



Development of Learning Modules in Project-Based Bun Arrangement Courses

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ABSTRACT

This research is research development (Research & Development) which aims (1) to find out how the procedure for developing modules in the project-based Bun Management course. (2) to determine the feasibility of the module in the project-based Bun Management course. (3) to find out student responses to the Bun Management course module. The research subjects were 26 students of the Bachelor of Family Welfare Education Concentration of Cosmetology Faculty of Engineering, Makassar State University, and the research object was a learning product in the form of a project-based bun styling module. This study uses research and development methods with a 4-D development model. The results of the assessment showed that: (1) The procedure for developing learning modules in the bun styling course went through 4 stages, namely the define stage, which was the initial stage of curriculum analysis, analysis of student characteristics, formulating learning objectives and material analysis by observing the course teaching lecturer. The design stage is carried out by designing and manufacturing modules according to the module framework. In the development stage, validation was carried out by material experts and media experts until trials were carried out on 26 students from the 2019 and 2020 classes. The last stage, namely disseminate, was not carried out due to limitations and only reached the develop stage. (2) the results of the validity of the Bun Arrangement module assessed by material experts obtained a percentage of 88.97% qualification "very good" with the equivalent of "very feasible", for the assessment of media experts obtained a percentage of 86.57% qualification "very good" with the equivalent of "very valid". (3) Based on student trials response seen from 3 aspects, an overall percentage of 85.32% obtained the qualification of "very good" with the equivalent of "very decent".

Keywords: *Project Based, Module, Bun Arrangement, 4-D Model Research and Development*

1. INTRODUCTION

Education is one of the factors that triggers successful development in efforts to increase human resources for the progress of the nation and state to realize national ideals and development [1,2]. The development of education on campus aims to improve the quality of human resources. In educational institutions, human resource management is a very important thing to implement.

Without human resource management, an organization will generally struggle in achieving its goals, as well as in educational institutions. Human resource management is the most important element in management because resources are the first element in management before other elements [3,4,5]. The role of human resource management in educational institutions certainly greatly contributes to helping improve the

quality of education, because quality education comes from the people who manage education themselves who are quality human resources as well.

Based on the results of an interview with one of the lecturers in the Bun Styling course on February 10 2022, the Bun Styling module for the Cosmetology Study Program already existed, but needed to be revised and redeveloped according to the needs of the learning process [6]. In the learning process the lecturer only presents power points and handouts which only contain a summary of the material [4,5]. This makes students still want to learn in the learning process and after, so students still need to look outside the learning process, for example at home.

Learning module students can learn even more. Therefore, the author sees that the development of learning modules in the project-based bun styling course can provide a detailed description of comprehensive

learning where there is already material in book form in which material regarding theory about bun styling, worksheets and evaluation is presented. in a way.

Based on the problems above, it is necessary to develop appropriate teaching materials appropriate and attractive so that it is effectively and efficiently used by students to increase high learning motivation in the learning process. One of the learning media that can be prepared to help the learning process run smoothly is module development.

According to Prastowo, a module is a printed teaching material that is arranged systematically in language that is easily understood by students according to their level of knowledge and age, so that they can learn on their own (independently) with minimal help or guidance from educators [10]. It cannot be denied that the definition of a module is not limited to understanding it definitively.

Project-based learning is a systematic learning method, which involves students in learning knowledge and skills through a long and structured search/inquiry process towards authentic and complex questions as well as tasks and products that are designed very carefully [8]. Based on the problems above, the author is interested in conducting research entitled "Development of Learning Modules in Project-Based Bun Arranging Courses".

Education is one of the factors that triggers successful development in efforts to increase human resources for the progress of the nation and state to realize national ideals and development [14]. The development of education on campus aims to improve the quality of human resources. In educational institutions, human resource management is a very important thing to implement [15,16]. Without human resource management, an organization will generally struggle in achieving its goals, as well as in educational institutions. Human resource management is the most important element in management because resources are the first element in management before other elements. The role of human resource management in educational institutions certainly greatly contributes to helping improve the quality of education, because quality education comes from the people who manage education themselves who are quality human resources as well. Based on the results of an interview with one of the lecturers in the Bun Styling course on February 10 2022, the Bun Styling module for the Cosmetology Study Program already existed, but needed to be revised and redeveloped according to the needs of the learning process. In the learning process the lecturer only presents power points and handouts which only contain a summary of the material. This makes students still want to learn in the learning process and after, so students still need to look outside the learning process, for example at home, with the learning module students can learn even more. Therefore, the author sees that the development of learning modules in the project-based bun styling course

