Developing the results of learning *megibung* for vocational education and culinary arts students

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**Abstract.** This study aimed at developing teaching materials for the *Megibung* tradition and determining the feasibility of teaching materials that have been developed according to expert judgment and students at the Vocational Education and Culinary Arts Study Program, Faculty of Engineering and Vocational Studies, Undiksha. This research method applied Research and Development (R&D), begun with a preliminary study followed by a product development and assessment stage. The research subjects were determined using a purposive sampling technique consisting of two expert judgments and 34 students of the Vocational Education and Culinary Arts Study Program (PVSK). Data collection used documentation study techniques and questionnaires. The procedure of this research consisted of the process of preparing the *Megibung* tradition teaching materials through the following stages: (a) preliminary study, by conducting interviews with the head of the study program. Studied syllabus analysis and analyzed basic competencies in the preparation of teaching materials, (b) collecting learning resources and literature and subject matter to be compiled, (c) drafting the teaching material for the *Megibung* tradition, (d) limiting trial of the product, (e) widening product trials, (f) data processing and evaluation. The result of this study was the development of teaching materials for the *Megibung* tradition, namely materials developed from the 2019 curriculum and the syllabus of the Balinese Culinary Course. Teaching materials were developed starting from Balinese culinary material in general, the history of the *Megibung* tradition, the preparation of tools, ingredients, the spices and processing methods for *Megibung* dishes, the procedures for serving *Megibung* and the eating procedures in *Megibung*.

1. Introduction

According to Mustofa [1], a good quality education provides capabilities required by the graduates to face life’s challenges. Quality education can be realized through quality learning. If the meaning of quality education is described in a quality learning paradigm, then teachers must be able and always try to link teaching material with students’ lives and facilitate and guide students to learn in problem life solving by utilizing the knowledge they learned [2]. Teachers are required to have a set of technical knowledge and skills in a learning process, in addition to mastering knowledge and materials to be taught.

Learning Balinese culinary in the Vocational Education and Culinary Arts study program is usually carried out in the following steps: lecturer explains the material, while students listen and take necessary notes. This activity is dominated by lecturer hence make students to be passive, less enthusiastic, with no written learning resources as references. In the learning process, the lecturer often explains the material directly, so that students are not given the opportunity to discover the *Megibung*
concept as part of the Balinese tradition. *Megibung* can be defined as an activity carried out by many people sitting down having a joint meal, discussing and share opinions [3].

Learning in a vocational education should consider the needs of the world of work, learning by doing in more practice contextually. Students should master various skills, such as making decisions, analytical thinking, and creative thinking, and also mastering interpersonal skills, such as the ability to work in teams and conduct negotiations.

Students are given the opportunity to carry out various meaningful activities, such as discovering, exploring, analyzing, and expressing their thoughts [4]. Good learning process will be realized if it is supported by a good learning resources that can facilitate student-centered learning activities. Currently, the availability of textbooks related to the *Megibung* tradition is still few and very limited. Considering that the learning material of the *Megibung* tradition is still limited, the connection between Balinese food concepts and materials and the context becomes important and absolute. This research was worth conducted because it produced a real product in the form of textbooks with a contextual approach. The textbooks provide novelty, both at the paradigm and practical level, so that they can be used as the reference for the development of a student-centered learning model.

Curriculum in colleges serves to determine the direction of the students' behavioral change after going through the teaching and learning process. The ability of students as subjects of qualified education really depends on the lecturers as learning facilitators. Lecturers play a central role in the teaching and learning process, because lecturers are expected to be able to translate the curriculum more operationally in the form of syllabus and teaching materials. Lecturers have the authority and responsibility to formulate student competencies through quality teaching materials [5].

Curriculum changes are always oriented towards strengthening the learning process that triggers students to be able to think critically and have balanced abilities in the aspects of attitudes, knowledge, and skills. This requires the creativity of lecturers in carrying out or implementing the teaching and learning process. Lecturers are expected to be able to design or compile teaching materials which play a role in determining the success of the learning process through a teaching material. Teaching materials can help lecturers in improving the learning process to be more effective and efficient [6]. Teaching materials are a set of learning tools that contain learning materials and methods in order to achieve the expected goals, namely achieving competencies or sub-competencies with all the complexities. The use of teaching materials in the learning process has an important role. The development of teaching materials is arranged to be one of the references that will support the development of students so that there is a balance between physical and spiritual needs [7].

