



Analysis of the Feasibility of Non-Text Reference Books as Popular Reading Material on the Benefits of Banana Gedeбок

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Abstract

Background: The development of research results as a reading source is rarely used among the wider community, so documentation of information from research results is still very minimal. Therefore, it is necessary to develop products based on research results in the form of popular reading materials that are non-text, interesting, and practical, which can also be used as references to increase knowledge and information in the health sector. **Methods:** Design for developing a non-text reference book using the four-D model with four stages, namely define, design, develop, and disseminate. 2 expert validators first validate the feasibility of the product being developed before being disseminated. Products declared suitable for use as reading sources by validators are then disseminated to users who have met the criteria as respondents. Analysis of the level of product suitability was obtained from the assessment results of 25 respondents comprising 15 students and ten members of the general public. Product feasibility level data was analyzed quantitatively and descriptively. **Results:** The results of the product feasibility analysis based on small-scale tests obtained results with aspects of content feasibility (87.54%), presentation feasibility (84.60%), and usefulness (88.40%) so that an average of 86.85% or excellent qualifications was obtained. Good and declared worthy to be used as reference material and popular reading. **Conclusions:** The product of developing a non-text reference book about the benefits of banana gedebok is considered worthy with excellent qualifications and can be recommended as popular reading material among academics and the general public. Therefore, developing reference books based on research results is essential as an effort to document information in the health sector.

Keywords: Banana Gedeбок; Eligibility; Reference Books; Sugar Levels



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Introduction

Non-text reference books are knowledge books not used as essential guides for students studying a particular field of science. Non-text books are not only used by schools but can also be read and used by the general public because these books are not bound by reader-level restrictions like school books (Widyaningrum et al., 2015). Non-text books have characteristics that make them not the central handbook for students in teaching and learning. They also do not contain questions as material for assessment, discussion, or other forms of evaluation, and the presentation of this book is also not presented according to the level level. Readers, about some or in connection with the SK/KD in the content standards, can be used by all levels of readers, both educational and community levels, as a reference or reference book (Danis, 2016).

Reference books are a source of information or learning resources. Reference books are essential in increasing the effectiveness and quality of learning, becoming a mandatory

reference used as a resource at every level of education and in general. The contents of reference books include learning materials and knowledge that have been collected and then processed, compiled, and presented to be used as a source of knowledge, increasing insight and thinking skills (Harahap, 2014).

The development of this non-text reference book contains the results of research that has been carried out regarding preparation formulations and testing the potential of banana gedebok fiber (*Musa paradisiaca*) on blood sugar levels. This is due to the lack of utilization and documentation of the benefits of gedebok banana kepok waste for the community and students so that the results of this research are published in non-text reference books as popular reading material for the wider community and students who still do not know the critical information related to the research results, already implemented. The non-text reference book that was developed is more interesting, easy to understand, and easy for people to use in everyday life. More informative in summarizing the specific ingredients of banana gedebok, which can reduce blood sugar levels.

This non-text reference reading material uses a 4-D model with four stages: define, design, development, and disseminate (Rahayu, 2018). Another aim of product development as a result of this research was to determine the feasibility of using non-text reference books about the benefits of banana gedebok. The contribution of this research is so that people have an alternative to conventional treatment before consuming chemical drugs, knowing the natural ingredients around them that contain the potential to reduce blood sugar levels.

Methods

This descriptive research aims to describe a phenomenon, variables, symptoms, and the actual situation regarding the research product being developed. The product being developed is a non-text reference book that will become a source of popular reading material about the benefits of banana gedebok, so that it can be used as a source of information among the public.

The research results were obtained based on product user assessments, which aimed to obtain public responses to the non-text reference books being developed. This research obtained data sources from product validation results by two expert validators in their fields and assessments from 25 product users consisting of students and the general public in small-scale tests.

Preparing non-text reference books uses a 4-D model consisting of 4 stages: define, design, develop, and disseminate. This 4-D development model makes translating laboratory experimental results into products (reference books) easier, starting from the stages of discovery/analysis of community needs, initial prototype, and validation to dissemination to the community.

Data analysis based on the validator results is descriptive, containing suggestions and comments. The components of the validator's assessment of the non-text reference books being developed are as follows.

Components of appropriateness of material

The component for assessing the appropriateness of the contents of reference books was developed based on an evaluation instrument for types of university-level reference books (P3AI, 2015), which was prepared and modified according to the research development objectives.

Serving components

The presentation components of all non-text reference book material are carried out sequentially, systematically, straightforwardly, and easily understood by readers.