can provide a detailed description of comprehensive learning where there is already material in book form in which material regarding theory about bun styling, worksheets and evaluation is presented. in a way Based on the problems above, it is necessary to develop appropriate teaching materials appropriate and attractive so that it is effectively and efficiently used by students to increase high learning motivation in the learning process. One of the learning media that can be prepared to help the learning process run smoothly is module development. According to Prastowo, a module is a printed teaching material that is arranged systematically in language that is easily understood by students according to their level of knowledge and age, so that they can learn on their own (independently) with minimal help or guidance from educators [10]. It cannot be denied that the definition of a module is not limited to understanding it definitively. Project-based learning is a systematic learning method, which involves students in learning knowledge and skills through a long and structured search/inquiry process towards authentic and complex questions as well as tasks and products that are designed very carefully [8]. Based on the problems above, the author is interested in conducting research entitled "Development of Learning Modules in Project-Based Bun Arranging Courses".

2. METHOD

2.1. Data Collection Technique

2.1.1. Observation

According to Endang Mulyatiningsih observation is the systematic observation and recording of symptoms that appear in research subjects [3].

2.1.1. Questionnaire or Questionnaire

According to Sugiyono a questionnaire is a collection technique data is carried out by giving a set of written questions to respondents to answer [5]. The type of data obtained by this questionnaire is in the form of intervals, the measurement scale uses a Likert scale with five answer choices, namely very valid, valid, quite valid, less valid, invalid.

2.2. Data Analysis Techniques

The data analysis technique used in this research is descriptive analysis technique. According to Sugiyono descriptive data analysis is statistics used to analyze data by describing or illustrating the data as it is without intending to make general conclusions and generalizations [6].

In this study, criteria were used by converting the scores on the instrument to a Likert scale. The Likert

scale used in this research was modified with 5 alternative answers, namely very valid, valid, quite valid, less valid and invalid. Furthermore, the results of measurements using a Likert scale can be calculated using percentages formula: $P = \frac{X}{X1} \times 100\%$.

a. Data Formula per Item

Information :

- P : Percentage
- X : Respondent's answer in one item
- X1 : Number of ideal scores in one item
- 100% : Constant

b. The formula for processing data as a whole item

is: $P = \frac{\sum X}{\sum X1} \times 100\%$

Information :

- P : Percentage
- $\sum X$: Total number of respondents
- $\sum X1$: The total number of ideal values in one item
- 100% : Constant

3. RESULTS AND DISCUSSION

3.1. Results

The project-based Bun Styling Module that was prepared meets the very valid criteria after going through several processes. The data analysis technique used is a descriptive data analysis technique by describing the data that has been collected as it is. The descriptive analysis technique will ultimately show the percentage of data so that we can find out what percentage is qualified and equivalent.

Next, a percentage of data will be carried out using a Likert scale. In this research, validation was carried out by 4 Family Welfare Education lecturers consisting of 2 material experts and 2 media experts.

The results of the learning module validation assessment by material expert 1 are shown in Table 1.

Table 1. Data from material expert validation results 1

No	Aspect	Amount Mark	Percentage
1	Self Instructional		93.91%
2	Self Contained		96%
3	Stand Alone	15	100%
4	Adaptive Stand	8	80%
5	User Friendly		73.33%

The results of the learning module validation assessment by material expert 2 are shown in Table 2.

Table 2. Data from material expert validation results 2

No	Aspect	Amount Mark	Percentage
1	Self Instructional		89.56%
2	Self Contained		92%
3	Stand Alone	15	100%
4	Adaptive Stand	8	90%
5	User Friendly		80%

Figure 1 is a percentage diagram of material expert 1 and material expert 2's assessment of the project-based bun styling learning module.

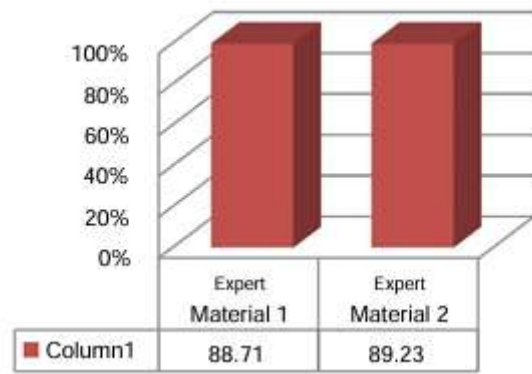


Figure 1. a percentage diagram of material expert 1 and material expert 2

100% 80% 60% or 40% 20% 0% Column1 Expert Material 1 88.71 Expert Material 2 89.23. Figure 1 Diagram of validation results from material experts 1 and 2. The results of the learning module validation assessment by media expert 1 are shown in Table 3.

Table 3. Data from validation results from media experts 1.

