



The Development of Food Entrepreneur e-Module Using Flipbook

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ABSTRACT

Introduction: The food entrepreneurship e-module is needed by students to make it easier to understand the learning and practice of food entrepreneurship. The research objective is to develop a food entrepreneurship e-book using the Flip Book PDF application. **Method:** The research was carried out at Medan State University. The food entrepreneurship e-module media was validated by media experts and education experts. The e-module media trial sample consisted of 10 Culinary Education and Nutrition students. E-module validation and trial data were collected using research instruments. The trial was carried out twice, namely pretest and the posttest. Data were analyzed using qualitative descriptive analysis. This type of research is development research (R&D) with the model used is the Four-D (4D) model which consists of four (4) stages, namely Define, Design, Develop, and Disseminate. **Results:** Define the stage by identifying problems and finding students' entrepreneurial motivation is lacking (77%) because they are still afraid to try entrepreneurial practices independently and have no experience. Identification of teaching materials is carried out by literature study. At the design stage, several activities are carried out such as creating a semester learning plan, designing learning materials, designing assessment and evaluation instruments, and compiling systematic entrepreneurship-based modules. The development stage uses the CASE concept (creative, active, systematic, and effective) with the PDF flipbook application. The module consists of 7 chapters. The modules that have been developed are then validated by education and media experts. The average expert validation results are relatively high (90.8). The trial was carried out with the results of an increase in sample knowledge in the pretest and posttest with an average pretest knowledge of 61% and increasing to 81% after using the food entrepreneurship e-module.

Keywords: Food Entrepreneur, E-Module, Flipbook, Learning Materials, R&D;

1. INTRODUCTION

Higher education is one of the institutions that can prepare prospective entrepreneurs. The results of the 2022 Business Characteristics Statistics survey found that 44.13% of entrepreneurs in Indonesia had a D4/S1 educational background[1]. Based on this data, almost all graduates have the potential to become entrepreneurs[2][3]. In this regard, universities need to instill entrepreneurial skills and values in students so that with these abilities they can create new entrepreneurs on campus.

Entrepreneurship in the food sector is one of the competencies that must be possessed by culinary and nutrition students[3]. Apart from being educators, graduates are also prepared to be able to become entrepreneurs or work in the food industry[4]. Students are equipped with entrepreneurial skills in the food sector and are allowed to manage culinary businesses on campus in groups in food entrepreneurship courses. The entrepreneurial spirit must be taught in schools so that students can run businesses in the food sector so that they can open employment opportunities after

graduating from school[5], [6].

This practice and learning with direct experience is expected to provide meaningful experience in the future, especially experience in entrepreneurship after they complete their studies [7]. The entrepreneurial experience for students is one of the main assets in cultivating entrepreneurial interest[8]. The experience gained will arouse interest, courage, and motivation for students to open a business [7], [9]. The students manage a food business independently. The results of the reflection on food entrepreneurship students found several difficulties experienced by students during food entrepreneurship lectures [10]. The mindset of students who think that entrepreneurship while studying will hinder the academic process so that students are less interested in entrepreneurship, another reason is limited capital[11].

Based on the initial survey conducted in food entrepreneurship practice classes, it was found some of these difficulties include students experiencing difficulties in choosing menus to sell and calculating selling prices; low student motivation in

entrepreneurship; low student desire to apply various marketing techniques that are developing today; and a lack of confidence in processing and marketing their products. Difficulties in the practice of processing food to be sold make students less motivated to try[5]

Interview results from several consumers stated that the taste is sometimes changing to too salty, without taste, too sweet, and various other forms of complaints about menu quality are often experienced by consumers. Currently, there are no entrepreneurship-oriented teaching materials in the food sector. Students only use the recipe book. Students need teaching materials that contain the materials needed during lectures [8]. Learning needs to be designed by providing real examples of various menus with various exercises on selling prices, calculating profits, and marketing management combined with technology [12]. Standard recipes are needed so that the taste of the food produced can be the same[13]. Thus, a standard recipe book and supporting materials for entrepreneurship in the food entrepreneur module are needed. The research objective is to develop a food entrepreneurship e-book using the Flip Book PDF application.