2. Method

This research applied the Research and Development method with ADDIE model, starting with a preliminary study and ending at the limited product testing stage. Development research is a research method used to produce certain products and test the effectiveness of these products [8]. Development research is not research that is intended to produce theories but to produce certain products. The research and development method was carried out in several steps and basically has two main objectives, namely developing a product and testing the effectiveness of the product in achieving the goal. The development steps are as follows: preliminary studies which include literature studies, field studies, interviews, material collection, preparation of initial product drafts, limit product trials, product revisions and improvements.

The preliminary study was the first stage. The activity carried out in observations PVSK Study Program, Faculty of Engineering and Vocational University of Ganesha Education (Undiksha). In this activity, initial information and data were collected. The results of this preliminary study were used as identification of the need to develop teaching materials of *Megibung* for PVSK Study Program students. Documentation study was applied namely searching for curriculum and syllabus of Balinese culinary courses. Competency analysis and learning outcomes in the Balinese culinary course. The researcher then determined the competencies and the order of the material needed in the development of the *Megibung* teaching materials for students of PVSK Study Program. The development stages
consist of (1) collecting sources of teaching materials or literature, (2) determining the main material based on the syllabus, (3) creating a material framework, (4) determining the sequence of learning, (5) preparing learning materials and designing teaching materials, (6) conducting an assessment by an expert judgment, (7) revising teaching materials, (8) conducting limited trials, (9) more extensive trials on students and (10) final teaching materials.

The evaluation stage is the stage of analyzing the data obtained to determine the feasibility of teaching materials for Megibung, product improvement and drawing conclusions. The product trial included the first stage evaluation which is a review of Culinary lecturers and experts, aimed to explore comments and suggestions, both written and oral, by conducting discussions and submitting textbook designs for review with reference to content and language. The test was carried out by 2 lecturers in the Culinary field and experts in the Balinese culinary course. The assessment process by expert lecturers was in accordance with the syllabus and can be used in learning. The purpose of the assessment is on the aspects of the feasibility of content and language to evaluate the content of textbooks. This assessment aimed to evaluate the language used, the coherence and suitability of the textbook material, and evaluation. While testing the material on students aimed to find out comments and suggestions. The evaluation instrument reference consists of aspects of appearance, aspects of presentation of material and aspects of benefits.

The results of the data from students were analyzed to be used as a basis for revising textbooks. This research was conducted in the PVSK Study Program, Faculty of Engineering and Vocational Education, Ganesha University. The data technique applied purposive sampling method. The research subjects were 3rd semester students taking Balinese culinary courses.

The instrument used in this development research was in accordance with the research stage. The purpose of this research is to develop and create teaching materials of Megibung that are suitable for learning. The research instrument used consisted of documentation study, interview guidelines, expert judgment questionnaire instruments and students toward Megibung textbook used. The data collection techniques used in accordance with the research objectives were: (a) documentation study, used to find out important documents related to the implementation of Balinese culinary learning, (b) interviews, used to interview lecturers, expert judgment, and other related sources. The interview used in this study was an unstructured interview, where in accordance with the form of the interview, the researcher was not tied to the interview guidelines, and (c) questionnaire, used to measure the student responses. These data were used to revise the use product. The quality indicators of the development of teaching materials in the aspects of its content consist of the relevance of the material, the weight of the material and the grammar, the design of the teaching materials (layout and writing), the completeness of the presentation, the completeness of the layout elements, as well as the combination of colors, illustrations and pictures. Respondent assessment questionnaires were compiled using the Likert scale assessment criteria. On the Likert scale, the highest score is 5 and the lowest is 1. To avoid the tendency of the respondent to choose category 3, the Likert scale was modified by only using 4 choices, namely 4 (VG, Very good); 3 (G, Good); 2 (E, Enough); 1 (L, Less). The data analysis technique in this study was based on descriptive analysis of percentages through data exposure or data conclusions processed using percentage techniques divided into five categories with the following formula:

$$P = \frac{\Sigma x 100\%}{n}$$  \hspace{1cm} (1)

Notes: P = Percentage of score achieved

$$\Sigma = \text{Total}$$

$$n = \text{total number of respondents}$$

source : [9]

Meaning and decision is based on Table 1.
Table 1. Level of Achievement

| Achievement Level % | Qualification | Annotation           |
|---------------------|---------------|----------------------|
| 90 - 100            | Very good     | No need for revision |
| 75 - 89             | Good          | No need for revision |
| 65 - 74             | Enough        | Revision needed      |
| 55 - 64             | Less          | Revision needed      |
| 0 - 54              | Very less     | Revision needed      |

The aim was to evaluate the quality of teaching materials so that the product is suitable for use. The data were obtained from a series of trials in the form of assessment data, responses, suggestions obtained from field trials, and from lecturers who teach Balinese culinary courses.

