentage				91,25%	

Based on table 2, the total score obtained from the subject matter experts is 73. The maximum score of the overall answer is 80. The percentage score of validation results from the overall subject matter expert reached 91.25% with the criterion of "very valid". Criticism and suggestions from media materials expert's booklet on medicinal plant diversity include:

- The university's identity writing is less proportional (less down) and uses the names of supervisors and validation lecturers, material and media experts.
- Correction of the double sentence in the title section of Psidium guajava L. and in the caption section of the written image Anredera cordifolia.
- Selection of effective sentence formulation (at the end of the conjunction does not begin the sentence).

2. Media Expert Validation Results

Table 3 Media Expert Validation Data

Yes	Assessment Items	Score			Information
		Tse	Tsh	%	
Size Aspect					
1	Size fit with booklet contents	5	5	100	Highly Valid
		5	5	100%	
Design Aspects (Cover)					
2	The appearance of layout elements on the cover has rhythm and unity and consistency	5	5	100	Highly Valid
3	Displays a good center point	4	5	80	Valid
4	The composition and size of layout elements (titles, authors, illustrations, logos, etc.) are proportional, balanced, and in sync with the layout of the content (according to the pattern).	4	5	80	Valid
5	Harmonious layout element colors and clarify functions	5	5	80	Highly Valid

6	The font size of the booklet title is more dominant and proportional compared to the booklet size and the author's name	4	5	80	Valid
7	The color of the booklet title contrasts with the background color	4	5	80	Valid
8	The illustration of the model cover illustrates the content/teaching material and reveals the character of the object	5	5	100	Highly Valid
		31	35	88%	
Design Aspects (Contents)					
9	Consistent placement of layout elements based on patterns	5	5	100	Highly Valid
10	Consistent placement of layout elements based on patterns	4	5	80	Valid
11	Spacing between text and illustrations as appropriate	5	5	100	Highly Valid
12	The placement of chapter titles, sub-chapter titles, and page numbers does not interfere with comprehension	5	5	100	Highly Valid
13	The placement of illustrations and captions does not interfere with understanding	5	5	100	Highly Valid
14	Use of font variations (bold, italic, all capital, small capital)	4	5	80	Valid
15	Content illustrations are able to reveal the meaning/meaning of the object	5	5	100	Highly Valid
16	Creative and dynamic content illustration	5	5	100	Highly Valid
		31	35	88%	
Sum		74	80		
Eligibility Percentage				92,5%	

Based on table 2, the total score obtained from the subject matter experts is 74. The maximum score of the overall answer is 80. The percentage score of validation results from the overall subject matter expert reached 92.5% with the criterion of "very valid". Criticism and suggestions from media materials expert's booklet on medicinal plant diversity include:

- Print booklets in A5 size
- The inscription "Medicinal Plants of Dusun Peluk" is less visible in color
- Numbering for the steps
- Separation between sentences on the occasion of the use of medicinal plants lacks space

Discussion

The data obtained by the validation of the material expert, namely Mr. Moch. Faizul Huda, S.Si., M.Si is data taken from filling out questionnaires for subject matter experts. The questionnaire from the validation of the subject matter expert consists of 16 questions with a closed question type by including criticism and suggestions columns. The score obtained from the material validator is processed with the formula: The total empirical score obtained from the expert assessment (Tse) is divided by the total expected score (Tsh) then multiplied by 100%. In the content aspect, it received a score of 94.2%, in the language aspect, it received a score of 90%, and in the learning aspect, it received a score of 88%. So, the

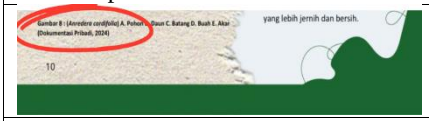
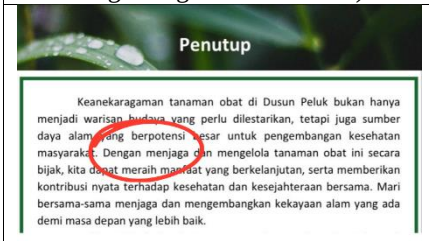
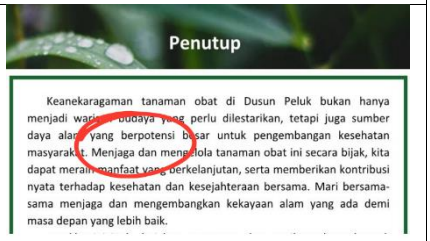
result obtained from all aspects is 91.25% with the criterion of "very valid". It can be known that the learning media Booklet Very valid to be used as teaching materials (Panjaitan et al., 2021).

