

The Development of Popular Book of Elegant Style Gala Bun

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Abstract. This research will develop a popular science book about elegant style Gala Bun arrangement, Gala Bun is a bun that is used for large parties, gala parties, large in shape, tall using luxurious jewelry and attractive colors, to form a beautiful, flexible bun. neat, elegant or we are familiar with the term elegant. The purpose of this research is to 1) produce a popular science book about the elegant style of Gala Bun. 2) to test the validity and practicality of popular scientific books. This research refers to the 4-D development model. In the material validation test, it was stated that the overall learning media obtained the criteria of "very valid" with a percentage value of 83.7%, Furthermore, in the media validation test the feasibility level of learning media was in the "very valid" interval with a percentage value of 88.3%, and the results practicality trials to students get a percentage of 89.9% which is in the "very practical" interval. Based on the data above, it can be concluded that the popular Scientific Book of Elegant Style Gala Bun is very valid and very practical and can be used in learning Modern and Modified Buns in the Diploma Three Cosmetology Study Program, Faculty of Engineering, State University of Jakarta.

Keywords: Product development, Popular scientific books, elegant Gala bun style

1 Introduction

The way one learns to get extensive information is in accordance with the development of science and technology in the industrial era 4.0 and will enter the 5.0 industrial era which was inaugurated 2 years ago, namely January 21 2019, the country of Japan has entered the 5.0 industrial era, following other developing countries such as Indonesia, where the concept of society 5.0 is a refinement of existing concepts and does not have much difference with industry 4.0. Technology developments have a major impact on changing the way a person learns and obtains information. Technology is a means to improve the quality of students, one of which can be seen from their learning outcomes. In addition, technology can support the learning process through various media that play a role in the learning process that is passed. In addition, technology provides various opportunities for teachers to apply various methods and learning strategies to support the learning process in this industrial 4.0 era.

Education should not only use conventional learning strategies which are always centered on teachers or lecturers who act as facilitators who only transfer knowledge to students through classroom learning. Educators, lecturers only deliver material according to the previously made learning design, monotonous, for example using the question and answer lecture method, so that it does not provide opportunities for students to develop themselves and explore their potential to be able to learn independently. This situation causes students to become inactive, eventually bored because their interest in learning decreases and results in them not learning if there are no teachers or lecturers because of their dependence on

educators.

The learning process in the classroom becomes more interesting if there is an integrated continuity between the selection of learning methods or strategies and the media used. Educators become learning media packaged into teaching materials in order to create an interesting impression and attract interest in students so that the material presented will continue to be understood and not just disappear along with the arrival of new material that will be given next. In addition, the learning process, especially one that sharpens students' psychomotor skills, demonstrates a skill that is not only once remembered by students, so that the material becomes difficult to remember and even understand by students.

One way to be able to overcome the problems above is to choose and apply appropriate learning strategies in the learning process according to the needs of students. The use of appropriate learning strategies is very important to note, because the learning strategies used must be able to grow attractiveness for students, with the growth of high attractiveness, generate high interest and attention so that students are expected to be able to absorb and understand the material easily. The high intensity of interest, attention and motivation is a pre-condition for optimal achievement of learning objectives. The use of appropriate learning strategies will greatly affect the achievement of learning objectives that have been set and increase student learning outcomes.

One of some the learning strategies to be used is to develop learning media in the form of popular scientific books that are interactive. According to Cahyo Pamungkas that "Popular Scientific Books are books written of a scientific nature and the language used is general so that it is easily understood by the public" [1]. This popular scientific book is taken based on experience that has been obtained from research results or textbooks used in learning related subjects. The combination is made with touches of Figures, and interesting and innovative narratives so that it can help students understand the material more easily. "Popular scientific books contain scientific information as a form of knowledge based on the results of experience and research aimed at the general public so that the concepts and systematics have many differences."

This is where the role of popular scientific books is needed to help students gain knowledge and broader insights and explore various information that is beyond imagination. Along with the rapid development of technology, learning media continues to be developed effectively to be able to go hand in hand with increasingly modern students.

Learning media is used as a tool to channel information from teachers to students and stimulate the thoughts, feelings, concerns and interests of students so that the learning process becomes more effective and efficient. By developing learning media, in the form of popular scientific books, it is hoped that students can more easily understand teaching materials and be able to implement the material or knowledge gained in everyday life so as to improve learning outcomes. The advantages of using popular scientific books in the learning process are that they can be read over and over again with contemporary popular language styles and appearances, whenever and wherever needed, they can read the book as a guide for students, so that teachers in explaining the material do not always carry out conventional learning such as demonstrations, question and answer lectures to students.