3. Results and discussion

As an early stage development, this teaching materials have passed the expert test stage to assess the feasibility of this teaching material. The assessment of teaching material components involved experts from the PVSK Study Program consisting of two lecturers who have experience in learning and Balinese culinary subject. The lecturers assessed by filling out the questionnaire given. This assessment included aspects of content feasibility, language feasibility. The feasibility test process was carried out to find out whether the material presented in the teaching materials is in accordance with the syllabus, the language used is in accordance with the lecture material.

The following is the data from the expert judgment's assessment of Megibung in detail, described in Table 2 and, Table 3. Details are described in Table 2 and, Table 3 below:

Table 2. Textbook Validation Results

| Aspect | Reviewer & score I | Reviewer & score II |
|--------|--------------------|---------------------|
| A. Material / Concept | | |
| 1. The correctness / accuracy of the material | 4 | 4 |
| 2. Material Completeness | 4 | 4 |
| 3. Material conformity with CPL | 3 | 3 |
| 4. Cluster Presentation of the material | 3 | 3 |
| B. Constructivist Aspects | | |
| 1. Clarity and communicative language | 4 | 3 |
| 2. The existence and clarity of the learning objectives for each chapter | 4 | 3 |
| 3. The existence and clarity of textbook identity | 3 | 3 |
| 4. Clarity of learning outcomes | 4 | 4 |
| C. Didactic Aspects | | |
| 1. The availability of contexts or situations used to initiate and facilitate students to find / build concepts for Balinese culinary courses | 3 | 3 |
| 2. The suitability of the material with the characteristics and development of students | 4 | 4 |
| 3. Availability of examples of contextual questions and practice questions that facilitate students to broaden their understanding and develop in-depth analytical skills | 3 | 3 |
| D. Technical Aspects | | |
| 1. Font types and sizes compatibility | 4 | 4 |
| 2. The appropriateness and accuracy of the placement of figures, tables, diagrams or illustrations | 3 | 4 |
| Aspect                                      | Reviewer & score |
|--------------------------------------------|------------------|
| 3. Appearance or presentation attractiveness| 4                |

Total items 14x2 validators = 28, total score 96/28 = 3.42

Textbooks compiled were validated by experts consisting of two lecturers, namely Dr. Risa Panti Ariani, M. Si and Cok Istri Raka Marsiti S.Pd., M.Pd, the lecturers in the Vocational Education and Culinary Arts Study Program as well as lecturer in Balinese Culinary Courses, respectively as reviewer 1 and reviewer 2. The validation results are presented in Table 2. The instrument was adapted from [4]. From the results of the validation, it was found that the average total score of the two reviewers was 3.42, more than 3, so that based on the predetermined criteria, the textbooks compiled met the valid criteria. Furthermore, evaluation of the textbooks that has been compiled was evaluated. This validation can also be viewed as an evaluation stage. There were several suggestions given by these reviewers. Among the inputs were related to clarity of images, systematics, and writing procedures. The input was used as the basis for improving textbooks.

4. Implementation Stage
Revised textbooks were then tried out in learning activities. The trial was carried out in two classes A and B of the PVSK study program. The following is a learning situation carried out online due to the Covid-19 pandemi.