Linguistic component

The use of illustrations (whether pictures, photos, diagrams, tables, or symbols) must be made appropriate and proportional, the use of terms and symbols must be standard and apply as a whole, using language, spelling, words, sentences, and paragraphs that must be considered accurate, and straightforward, and transparent.

Graphic design components and layout

The book design is placed where the illustrations are attractive and reflect the book's contents (Kemendikbud, 2018). The data in this reference book is quantitative data based on questionnaire score data using a Likert scale, so the data can be analyzed with descriptive percentages as follows.

$$Value = \frac{Total\ Score\ Obtained}{Maximum\ Score} \times 100\%$$

A product is declared worthy if it gets a final assessment with the criteria "very good" and "good." The evaluation of the appropriateness criteria for reference books refers to the indicators shown in Table 2.

Table 2. Validity Criteria for Validator Eligibility Assessment Questionnaire Data

Score	Qualification	Information
80 – 100	Very good	No need for revision
70 – 79	Good	No need for revision
60 – 69	Enough	It needs to be revised
50 – 59	Not enough	It needs to be revised
< 50	Very less	It needs to be revised

(Hujjatusnaini et al., 2021)

The initial stage in developing a reference book is to conduct a needs analysis stage, which identifies readers' needs regarding reading materials or references regarding the benefits of gedebog bananas among users. The results of this need analysis can be seen in the following diagram.

Result

The reference book that has been developed is continued by carrying out validation tests or feasibility tests by two expert validators. Quantitative data on validation results is obtained from questionnaire scores provided by validators.

Table 3. Summary of Validation Results by Material Expert Validators

No.	Rated Aspect	Maximum Score	Score Obtained	Qualification	Information
1.	Content Appropriateness	100	100	Very good	No need for revision
2.	Presentation	100	100	Very good	No need for revision
3.	Language	100	100	Very good	No need for revision
	Total Percentage Score		100%	Very good	No need for revision

The calculation results from the expert validator's assessment of the content of the reference book show that the average score for assessing aspects of the suitability of the content, presentation, and language is 100%. The scores from these three aspects indicate very good qualifications, so they do not need revision and are suitable for further use.

Table 4. Summary of Validation Results by Design Expert Validators

No.	Rated Aspect	Maximum Score	Score Obtained	Qualification	Keterangan
1.	Reference book Size	100	80	Very good	No need for revision
2.	Reference book Cover Design	100	97,14	Very good	No need for revision
3.	Content cover design	100	87,27	Very good	No need for revision
	Mean total percentage		88,14%	Very good	No need for revision

The calculation results from the validator assessment of reference book design experts showed that the validation score for the reference book size aspect was 80%, the reference book cover design was 97.14%, and the cover content design aspect was 87.27% with an average aspect assessment of 88.14%. The scores from these three aspects indicate very good qualifications, so revision is unnecessary.

Table 5. Summary of Material Feasibility Test Results by Respondents

No	Rated Aspect	Maximum Score	Score Obtained		
			Respondent I	Respondent II	Respondent III
1	Content Appropriateness	100	80	85	80
2	Presentation	100	68	80	80
3	Language	100	80	80	80
	Total Percentage Score		228	245	240
	Mean		76	81,7	80
	Mean Total			79,2	

The respondents' results of the material feasibility test were obtained from three lecturers from the implementation stage. The average percentage value obtained from the first respondent was 76%, the second respondent was 81.7%, and the third respondent gave an assessment of 80% for the feasibility test of the material. The results of these three aspects show good qualifications, so there is no need for revision.

Table 6. Summary of Design Feasibility Test Results by Respondents

No	Rated Aspect	Maximum Score	Score Obtained		
			Respondent I	Respondent II	Respondent III
1	Reference book Size	100	80	100	80
2	Reference book Cover Design	100	77,1	80	80
3	Content cover design	100	81,8	90,9	87,3
	Mean total percentage		238,9	270,9	247,3
	Mean		79,6	90,3	82,4
	Mean Total			84,1	

Based on Table 6 above, the results of the design feasibility test by respondents from three teaching lecturers obtained an average percentage score from the first respondent of 79.6%. The second respondent assessed 90.3%, and the third respondent gave an average assessment of 82.4%. The results of these three aspects show that the qualifications are very good, so there is no need for revision.