No	Aspect	Amount Mark	Percentage
1	Module Shape and Size	26	86.66%
2	Organization		
3	Attraction	40	88.88%
4	Format	31	88.57%
5	Consistency		

The results of the learning module validation assessment by media expert 2 are shown in Table 4.

Table 4. Data from validation results from media experts 2.

No	Aspect	Amount Mark	Percentage
1	Module Shape and Size	25	83.33%
2	Organization		
3	Attraction	38	84.44%
4	Format	29	82.85%
5	Consistency		

Figure 2 is a percentage diagram of media expert 1 and media expert 2's assessment of the project-based bun styling learning module. 100% 80% 60% 40% 20% 0% Column1 Expert Medium 1 87.36 Expert Media 2 85.78.

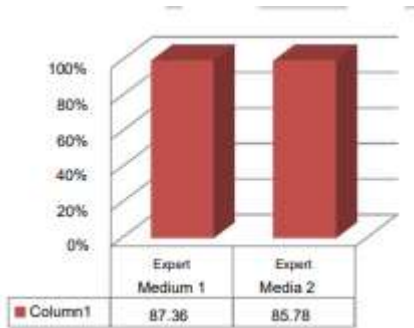


Figure 2. Diagram of validation results from media experts 1 and 2

Student response data was obtained using a student response questionnaire. The results of student responses to the learning module are shown in table 5, while the diagram of the student response questionnaire results is shown in figure 3.

Table 4. Data on student responses

No	Aspect	Amount Mark	Percentage
1	Presentation Material	1227	85,80%
2	Media/Display		
3	Benefits	1323	84,80%

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Column1 86.8 Aspect Presenter an Material Mark 1227 85.80% 1323 84.80% Aspect Media/ Come on stage 84.8

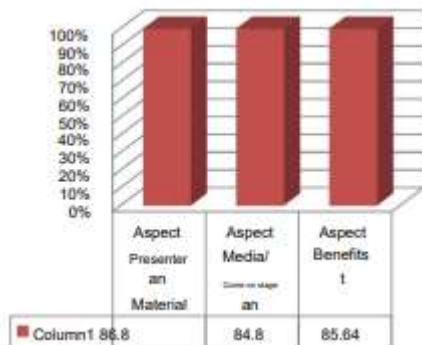


Figure 3. Diagram of student response results

3.2. Discussion

Aspect Benefits t an 85.64 This project-based bun styling module development research uses the R&D (Research and Development) type of research using the 4-D development method. This model was developed by Thiagarajan (1974). The 4-D development model

consists of the main stages, namely Define, Design, Develop

3.2. (Development) and Disseminate

Dissemination. This method and model was chosen because it aims to produce a product in the form of a module. The product developed will then be tested for validity and product trials to determine the validity of the learning module in the Bun Arrangement course.

Based on the problems at the analysis stage that have been explained in the research results. It is known that the learning process for students in the Bun Arrangement course is very dependent on the lecturer as the main source of learning. Therefore, there needs to be a more interesting development that can be a source of learning and reference for students in learning Bun Arrangement.

The complete content of the Bun Arrangement module itself is designed with the RPS desired by the lecturer in carrying out learning. The module is first conceptualized and a discussion sequence is created which will later determine the systematic arrangement of the module.

The modules created are guided by the applicable curriculum in their development, applying learning principles so that the program allows students to examine the subject matter in an interesting and easier way.

The development stage is the main stage in the module creation process [17]. Researchers consult with course lecturers and supervisors to maximize the modules that have been created by adding input and suggestions before submitting them to experts to carry out validation tests, then validation tests are carried out using materials and media, this aims to obtain input, criticism, and suggestions for perfection of the learning modules developed. Apart from that, a validation questionnaire/questionnaire is also carried out which will determine the validity of the module so that the validity can be tested by students.

In the next stage, namely implementation, which was carried out by conducting a limited trial, namely the response from 26 students of the Bachelor of Family Welfare Education Study Program, Cosmetology Concentration class of 2020, who stated that the product developed was valid and this research would only carry out an evaluation, because this type of evaluation related to the stages of development research to improve the resulting development product.

The results of research into the validity of the project-based Bun Arrangement module as teaching material in the learning process can be seen from the data from validation test results from material experts and experts media, as well as testing student responses as follows:

2.1.1. Material Expert Data

Based on the results of research by material experts, there are 5 aspects of assessment, namely self-instructional, self-contained, stand-alone, adaptive, and user friendly. The assessment of material experts 1 and 2 based on these 5 aspects contains statements that received the highest score, namely 5, medium, namely 4, which indicates that the validity of the module content was assessed in the good and very good categories.