2. METHOD

This research was carried out at Medan State University. The food entrepreneurship e-book media was validated by media experts and education experts. The e-book media trial sample consisted of 10 Culinary Education and Nutrition students. E-book validation and trial data were collected using research instruments. The e-book validation instrument consists of instruments for material validation and media validation which are filled in by the validator. After validation, revisions are made according to input from the validator, then validation is carried out again.

The trial was carried out twice, namely pretest and the posttest. Pretest data was collected before the e-book was distributed. After the pretest data was filled in, respondents read and studied the food entrepreneur e-book and then collected post-test data using the same instrument. Data were analyzed using qualitative descriptive analysis.

This type of research is development research (R&D) with the model used is the Four-D (4D) model which consists of four (4) stages, namely Define, Design, Develop, and Disseminate. The define stage is carried out by studying the material that will be created in the e-book through curriculum identification and literature study. Curriculum identification was carried out in a focus group discussion with 2 food entrepreneurship lecturers. Collecting data on learning motivation and identifying food entrepreneurship learning problems using instruments to obtain information about motivation and problems experienced by students during learning. After finding the food entrepreneurship e-book material, the e-book design is carried out, known as the design stage. E-modules are designed to be attractive, make readers

active in exploring them, and be arranged systematically and effectively so that they are easy to read and disseminate.

The development stage uses the CASE concept (creative, active, systematic, and effective) with the PDF flipbook application. The development stages include 1) the validation stage, namely validation of the e-book by material experts and media experts. Material experts assess aspects of content and presentation that are adapted to the competencies of the food entrepreneurship course. Media experts assess e-books from language and graphic aspects; 2) Revision stage, namely the researcher improves the e-book based on input from the two experts; 3) A trial of the food entrepreneurship e-book was carried out by filling in the instrument using Google Form with 10 culinary and nutrition education students. Validation results from experts were assessed based on the categories very feasible (81%-100%), feasible (61-80%), quite feasible (41%-60%), less feasible (21%-40), and not feasible (0%- 20%). The Dissemination Stage was carried out to determine user responses to the e-book being developed. The data analysis used is a descriptive analysis technique

3. RESULTS

3.1. Define Stage

The stage defined by identifying problems and finding student motivation for entrepreneurship is less (77%). Lack of motivation among students is often caused by fear, lack of resources, and inexperience. Motivation is always within a person and is a source of energy to achieve success in entrepreneurship[14]. Organizing lectures has been proven to have a positive impact on the formation of students' entrepreneurial motivation[15].

At the definition stage, the learning material is identified. Identification of teaching materials is carried out through literature studies. Then identification of existing curriculum content and recording of material and competencies needed in the food entrepreneurship course are carried out. Focus Group Discussion with 2 lecturers of food entrepreneurship courses obtained information about the formulation of the semester learning plan, which became the basis for the development of teaching materials. The results of the FGD agreed on eight materials to be made in the food entrepreneurship e-module.

3.2. Design Stage

The design stage carried out several activities, namely making semester learning designs, designing learning materials, designing assessments and evaluation instruments, compiling entrepreneurship-based module systematics such as designing flowcharts, and entrepreneurship materials, and applying entrepreneurial exercises such as exercises to determine market share, choosing food products to be sold, looking for standard recipes, testing recipes, calculating selling prices, and business implementation practices.

The results of the design stage can be seen in Figure 1. The validation results can be seen in the image on the right.



Figure 1. Cover before validation (left) and after validation (right)

The design stage is continued by drafting an e-module based on the curriculum and learning materials that have been formulated. The formulation of the module draft resulted in 8 main materials. Each material is broken down into sub-materials consisting of 8 materials, namely: 1) the concept of production units; 2) catering service business planning; 3) procurement of business needs; and 4) calculation of selling prices. 5) Standard recipes (bakery pastry, traditional snacks, main foods, portions, and drinks); 6) Menu planning and product standards, 7) Business practices in the fields of bakery pastry, traditional snacks, food portions, main foods, and beverages 8) Evaluation and presentation of reports each material is broken down into submaterials (Table 1).