Table 7. Summary of Design Feasibility Test Results by Users

No.	Rated Aspect	Maximum Score	Score Obtained	Qualification
1.	Content Appropriateness	35	87,54	Very good
2.	Presentation	15	84,6	Very good
3.	Expediency	20	88,4	Very good
	Score Total	70		
	Mean Total		86,85	Very good

The results of the design feasibility test by user respondents show that the content feasibility aspect received a score of 87.54. The presentation feasibility aspect received a

score of 84.6, and the reference book usefulness aspect received a score of 88.4. The scores from these three aspects show that the qualifications are very good and suitable for use.

Discussion

The non-text reference book was created with a validation test by expert validators in their fields, namely two lecturers who are material experts and design experts. This reference book product is a non-text reference book with a popular book type that is precise for students and the community to increase their knowledge regarding the benefits of banana stems. The preparation of this non-text reference book uses a four-D model. There are four stages in the development of this device: define, design, development, and disseminate (Rahayu, 2018).

The first stage, define (definition), is carried out to develop a reference book on the benefits of banana stems and determine what user needs are needed. Based on the statement put forward by Sofiyana et al. (2016), there is a priority in managing interesting material content in the reference book. The objectives and materials developed will be analyzed by analyzing general user needs. Based on the results of the user analysis obtained it show that references related to the efficacy of banana stems are still very minimal and even challenging to find, so it is necessary to carry out development to develop the material namely that users want to know the methods used in utilizing banana stem and about how to process banana stem fiber for metabolic syndrome disease which is also expected to be used as a source of reference for readers. In addition, writing reference books using spelling and punctuation by the PUEBI Indonesian spelling guidelines has an essential role for readers because readers also need to learn spelling correctly according to linguistic rules to make it easier for readers and users to understand each content of the material in the reference book (Ngazizah et al., 2018).

The second stage is design, where at this stage, the first aspect that needs to be considered is the design of the parts of the reference book, both in terms of format selection and even the media used for the production of the initial version. This stage consists of the design and product design stages (Sugianto et al., 2017). The selection of a suitable presentation format to be included in the book is done by reviewing several results from user needs and based on library sources close to it. Based on this, the presentation format was chosen with the form of a reference book size of B5, which has been adjusted to the standard provisions of Ristek DIKTI for reference books, which contain more than 100 pages with the appearance of images presented in the form of colored illustrations according to the material from the research results. It is offered in standard and relaxed language so that it is easy to understand for all levels of society (Juwita et al., 2017). The validation design is loaded in the form of a questionnaire containing scores for each assessment component. These components include the material feasibility component (content), presentation component, and language component. The questionnaire is intended for expert validators to assess the feasibility of this non-text reference book.

The third stage, namely development, includes product design activities that are adjusted to the objectives of achieving solutions to problems that arise while analyzing the needs of reference books (Aprianto et al., 2021). Carrying out modifications and several stages of revision and reconstruction on the book by compiling all the contents, images, and designs needed to become a coherent whole in the form of a non-text reference book is done repeatedly. After that, it was continued with book validation by two expert validators, namely a biology education lecturer in the field of education/materials and a lecturer in the design field. The validation results improve the product so that the resulting book meets the eligibility standards (Fahrudin, 2019).

The fourth stage is dissemination. Small-scale or limited trials are carried out at this stage after the resulting product is declared feasible by the validator team (Andina, 2011). A small-scale trial was conducted to evaluate the feasibility of using a reference book on the efficacy of banana stems as an additional reference source (Oktavianie et al., 2018). The feasibility test was carried out on general users, including the community and students,

with an assessment of several aspects of the feasibility of the content, the feasibility of the presentation, and the benefits of the reference book. The results of the small-scale trial showed that the aspect of the feasibility of the content obtained a percentage of 87.54%, the feasibility of the presentation received a rate of 84.6%, and the aspect of benefits obtained a percentage of 88.4%. Continued with the implementation stage of a small-scale product trial or limited trial from 3 lecturers who teach in the Biology Education Study Program, IAIN Palangka Raya, where based on the feasibility results of the content (material), the overall average value was 79.2%.

Based on the design feasibility assessment results, the overall average value of 84.1 is interpreted as the reference book design being categorized as "Very Good" and not needing revision. Based on the results of the book validation test conducted by two expert validators in their fields and a small-scale test on users, the non-text reference book product entitled 'Khasiat gedebok pisang' can be interpreted as suitable for use as a reference book and popular reading material.

Conclusions

Development research based on research results produced a non-text reference book about the benefits of banana gedebok, according to the results of validation by material experts, design experts, and feasibility tests by users, which was developed based on an analysis of the feasibility of the reference book for users, which is suitable for distribution and use as reference material and popular reading.

Declaration statement

The authors reported no potential conflict of interest.

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