

Development of Buleleng Culinary Teaching Materials to Improve Student Creativity

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ABSTRACT

Balinese culinary learning as one of the lessons in the Culinary Study Program is very important, considering that Bali as a tourism area needs support from culinary tours that characterize Balinese food. Buleleng Regency is one of eight regencies in Bali which has culinary potential to be developed and as a source of learning. The research was designed to prepare teaching materials for Buleleng culinary as one of the subjects matters in Balinese culinary courses in which the substance was Balinese culinary materials which were developed into modern menu. The aims of this research were (1) to describe the stages of developing Buleleng culinary teaching materials to increase students' creativity and culinary competency in terms of knowledge, skills, and attitudes. (2) to know the validity of the teaching materials developed. The product of this research was to produce teaching materials for Buleleng culinary who have received studies from experts, both in terms of material and content as well as in terms of learning design. The research was development research which referred to model ADDIE. The instruments of this research were questionnaires and guidelines interviews. The data were analyzed through descriptive analysis techniques. The test results of content experts and learning design experts on teaching materials showed that teaching materials were in good category. Students gave a positive response to the draft of teaching materials and deserved to be used as a learning resource.

Keywords: *Teaching materials, Development, Buleleng Culinary*

1. INTRODUCTION

Learning or lectures on Balinese culinary courses in the Culinary Arts Vocational Education study program is one of the compulsory courses programmed by students after graduating from Basic Culinary Course. Based on observations and interviews with previous supporting lecturers, there were difficulties in teaching Balinese culinary, where the causal factor was the lack of standard learning resources in the study program, so that the learning materials were fully explored on internet because specific literature to Balinese culinary was very limited. This condition was the results of lack of mastery of the material by students. The recipes were not relevant with the standard recipe from their origin country, considering that these recipes have not been tested which were summarized into a collection of recipes.

A good learning process is materialize if it is supported by good learning resources. Learning resources can facilitate students-centered learning activities and relate the gap between material and its context of everyday life. The availability of teaching

materials can support students to carry out meaningful activities and relate the gap between theory and practice. Material and context were still few or even rare. The characteristics of Balinese culinary learning prioritize skills to process Balinese dishes, so adequate teaching materials were needed as a guide in learning. That's why this research was very important because it produced a real product in the form of printed teaching materials with a contextual approach. This printed teaching material produced a novelty, both at the paradigm and practical levels, related to the development of students-centered learning models.

Tegeh & Kirna [1] explains that textbooks are used as textbooks in certain fields of study, which are standard books compiled by experts in their fields, for instructional purposes. The learning teaching materials can be equipped with teaching tools that are harmonious and easy to understand by the users. So that they can support teaching programs. Furthermore Hernawan et al. [2] teaching materials play an important role in learning. Meanwhile, according to Prastowo [3] teaching materials are all forms of materials used to assist teachers or

instructors in carrying out the learning process in class. Teaching materials are a set of learning tools or tools that contain learning materials and ways of evaluating that are designed systematically and attractively in order to achieve an expected goal.

The characteristics of good printed teaching materials, including 1) must contain sufficient substance and be presented systematically to achieve learning objectives; 2) the substance must be in accordance with the curriculum covering aspects of the goals/competencies to be achieved, methods and assessments used in the learning process; 3) arranged systematically with the rules of scientific writing; 4) prepared in a language that is easily digested and mastered by students, so that it has a high degree of readability; 5) interesting format and physical form of teaching materials; and 6) being able to build the motivation of its readers to learn (Suwatno 2014). A teaching material at least includes: a) study instructions (student or teacher instructions), b) competencies to be achieved, c) supporting information, d) exercises, e) work instructions, which can be in the form of worksheets (LK), f) evaluation [4]. There are four aspects that need to be considered in writing a book, according to the center for curriculum and books. These aspects are as follows: (1) content or material aspects; (2) aspects of presentation of material, (3) aspects of language and readability, and (4) aspects of graphics [5]