In these five aspects, a calculation of 90.51% was obtained, which indicates that the success rate in the qualification is "Very Good" with the equivalent of "Very Valid".

2.1.1. Media Expert Data

Based on the results of the media expert's assessment, there are 5 assessment aspects, namely aspects of module shape and size, organization, attractiveness, format and consistency. The media expert's assessment based on these 5 aspects contains statements that received a score of 5 and 4, indicating that the validity of the module's content was assessed in the good and very good categories.

From these five aspects, a calculation of 86.57% can be obtained, this indicates that the success rate in the module design developed is classified as "Very Valid" for use.

2.1.1. Student Respondent Trial Data

The results of the student respondent assessment instrument data were obtained from the results of the questionnaire assessment sheet which was distributed online S1 to the Family Welfare Education Concentration of Makeup Makeup students from the class of 2019, there were 13 students and the class of 2020, there were 13 students who had passed the Bun Styling course. The assessment sheet aims to find out students' responses before seeing the learning module in the form of a module as teaching material and to find out the response to the validity of the module.

Student responses to 3 aspects of assessment, namely aspects of material presentation, media/display aspects and benefits aspects. The assessment of the presentation aspect of the material for each question received a percentage of 86.80%, indicating that the presentation aspect of the Bun Arrangement material was considered very valid for use with slight changes after Validity tests were carried out on students/respondents.

In the media/display aspect, all questions received a percentage of 84.80%, indicating that the media/display aspect of the assessment was assessed with very good qualifications. Assessment on the benefits aspect of all questions gets a percentage of 85.64% indicates that this

aspect of the assessment is very good. From the three aspect assessments, a calculation of 85.32% was obtained, indicating that the success rate was classified as "Very Good" with the equivalent of "Very Valid" for use.

Based on this data, the results of the validity test can be depicted on a bar chart of material experts, media experts and students.

92 90 88 86 84 82 Series 1 Material Expert Student Media Expert 90.51 86.57 85.32 Figure 4 Bar Diagram of Material Experts, Experts Media, and Students

The results of this research are in line with previous research which carried out the development of a project-based learning module for tailoring courses in the D3 fashion design study program majoring in PKK FT UNM by obtaining a percentage of expert validation results of 87.53% with a very feasible category. Apart from that, there is also research that has been carried out previously, namely in the form of developing project-based learning modules in the maintenance and repair of electrical machines courses in the electrical engineering department at Surabaya State University with appropriate categories from experts and feasibility tests for students.

After validation is carried out and improvements to the product have been made, the next step is to carry out limited trials. The test subjects were students from the 2019 and 2020 classes, Family Welfare Education Department, Cosmetology Concentration Makassar State University Faculty of Engineering. The number of subjects was 26 students. This trial was carried out online by filling out a questionnaire via Google Form.

This trial includes distributing questionnaires via Google Form. In the student response questionnaire there are three aspects, namely the material presentation aspect which has 11 questions, the media/display aspect which has 12 questions and the benefits aspect which has 3 questions. The student response questionnaire assessment consists of questions and answers in the form of a 5-point Likert scale check list.

The first aspect is the presentation of material with a percentage of 86.80% or included in the very good qualification with the equivalent of very valid. This means that most students strongly agree that the Bun Styling module is easy to understand the material. In the second aspect, namely media/display obtained a percentage of 84.80% or included in the very good qualifications with very valid equivalents. This means that most students think that the Bun Arrangement module helps in the learning process without the help of other people.

Furthermore, in the benefits aspect, the percentage obtained was 85.64% or included in the very good qualifications with very valid equivalents.

4. CONCLUSION

Based on the results of the research and discussion that have been described and looking at the problems from the problem formulation, it can be concluded that:

1. Development of the Bun Arrangement module through 4 stages, including (1) The definition stage is carried out by means of curriculum analysis, analysis of student characteristics, participants formulate learning objectives, and material analysis) which is carried out through observation results. (2) The design stage is selecting the format, determining systematics, and initial design. (3) Development stage, namely expert validation and development testing. (4) The disseminate stage is the last stage of development, but the dissemination stage is not carried out because there are limitations and only reaches the development stage.
2. The Bun Styling Module developed has the "Very Valid" category for used in the Bun Arrangement course in the Department of Family Welfare Education, Faculty of Engineering, Makassar State University. This is stated based on the results of validation by material experts which reached a validity of 88.97%, validation from media experts which reached a validity of 86.57%.

Based on the percentage that has been obtained, it states that the modules and materials are valid for use in learning activities as material sources. 3. Student responses to the project-based Bun Styling learning module had very good qualifications with the equivalent of being very valid involving 26 cosmetology concentration student respondents from the class of 2019 and 2020 with an average score of 85.32%.

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