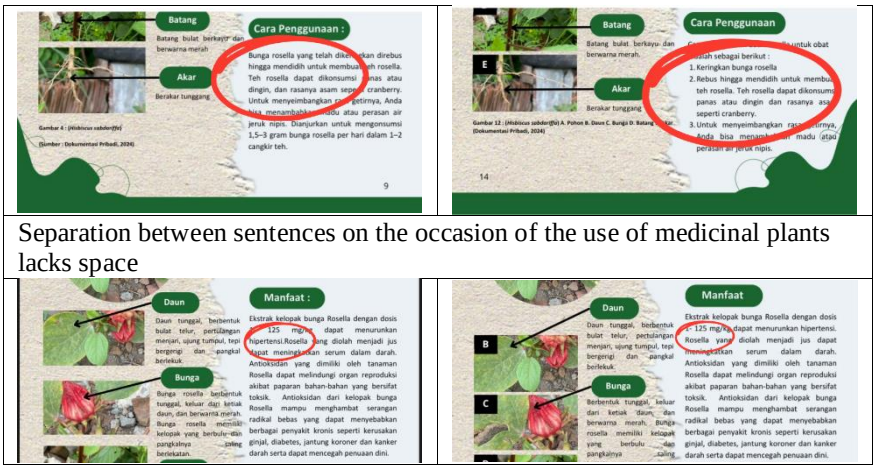
The percentage score on each question item was not the same, namely 9 questions (numbers 1,2,3,6,7,9,11,14,15) got a percentage score of 100% with the assessment criteria "very valid" and the other 7 questions (numbers 4,5,8,10,12,13,16) got a percentage score of 80% with the assessment criteria "valid". On the development of media learning media Booklet Biodiversity material that the importance of local potential in teaching materials adds to students' insights, so as to make students more understanding, able to learn independently, actively and have a high interest in learning (Setyaningsih et al., 2019).

The data obtained by the validation of the material expert, Mrs. Fitri Umardiyah, M.Pd is data taken from filling out a questionnaire for material experts. The questionnaire from the validation of subject matter experts consists of 16 questions with a closed question type with criticism and suggestions columns. The score obtained from the material validator is processed with the formula: The total empirical score obtained from the expert assessment (Tse) is divided by the total expected score (Tsh) then multiplied by 100%. In the aspect of size gets a score of 100%, in the aspect of design (Cover) got a score of 88% and in the design aspect (content) got a score of 95%. So, the results obtained from all aspects are 92.5% with the criterion of "very valid". It can be known that Booklet Very valid to be used as a learning medium (Photo & Isnawati, 2023).

The percentage score on each question item was not the same, namely 10 questions (numbers 1,2,5,8,9,11,12,13,15,16) got a percentage score of 100% with the assessment criteria of "very valid" and the other 6 questions (numbers 3,4,6,7,10,14) got a percentage score of 80% with the assessment criteria of "valid". Learning media Booklet It is good to have a matching font size for each word, so that the appearance will look neat and not be an obstacle to the readability level (Apriyeni et al., 2021). The revision was carried out by the material expert Mr. Moch. Faizul Huda, S.Si., M.Si. and media expert Mrs. Fitri Umardiyah, M.Pd. The results of the product revision developed can be seen in table 4.

Table 4 Product Revision

<table>
<tr><td colspan="2">Material Expert Advice</td></tr>
<tr><td>Before Revision</td><td>Revision</td></tr>
<tr><td colspan="2">The university's identity writing is less proportional (less down) and uses the names of supervisors and validation lecturers, media and material experts</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td colspan="2">Correction of double sentences in the title section of Psidium guajava L. and in the caption section of the written image of Anredera cordifolia</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Effective selection of sentence formulation (at the end of the conjunction not at the beginning of the sentence)</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td colspan="2">Media Expert Advice</td></tr>
<tr><td colspan="2">The inscription "Medicinal Plants of Dusun Peluk" is less visible in color</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td colspan="2">Addition of numbering for steps</td></tr>
</table>



Separation between sentences on the occasion of the use of medicinal plants lacks space

CONCLUSIONS

Based on the results of the development of learning media for the diversity of medicinal plants booklet for class X of the Superior Islamic senior High School K.H. Abd. Wahab Hasbulloh Tambakberas can be concluded that the products that have been developed have been assessed by several validators, namely the validation of material experts and the validation of media experts. The value for the medicinal plant diversity booklet media from the validation of subject matter experts is 91.25% with a very valid category to use. The value for the medicinal plant diversity booklet media from the validation of media experts is 92.5% with a very valid category to use. Based on the results of the development of learning media for the diversity of medicinal plants booklet for class X of the Superior Islamic Senior High School K.H. Abd. Wahab Hasbulloh Tambakberas can be concluded that the products that have been developed have been assessed by several validators, namely the validation of material experts and the validation of media experts. The value for the medicinal plant diversity booklet media from the validation of subject matter experts is 91.25% with a very valid category to use. The value for the medicinal plant diversity booklet media from the validation of media experts is 92.5% with a very valid category to use.

Based on the results of this development research, it is recommended as follows:

- For users, the booklet learning media on the diversity of medicinal plants can be used as a learning medium in the learning process in the classroom.
- For further research, it is hoped that the booklet learning media will conduct development research for other materials.