2. METHOD

This research was research development or Research & Development (R&D). Research & Development. R & D is a research method used to produce certain products, and test the effectiveness of the products. The selected development model was the ADDIE model. Because the ADDIE model is a model that is developed systematically and is based on a learning design foundation. This model is structured based on a systematic sequence of activities in an effort to solve learning problems related to learning resources that suit the needs and characteristics of learning. According to Cahyadi [6] the ADDIE model for designing instructional systems uses a systems approach. The essence of the systems approach is to divide the lesson planning process into several steps, to organize the steps into logical sequences, then use the output of each step as the input for the next. The procedures for developing teaching materials with the ADDIE development model are: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. However, in this research only three stages were carried out, namely analysis, design, and development. The steps for developing this research were as follows: (1) Analysis phase is the first stage in applying the ADDIE model to design and develop a product. This stage was carried out by determining objectives, identifying suitability

between real conditions and needs that need to be developed and determining the steps to be taken for the development of these teaching materials 2. Planning stage is in the design of teaching material preparation. Teaching materials were designed by taking into account the manufacturing structure which consists of several parts, namely titles, instructions for use, mapping of basic competencies, learning materials, student worksheets, evaluation questions, answer keys, glossaries, lesson plans and assessments. 3. Development stage, teaching materials are developed to see the feasibility of teaching materials that have been made. First, the teaching material was validated by the validator using a validation sheet. The feasibility of teaching materials can be seen from the results of the validation which was seen from the aspect of validity and reference for making a decision whether teaching materials are worth testing or not.

The data analysis technique from the results of the validator's assessment uses the following formula:

$$Va = \frac{Tse}{TSh} \times 100\%$$

In this research, the validation was carried out by 2 material experts and 2 learning design experts, to determine the level of validity, the average was determined first. The formula used was as follows [5]:

$$V1 = \frac{Va1+Va2}{2} = \dots\%$$

$$V2 = \frac{Vb1+Vb2}{2} = \dots\%$$

$$Vgab = \frac{V1+V2}{2} = \dots\%$$

Information:

V = Joint Validation

Va1 = Validation of expert 1 (material)

Va2 = Expert validation 2 (Material)

Vb 1 = Validation of expert 1 (media expert)

Vb 2 = Expert validation 2 (Media Expert)

TSh = maximum expected total score

TSe = Total empirical score

Table 1. Criteria for the Level of Validity

Percentage	Validity Level
81%-100%	Very Valid can be used without revision
61% - 80.99%	Valid, or can be used but needs minor revision
21%-40.99%	Invalid, or may not be used
0% - 20.99 %	Completely invalid or should not be used

The test subjects of the development stage were two media design experts and 2 content experts who were lecturers in the Culinary Arts Vocational Education

Study Program. Media design experts were asked to be willing to review and correct drafts of developing teaching materials related to construction aspects, namely clarity and use of language communicative, clarity of learning objectives in each activity and the objectives of each learning activity, existence and clarity of course identity, clarity of instructions and steps for each activity in teaching materials. The technical aspect consists of readability, suitability and accuracy of the size of the image placement, as well as the attractiveness of the display or presentation. Content experts were asked to be willing to review the truth/accuracy of the material, the adequacy of the material, and the suitability of the material on a competency and competency standards basis.

Data were collected through the implementation of formative evaluation consisting of 1) the first phase evaluation data was data from expert test results, namely learning design experts and content or material experts. Technique analysis of data was done by how to classify all information from qualitative data, in the form of input, responses, criticism and suggestions for improvement obtained from filling out the questionnaire. The results of the analysis and study of the data obtained are used to revise the teaching material products developed.

3. RESULTS AND DISCUSSION

3.1 Results

The selection of the ADDIE model was based on the consideration of this development model: 1) continuous improvement in every step so as to produce a teaching material is better, and 2) development very simple and practical, but the implementation is systematic [7].

The researcher found several solutions to problems in the development of teaching materials in analysis stage, namely: analyzing the competencies required of students, analyzing the characteristics of students about their learning capacity, knowledge, skills, attitudes that students already have and other aspects which were related; conducting material analysis in accordance with competency demands. In the Bali Culinary Course, there was one subject about the Distinctive Culinary of Buleleng Regency. The competence demands were familiar with the concept of typical Buleleng culinary, familiar with Buleleng culinary equipment, familiar with Buleleng culinary specialties, types of culinary or Buleleng special dishes, and how to serve Buleleng special dishes.