Table 1. The food entrepreneur module material

No	Material	Sub material
1	Food Entrepreneur concept	Food service business and production unit
2	Catering business planning	Market survey Online and offline promotions Job description Organization Structure
3	Procurement of business needs	Procurement of materials Procurement of food equipment
4	Selling price calculation	Type of fee Planning and cost calculation Determine the selling price
5	Standard recipe	Bakery pastry Traditional hawker food Main meals / portions Drink
6	Menu planning and product standards	Make a business plan in the field of bakery pastry, traditional snacks, portion foods, main meals and beverages
7	Guided practice	Business practice in the field of bakery pastry, traditional snacks, portion food, main food and beverages
8	Evaluations and Reports	Presentation

The initial page displays the development of the food entrepreneurship e-module and explains the content, instructions for use for lecturers and students, and the purpose of using the module. Each material is broken down into sub-materials, explanations, and exercises to determine students' understanding of the material being studied

3.3. Development stage

The development stage uses the concept of CASE (creative, active, systematic, and effective)[16]. E-module or electronic module, is a form of book that can be opened electronically via a computer. An interactive module is a module that contains material on reciprocal interactions that take place in two directions between the media and those who use the media. E module using the flipbook application can be a source of independent learning [17]. After the food entrepreneurship module was created using the CASE concept, the e-module was developed using the PDF flipbook application with various features that are easy for students to use[18].

E-modules are arranged in a complete, clear, and attractive manner to make it easier for readers to understand the contents[19]. Preparation of a complete, clear, and attractive e-module draft so that the contents are easy to understand. The modules that have been developed are then validated by education and material experts. The first validation result was obtained on an average of 4.01, with the highest average of 5, and increased to 4.54 (90.8%) after revision according to suggestions and input from material experts. The validation results are in the very feasible category. The e-module can be used if it has been validated by material and media experts with predetermined categories [20]

The results obtained showed that the validation performed by media experts before the revision averaged 4.13 and increased to 4.67 (93.4%) after the revision category. According to media experts, this e-book is included in the category of very suitable both for completeness of presentation and graphic feasibility and can be used as electronic media. The modules in this study meet the criteria very well because they have passed the validation process from material and media experts and contain the following: (a) the module has clarity of learning objectives; (b) the material is packaged in sequence; (c) the learning materials are supported by examples and illustrations; (d) questions and tasks are available to measure student mastery; (e) the tasks and questions presented are relevant to the material, the context of the activities, and the environment of students; (f) the use of simple and communicative language; (g) a summary of learning materials is available; (h) assessment instruments are available; and (i) feedback on assessment is available. The revised validation results from the two experts showed improvement, meaning that the development of the food entrepreneurship e-module was suitable for use after being assessed by the

two experts. The interactive food entrepreneurship module based on CASE used in food entrepreneurship courses can be used as a learning resource if it is declared to have passed according to the validator's assessment[16]

3.4. Dissemination stage

The revised e-module was implemented by conducting small-group trials. The trial was conducted with 10 selected students. The ten students were then allowed to study the e-book that had been developed. Next, fill out the readability level questionnaire. The results of this e-module readability questionnaire are used as a basis for improving the e-module that was developed to be better than before. Dissemination was carried out with the result that there was an increase in sample knowledge on the pretest and posttest, with an average pretest knowledge of 61% which increased to 81% after using the food entrepreneurship module. Students have a great motivation for entrepreneurship when they have a good understanding of entrepreneurship[15]. An entrepreneur needs to have sufficient knowledge to be able to direct himself to obtain business opportunities, develop business concepts, make plans, and operate the business[21]. Good quality learning is needed to create productive and competitive graduates so that students can implement their knowledge in life[12]. Mobile phones as a communication tool are growing rapidly, and with the facilities provided, they can become a learning medium. Mobile phones are used by all students as a tool to access learning materials, so lecturers have to be creative in making electronic teaching materials such as e-modules [22]. Various entrepreneurship programs initiated by the campus from various funding sources can increase students' understanding and abilities in entrepreneurship, such as abilities in aspects of management, production, and financial literacy [23]. Entrepreneurs must have technical and non-technical skills including leadership, communication, cooperation, creativity, innovation, risk-taking, and skills in the business sector that will be developed [24]

CONCLUSION

The development stage uses the CASE concept (creative, active, systematic, and effective) with the PDF flipbook application. The module consists of 7 chapters. The average expert validation results are relatively high (90.8). The trial was carried out with the results of an increase in sample knowledge in the pretest and posttest with an average pretest knowledge of 61% and increasing to 81% after using the food entrepreneurship e-module

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