In the realm of education, both theoretical and practical learning activities can also be made into popular scientific books for learning. One of the courses in the cosmetology study program at the State University of Jakarta is the modern and modified bun, which contains theoretical and practical material. Starting from knowledge about the arrangement of buns, tools, materials and cosmetics used, to the practice of how to make trending buns. To be able to practice, it is important for students to understand the basic theory first, so that they are not

wrong in acting and minimize errors that may occur. Therefore, it is very important how students capture and absorb the material taught by the teacher during the learning process. However, there are several limitations such as facilities, time, methods or strategies and learning media used so far resulting in less than optimal student learning outcomes.

Based on the preliminary survey, data was obtained that students really needed or 30 students from 30 students (100%) said popular scientific books as learning resources in modern bun courses and modifications were needed. This is because there is no book that presents the elegant style Gala bun. Based on the background of the problems above, the researchers are interested in developing a popular scientific textbook Gala elegant style bun to improve student learning outcomes.

2 Research Method

2.1 State of the art

Learning media in the form of popular science books are used as tools to channel information from teachers to students and stimulate the thoughts, feelings, concerns and interests of students so that the learning process becomes more effective and efficient. Making popular scientific books is generally used for learning. Learning needs to be supported by relevant learning resources, learning resources using popular scientific books. This is in accordance with research conducted by Irwandi, where popular scientific books developed are interesting, effective and efficient for use in learning. The development method used is Plomp and Nieveen [2]. Research that also examines popular scientific books was also carried out by Eka Putri Setiana et al with the theme "Development of Popular Scientific Books on Mangroves Diversity in Pasir Sakti as a source of learning on biodiversity material". Used so that students get reading references so that they enrich their insights [3]. This research also has similarities with previous research, namely developing a popular scientific book researched by Devy et al about "The development of the popular scientific books on butterflies in the mangroves of the Bakau River on student's critical thinking skills". BIP) developed is very valid with a value of 96.3% and is declared very practical with 94.7%, also popular scientific books are declared effective have a value of 88.30 [4]. For teaching materials for the gala bun, there is also research on the gala bun by Kswidyaningrum N.J with the research title "Development of E-Module Arrangement of Gala Buns at Vocational High Schools Beauty Program Expertise", affective and psychomotor skills program students beauty tattoo. Where the results of the validity level is 81.67% (valid), the feasibility level is 3.56% (feasible), and the reliability level is 0.364 (reliable).

Based on the results of previous research, there is no popular scientific book that discusses the Elegant Style gala bun, and no one discusses the gala bun that has researched and made a Popular Scientific Book. The development of this popular book is very rapid and is in great demand by students to add scientific insight, especially the development of popular scientific books about the gala style bun, which does not yet exist but is needed by students, while this popular scientific book is made on the basis of research and is used as a medium of learning in courses. modern bun and modification in D3 and S1 Cosmetology Education.

2.2 Method

The research method used in this research is the research and development (R&D) method. Research and development methods are research methods used to produce certain products, and test the effectiveness of these products. To be able to realize this, research and development carried out must go through a structured or systematic process (steps) so that

new products or improvements to existing products can be accounted for for their results and level of effectiveness.

This study uses the 4-D development model (Four-D model) developed by Thiagarajan, Semmel and Semmel in 1974. The 4-D development model according to trianto consists of four stages including the "define" stage, the design stage, the stage of development (develop) and the stage of dissemination (disseminate)", the stages are as follows [5]:

- 1) *Define Step* (Defining). *Define* (Defining) done out to analyze development needs, as well as define product development requirements that are in accordance with user needs or needs analysis
- 2) *Design Step* (Designing). The initial product design or product design that will be developed at this stage, composes a popular scientific book that has been adapted from the RPP analysis. The product design needs to be validated by a material expert in the same field of expertise before the product design proceeds to the next stage.
- 3) *Develop Step* (Developing). The technical development stage carried out by the Validator will provide material input and product designs that have been prepared and continue with activities carried out for product design trials to the actual target subject. In thistrial, it is necessary to look for response data and comments from users on the product design. After that the product is repaired and then retested to obtain effective results.
- 4) *Disseminate Step* (Disseminating). This stage is divided into 3 stages, including: validation testing, packaging, diffusion, and adoption. In the validation testing stage