The design stage is the stage of selecting material according to the characteristics of students and competency demands, learning strategies, forms and methods of assessment. In this stage, the drafting of teaching materials includes: 1) Prefacing; 2) Presenting

Material 3) Processing 4) Presenting Results, 5) Evaluating.

The development stage, the activities of compiling and writing drafts of learning teaching materials were carried out in accordance with the plans made in the *design step*. Furthermore, the validation step was used to measure a product's feasibility. Product validation was carried out by providing an assessment by material/content experts and learning design experts. Evaluation of Buleleng culinary teaching materials products was given to each expert to assess the design and feasibility of the content, so that further strengths and weaknesses can be identified. The following were the results of the validation of the development of Buleleng culinary teaching materials that were described by learning design experts, content/material experts. Expert design learning consists of two-person lecturers with the field of learning evaluation expertise. Content/material experts consist of two lecturers of Culinary Arts Vocational Education study program with culinary expertise. The results of the material expert assessment can be presented as follows:

Table 2. Material Expert Assessment

No	Criteria	Score	
		Va1	Va2
1	The suitability of the material in the teaching materials with the RPS	4	5
2	Material clarity	4	4
3	Technical clarity	4	3
4	Conformity	4	4
5	Operational learning objectives	4	4
6	Conformity between learning objectives and exposure to the material	3	4
7	Clarity of material description	3	4
8	Clarification of the examples given	5	4
9	Material depth	3	3
10	Material systematics	4	4
11	Use of communicative language	3	4
12	The accuracy of the bibliography that can be used as a reference for finding reading sources that are relevant to the material	4	4
	Amount	44	47
	Percentage	73.33%	78.333%
	So average percentage = 75.83%		

Based on the data of Table 1, it can be calculated that the percentage of assessment by the two material experts is 75.83%. Some of the inputs from material experts

through an open questionnaire are summarized as follows:

- 1) It is better to add an example image to the sub-material for the Buleleng culinary presentation tool.
- 2) Pictures of the types of dishes typical of Buleleng.
- 3) Examples of typical Buleleng dishes are still preserved today.

Table 3. Assessment of Instructional Material Design Experts

No	Criteria	Score	
		Vb1	Vb2
1	The substance of the material includes competencies that are relevant to the graduate profile	5	5
2	Facilitate learning, complete substance	4	3
3	Interesting colors, backgrounds, images	4	4
4	Image size fit.	4	5
5	Legibility	4	4
6	Systematics Clear, coherent and complete	4	4
7	Complete instructions for use.	3	4
8	Easy to understand	5	5
	Amount	28	29
	Percentage	70%	78.333%
	So average percentage = 71.25%		

Based on the data in Table 2, it can be calculated that the percentage of assessment by two media design experts is 71.25%. Learning media experts provide input through an open questionnaire with a statement that teaching materials can be used with minor revisions. Furthermore, some suggestions and input were given, namely the need to explain the instructions for using teaching materials that were easy to understand. Image display adjusted for size, image clarity, color and description.

3.2 Discussion

Research on the development of teaching materials is only through formative evaluation to collect data at each stage used for improvement [1]. Evaluation is carried out related to the stages of development research to improve the resulting product development.

The results of the validation of the draft teaching materials were assessed by 2 validators in terms of the aspects of the material being assessed and as a whole were in the range of 61% - 80.99%. This means that materially the draft Buleleng culinary teaching materials

have valid validity and can be used with small revisions. And the validation results from 2 validators were seen from the aspects of learning design that were assessed and as a whole were also in the range of 61% - 80.99%. This means that the developed Buleleng culinary teaching materials have valid validity and can be used with minor revisions. Buleleng on the Balinese Culinary course according to the expected standards. The results of this research were in line with research conducted by Teger et al. [8] and Irwanti & Zetriuslita [9]. The results of his research shows that the devices made are very valid and practically used by students [2, 9, 10]. However, this research was only carried out up to product validation because theoretical lectures were still being conducted online.

4. CONCLUSION

The results of the analysis of development research can be concluded that teaching materials in the form of printed products have a level of validity that is suitable to use and test. However, because now it is post-pandemic where lectures are carried out online the stages used of ADDIE development model only in 3 stages. Furthermore, after making improvements according to suggestions and input, this teaching material product is suitable for limited testing.

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