![Online learning through google meet.](image)

In general, students were actively involved in learning activities. Lecturer asked about the moral value of *Megibung*, students answered according to the material and their understanding after reading and listening to the lecturer's explanation. Lecturers tried to facilitate learning to be interesting and students were enthusiastic about learning. One of them was through the *Megibung* video and documentation of the research results. The implementation of learning in the context of testing the application of textbooks carried out in the PVSK Study Program in two classes went well.
### Table 3. Results to Student Response Questionnaires on Textbook Trials

| Description                                                                 | Respon | Total | %   |
|-----------------------------------------------------------------------------|--------|-------|-----|
| • Book appearance is attractive                                            | VG     | 20    | 58.82 |
|                                                                             | G      | 10    | 29.41 |
|                                                                             | E      | 4     | 11.76 |
|                                                                             | L      |       |       |
| • Color, size, layout in the cover of this book are in match               | VG     | 22    | 64.71 |
|                                                                             | G      | 10    | 29.41 |
|                                                                             | E      | 2     | 5.88  |
|                                                                             | L      |       |       |
| • Has clear instructions for each chapter                                  | VG     | 24    | 70.59 |
|                                                                             | G      | 8     | 23.53 |
|                                                                             | E      | 2     | 5.88  |
|                                                                             | L      |       |       |
| • Size and font type used are easy to read                                 | VG     | 24    | 70.59 |
|                                                                             | G      | 6     | 17.65 |
|                                                                             | E      | 4     | 11.76 |
|                                                                             | L      |       |       |
| • Language is easily to understand                                        | VG     | 18    | 52.94 |
|                                                                             | G      | 14    | 41.18 |
|                                                                             | E      | 2     | 5.88  |
|                                                                             | L      |       |       |
| • Images are clear                                                         | VG     | 15    | 44.12 |
|                                                                             | G      | 10    | 29.41 |
|                                                                             | E      | 9     | 26.47 |
|                                                                             | L      |       |       |
| • Description of the material are in sequence                              | VG     | 23    | 67.65 |
|                                                                             | G      | 8     | 23.53 |
|                                                                             | E      | 3     | 8.82  |
|                                                                             | L      |       |       |
| • I can easily understand the sentences used in this book                  | VG     | 26    | 76.47 |
|                                                                             | G      | 8     | 23.53 |
|                                                                             | E      |       |       |
|                                                                             | L      |       |       |
| • No ambiguous sentences                                                   | VG     | 28    | 82.35 |
|                                                                             | G      | 6     | 17.65 |
|                                                                             | E      |       |       |
|                                                                             | L      |       |       |
| • The practice questions used are in accordance with the material         | VG     | 27    | 79.41 |
|                                                                             | G      | 7     | 20.59 |
|                                                                             | E      |       |       |
|                                                                             | L      |       |       |

Average VG: 75.77, G: 20.59, E: 3.64
Based on table 3. above, the student response to this textbook is in a very good category with a percentage of 75.77%.

5. Result and discussion
Table 2 explains that in the aspect of content feasibility there are two indicators that are assessed. The first indicator is the appropriateness of the content which includes the category of suitability of the material description with learning outcomes, the accuracy of the material, and the learning support material. The second indicator is the feasibility of presentation which includes categories of presentation techniques, presentation of learning, and completeness of presentation. The average percentage value obtained in the category of content feasibility aspect is 75.42% which is in the good category. Teaching materials are sufficient to provide explanations and descriptions of learning materials to students. The feedback given by the expert judgment suggested that at the beginning it is better to explain the basic concepts of Balinese culinary in relation to Megibung.

In the aspect of language feasibility, there are two indicators that are assessed. The first indicator is the feasibility of language, which includes the category of conformity with the level of development of learners and communicative. The second indicator is the feasibility of presentation which includes categories of presentation techniques, presentation of learning, and completeness of presentation. The average percentage value obtained in the category of language eligibility aspects is 75% which is in the good category. The feedback given by the expert judgment suggested that the presentation of the language is adjusted to the students' abilities and in clear and communicative language.

Table 3. explains student responses to the feasibility of teaching materials, in this case students provide an assessment by filling out the questionnaire given. The assessment included aspects of appearance, presentation of material and benefits. The results of the assessment were used as an input for revising teaching materials. More trial involved 34 students to respond to the appropriateness of Megibung teaching material.

6. Conclusion
The results of data analysis on research and development of Megibung textbook can be explained as follows: (1) the development of teaching materials of Megibung were based to the 2019 curriculum and syllabus. The materials for Balinese culinary courses were developed starting from the basic concepts of Balinese culinary, the history of Megibung, preparation, tools, ingredients, how to process dishes for Megibung, (2) the appropriateness of Megibung teaching materials was validated and assessed by expert judgment from the aspects of content feasibility, language aspects, while the response to Megibung teaching materials was tested on a number of students with results that were in the good category.

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