3 Result and Discussion

The learning media developed by the researcher is the Popular Scientific Book of Sanggul Gala Elegant Style. This research was conducted at the State University of Jakarta through the stages of development with a 4-D development model (Define, Design, Develop, Dissemination). The following is a chart of the 4-D development procedure:

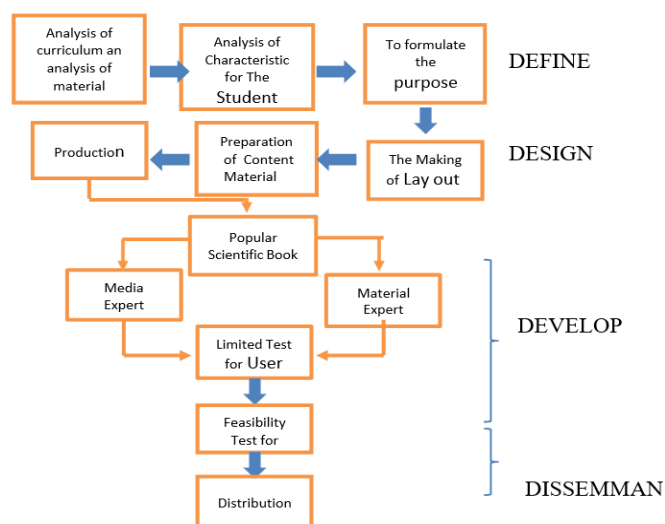


Figure 1. Product Design Stages

1) Define (Defining)

a. Analysis of curriculum and analysis of material

Curriculum analysis is carried out by examining the curriculum used in the UNJ Cosmetology Diploma Three Study Program because the curriculum contains the competencies and skills that must be achieved by students listed in the Semester Learning Plan (RPS). This is done so that the products produced in the research and development of the popular scientific book Sanggul Gala Elegant Style do not deviate from the learning objectives. The results of the curriculum analysis can be seen in Table 1.

Table 1. Modern and modified RPS bun

Course Learning Outcomes (CPMK)	Learning Outcomes (sub-CPMK)	Indicators of Competence Achievement
Create a Gala partybun arrangement <ul style="list-style-type: none">elegant style	Explain the meaning of Elegant Style Gala bun arrangement Gala elegant style bun arrangement pattern	<ul style="list-style-type: none">Definition of elegant style gala bunFront styleCrown stylBack style

b. Analysis characteristics of students

This analysis stage is about the characteristics of students through direct observation. Students who do not understand what is being conveyed because the demonstration is only held once in a semester, so students who are less responsive will have difficulty understanding and remembering what has been demonstrated. Previously there was a book that discussed learning to arrange buns, only the discussion in the book did not lead to the material of the gala bunso that it was quite difficult for students to review the material that had been presented at the demonstration. The making of the Sanggul Gala Book is expected to be able to meet the needs of students both in terms of learning media in the form of Popular Scientific books.

2) Design (Designing)

Designing Step (*design*) is a step taken after the definition stage is completed. The design stages in this research are divided into three stages, namely:

a. To make *cover* dan *layout* modul

The process of making vector image designs is made using Adobe Draw software (software for drawing and designing) and for making cover designs using Adobe Photoshop software (software for editing and creating effects). The font used forthe cover is Arial Unicode MS, Aharoni, High Performance

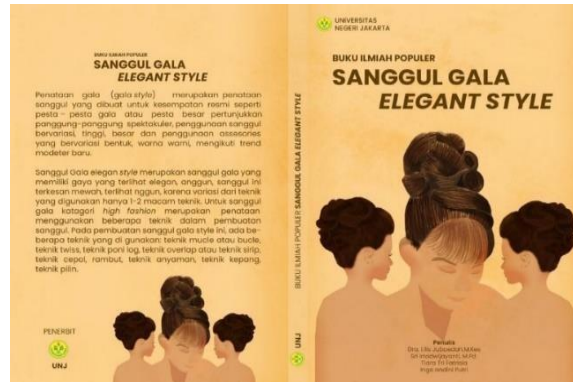


Figure 2. BIP results after printing

- b. To prepare the material
The researcher made a writing draft containing descriptions of the material and Figures of the Gala bun arranged in order of the outline of the book content and the description of the book material, taking Figures and editing.
- c. To produce the book
Packaging the product in printed, this printed book which will later be reviewed and validated by media experts and material experts before the book is distributed