REFERENCES

Akbar, S. (2017). *Learning Tools Instruments*. Bandung: PT Remaja Rosdakarya.

Apriyeni, O., Syamsurizal, S., Alberida, H., & Rahmi, Y. L. (2021). Validitas Booklet pada Materi Bakteri untuk Peserta Didik Kelas X SMA. *Jurnal Edutech Undiksha*, *9*(1), 8–13. https://doi.org/10.23887/jeu.v9i1.33805

Ardhyantama, V. (2022). Pengembangan Media Booklet untuk Meningkatkan Hasil Belajar Matematika Segi Banyak Retno Andhita Ananda[1], Vit Ardhyantama[2] dan Sugiyono[3]. *Jurnal Ilmiah Kependidikan*, *9*(3), 254–264. https://doi.org/10.30998/xxxxx

Azizah, N. N., Niam, F., & Prastowo, A. Y. (2022). Pengembangan Media Pembelajaran Booklet Materi Benda di sekitar Kelas 3 untuk Meningkatkan Keaktifan dan Hasil Belajar Siswa SDN Wonorejo 02 Kabupaten Blitar. *Patria Eduacational Journal (PEJ)*, *2*(1), 60–69. https://doi.org/10.28926/pej.v2i1.96

Cahyani Hidayah, N., Fajriyah, K., & Kartinah. (2023). Analisis Minat Belajar Siswa Melalui Media Gambar Siswa Kelas 2 Sdn Sawah Besar 01. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 3966–3976. https://doi.org/10.36989/didaktik.v9i2.1239

Hafinda, T., & Armanisah. (2021). Keterampilan Guru Mengelola Kelas: Upaya Untuk Meningkatkan Prestasi Belajar Siswa. *Al-Ihtirafiah: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah*, *1*(2), 167–182. https://doi.org/10.47498/ihtirafiah.v1i02.699

Hasan, M., Milawati, Darodjat, Khairani, H., & Tahrim, T. (2021). Media Pembelajaran. In *Tahta Media*

Group.

Hidayat, R., & Sholihah, F. N. (2021). The Correlation Between Processing Skills and Learning Outcomes Based on Implementation Discovery Learning. *Multidiscipline International Conference*, *1*(1), 11–16. https://ejournal.unwaha.ac.id/index.php/ICMT/article/view/2188

Husna, K., & Supriyadi, S. (2023). Peranan Manajeman Media Pembelajaran Untuk Meningkatkan Motivasi Belajar Siswa. *AL-MIKRAJ Jurnal Studi Islam Dan Humaniora (E-ISSN 2745-4584)*, *4*(1), 981–990. https://doi.org/10.37680/almikraj.v4i1.4273

Khotimah, K., Ami, M. S., & Sholihah, F. N. (2023). Botanical Concepts Understanding of Biology Education Students. *APPLICATION: Applied Science in Learning Research*, *2*(3), 132–135. https://doi.org/10.32764/application.v2i3.3596

Nurrita, T. (2018). *Pengembangan Media Pembelajaran Untuk Meningkatkan Hasil Belajar SiswA* (Vol. 03).

Panjaitan*, R. G. P., Titin, T., & Wahyuni, E. S. (2021). Kelayakan Booklet Inventarisasi Tumbuhan Berkhasiat Obat sebagai Media Pembelajaran. *Jurnal Pendidikan Sains Indonesia*, *9*(1), 11–21. https://doi.org/10.24815/jpsi.v9i1.17966

Rachma, A., Tuti Iriani, & Handoyo, S. S. (2023). Penerapan Model ADDIE Dalam Pengembangan Media Pembelajaran Berbasis Video Simulasi Mengajar Keterampilan Memberikan Reinforcement. *Jurnal Pendidikan West Science*, *1*(08), 506–516. https://doi.org/10.58812/jpdws.v1i08.554

Sary, A. L., & Isnawati. (2023). Pengembangan Media Pembelajaran Booklet Berbasis Edible Mushroom pada Materi Fungi untuk Meningkatkan Minar Berwirausaha Siswa Biologi Kelas X SMA. *BioEdu*, *12*(1), 218–228.

Setyaningsih, E., Sunandar, A., & Setiadi, A. E. (2019). Pengembangan Media Booklet Berbasis Potensi Lokal Kalimantan Barat Pada Materi Keanekaragaman Hayati Pada Siswa Kelas X di SMA Muhammadiyah 1 Pontianak. *Pedagogi Hayati*, *3*(1), 44–52. https://doi.org/10.31629/ph.v3i1.1068

Suryana, S. (2020). Permasalahan Mutu Pendidikan Dalam Perspektif Pembangunan Pendidikan. *Edukasi*, *14*(1). https://doi.org/10.15294/edukasi.v14i1.971

Susanti, S., Aminah, F., Assa'idah, I. M., Aulia, M. W., & Angelika, T. (2024). *PEDAGOGIK*. *2*(2), 86–93.