3) To develop

In the research on the development of the popular scientific book, the elegant style bun, a feasibility test was carried out to find out whether this popular scientific book was worthy or not to be used as a reference for learning books. The researcher uses an assessment sheet instrument in the form of closed questions, where the data or results obtained from the assessment sheet instrument are quantitative data in the form of scoring, which will be processed with a rating scale.

a. Material Expert Test Results

Based on the results of data collection obtained the formula. The results of the validation data from the media expert and material expert validation instrument will use the calculation formula below.

The calculation formula is:

$$P = \frac{\text{Total score is gotten}}{\text{Maximum Total Score}} \times 100\%$$

Description:

P : Practical Percentage

Score of Data Collecting = Respondent Appraisal of Total Score

Ideally Score = The highest score for each item x number of respondents x number of items

Based on the results of data collection which is obtained, the percentage of BIP learning has increased with the percentage before being revised = 78.7% and after being revised = 88.3%. Entered into a score interval of 81 - 100% with the interpretation of "Very Eligible". It can be concluded that the popular scientific book Gala Elegant style is worthy

of being used as an alternative learning resource. The results of material expert validation can clearly be seen in the following graph:

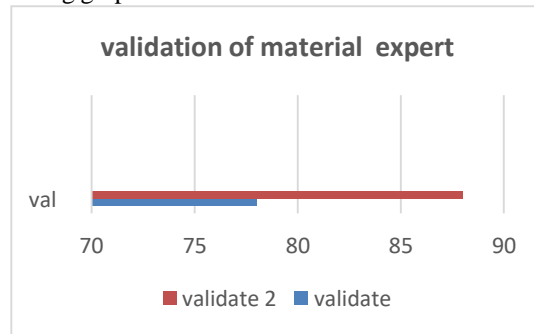


Figure 3. Graph of Material Expert Test Results

b. Media Expert test results The calculation formula is:

$$P = \frac{\text{total score obtained}}{\text{Maximum score}} \times 100\%$$

$$P = \frac{293}{350} \times 100\%$$

$$P = 83.7\%$$

Based on the results of data collection obtained, the percentage of learning modules has increased with the percentage before being revised is 78.3% and after being revised is 83.7%. According to Table 3.6 Interpretation of the feasibility assessment of popular scientific books, the score is 83.7%. The interpretation is "very feasible" because it is in the 81-100% score interval. It can be concluded that the popular scientific book elegant style bun gala is very feasible to be used as an alternative. learning resources on modern and modified bun courses. The results of the validity of media experts can clearly be seen in the following graph.

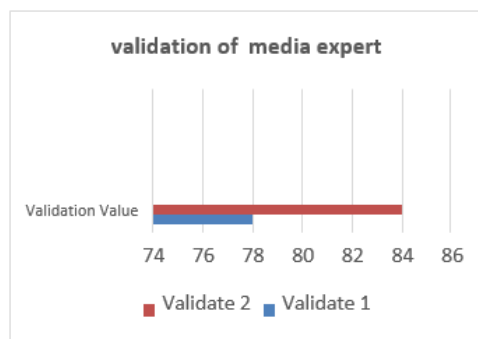


Figure 4. Graphic of Media Expert Test Result

1) Popular Scientific Book Practicality
The Limited Trial

The limited trial was conducted on a small group of 5 students of Makeup Education, State University of Jakarta. The assessment is done by showing the books that have been printed and in the form of pdfs to students, then they fill out a questionnaire with a scale of 1 – 5 and provide suggestions and input. Suggestions and input from students can be used by researchers to improve the popular scientific book Sanggul Gala Elegant Style so that it becomes better. The following are the results of the limited trial assessment recapitulation.

Table 2. Results of the Limited Trial Assessment Recapitulation

Appraisal Aspect	R1	R2	R3	R4	R5
Content Feasibility Aspect	17	17	19	18	16
Language Feasibility Aspect	13	10	13	13	12
Presentation Feasibility Aspect	18	20	23	21	20
Graphical Aspect	21	19	25	25	40
Total	67	66	80	87	68
Total of Score					350
Practical Presentation Value					82,4 %

(Source: Processed Research Data)

The results of the limited trial assessment conducted on 5 students of Make-up Education at the Jakarta State University showed the percentage obtained was 82.41%. The results of the assessments obtained indicate that the development of popular scientific books on the basic elegant style bun is very practical to use as a medium of learning in modern and modified bun courses at the State University of Jakarta. BIP produces a final product that is feasible and practical to use to review the impact of learning in a critical way, as well as measure the achievement of product development goals, measure what the target has been able to achieve, and look for any information that makes students achieve good results [6].

2) Field Trial

Practicality test on users, namely students of Diploma 3 cosmetology class 2000, Jakarta State University as many as about 31 students. The feasibility test stage is the last assessment stage before the product is disseminated to wider users (general) in the feasibility test stage, students are given an explanation of the module learning that is being developed before they use the module. The assessment is carried out by paying attention to the module to students and then they fill out a questionnaire with a scale of 1-5 and provide suggestions and input.

Table. 3 Result of Field Trial Assessment Recapitulation

Appraisal Aspect	Total
Appraisal Aspect	706
Language Aspect	536
Presentation Aspect	894
Graphical Aspect	922

Total Score	3058
Practical Presentation Value	89,9 %

To get the total score obtained, it is done by adding up all the total scores obtained from the seventeen questions so that the total score is as follows:

$$\sum score = (\text{Total score 1} + \text{Total score 2} + \dots + \text{total score 13})$$

$$\sum score = 3.058$$

Furthermore, to get the maximum score, we will transfer the maximum value of the question, which is worth 5 with the number of students, which is 40 and multiply it by the number of questions provided, which is 17 questions. So that the maximum score can be obtained as follows:

$$\sum \text{Maximum Score} = (\text{Maximum Value} \times \text{Total Students}) \times \text{Total Test}$$

$$\sum \text{Maximum Score} = (5 \times 40) \times 17 \text{ item of test}$$

$$\sum \text{Maximum Score} = 3400.$$

To draw data conclusions from the results of data analysis to determine the practicality of the learning media that has been developed, the scores can be interpreted according to the following table:

Table 4. Interpretation of score

Score	Category
81% - 100%	Very Practical
61% - 80%	Practical
41% - 60%	Practical Enough
21% - 40%	Impractical
0% - 20%	Very Impractical

Based on the score interpretation table above, in the practicality test of learning media that gets a score of 89.9%, it is in the "very practical" interval. Thus, this popular scientific book learning media is very practical to be used as an alternative source of learning material for gala buns in modern and modified bun courses. This is the same thing according to Eka et al that "with these learning resources, it is feasible and practical to use so that students get additional reading references so that they enrich their insights" [3]. As for some comments and suggestions from users, namely:

- Overall in terms of design is quite attractive, simple but makes the reader so excited to read it. Interesting book.
- The material provided is quite good
- The book is equipped with clear and attractive Figures and illustrations to facilitate the learning process
- Books are very helpful because materials on the gala bun are hard to find.

Dissemination

Dissemination is done by making a book in pdf format packaged in CD/DVD pieced and printed form which will later be given to lecturers in charge of modern Bun and modification courses, UNJ.

4 Conclusion

Research and development of the popular scientific book Sanggul Gala Elegant Style is a source of learning that no one has written this book, this BIP is interesting and needed to be used in the Bachelor of Makeup Education and D3 Cosmetology Study Program, in the Modern and Modified Bun Arrangement Course [7]. This study uses a 4-D model. The results of the developed assessment are declared popular Scientific Books Sanggul Gala Elegant Style with the following criteria:

- 1) The BIP that has been developed is declared valid from the opinion of material experts including the suitability of the material with CPMK, Material Accuracy, Material Update, encouraging curiosity, obedience to laws and regulations - invitation, conformity with the development of students, readability, ability to motivate, straightforwardness, coherence of thought flow, conformity with Indonesian discussion, use of terms and symbols. Based on the test, the popular Scientific Book Sanggul Gala Elegant Style was declared very good. While the validity with media experts was declared very valid including book cover design, book content design, presentation techniques, supporting material presentation
- 2) Popular Scientific Books Sanggul Gala Elegant Style is easy to use based on practicality tests for small and large groups declared very practical in terms of content, language, presentation and graphics. With the popular scientific book Sanggul Gala Elegant Style as a learning resource, it is feasible and practical to use so that students get additional reading references so that they enrich their insights.

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