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# Glideapp Based E-module Learning Media Innovation as a Support For Student Practicum in Basic Boga Courses

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**Abstract:** Technology affects the progress of education, where its development has an impact on the learning process including in higher education. Showing the idea or introduction of new things renewal of new discoveries that are different from existing or previously known. one of them is about the existence of electronic-based media used in the learning process. Electronic-based modules or e-modules become media by utilizing technology. Glideapps-based e-modules are an alternative in learning without print media. By innovating teaching media from manual to electronic-based learning resources, this study was conducted to determine the feasibility of e-modules as an alternative teaching material that can support the learning process by utilizing technological advances, because it contains material, images, and videos so that students can easily understand the material. In practice, students are given the freedom to access various things related to learning, including activities in class or laboratory practicum in basic culinary learning. This is the basis that it is very necessary by utilizing this technology to facilitate the course of learning, with glideapps-based e-modules as teaching materials to support practicum in basic food courses. This type of research is a type of development research conducted using the 4-D development model (Define, Design, Develop, and Disseminate). It is known that the results of research on the development of glideapps-based e-module media by obtaining media feasibility from material expert validation got a percentage of 85.80% with a very feasible category, then media expert validation got a percentage of 80.65% with a feasible category, and student responses got a percentage of 93.03% with a very feasible category. Based on the results obtained from this study, it is concluded that the glideapps-based e-module is feasible to use.

**Keywords**: Technology, E-Module, Glideapps, Basic Boga, 4D

## Introduction

The learning process that has a major influence in assisting educators in providing information (material) and increasing the interest and motivation of students is learning media (Elvarita et al., 2020). Learning media as a learning resource is one of the main supporters of success in learning. For this reason, teaching materials are needed that are more interactive and also attract students' interest in learning. Teaching materials are one of the learning resources that can be used such as modules, Modules are teaching materials, books that have the aim that students can use independently without teacher guidance is the definition of Modules (Irianti, 2016). The module contains complete learning objectives, learning material indicators, learning resources, LKPD & evaluation of learning outcomes arranged systematically, in detail, and intact (Haristah et al, 2019). Modules are categorized into 2, namely printed modules and electronic modules. Electronic modules are systematic independent teaching materials in electronic format which contain animation, audio and navigation so that they can make users more interactive (Puspitasari, 2019). Electronic modules or e-Modules are information displays in book format that are presented electronically and can be read using a computer, laptop, gadget or smartphone (Wibowo, 2018).

E-modules are needed in learning in basic food courses. Basic food is knowledge about how or techniques to process food. Starting from preparing ingredients, cooking equipment, processing the ingredients to serving. In the process, there are material exposure or theory and practicum activities. By paying attention to the need for learning resources in this course, e-modules are a solution as teaching materials that can be accessed using developing technology. In this case, the E-Module developed by this researcher uses the help of glideApps because it is easily accessible and free to make without programming. Glideapp is a web-based mobile

app creation platform that aims to develop its own applications quickly without the need for in-depth knowledge of programming.

Glideapps-based E-Module which intends to motivate students in their practice so that they can easily and skillfully carry out their practicum. On the other hand as a multiplatform media which is easily accessible on various devices. There are similar studies that develop glideapps-based e-modules by Shofiyah Rahmah Maulidiyah, 2023 and Bunga Nur Asyah, 2020, with the use of technology making glideapps-based e-modules a learning medium that is feasible to apply and use. This implies that the EModul research results can be used in learning. Therefore, this study aims to determine (1) good learning media in increasing students' understanding of learning basic food science, (2) the feasibility level of glideapp-based e-module learning media as support for basic food courses and user responses to glideapps-based e-modules. Therefore, the researcher conducted a study with the title Glideapp-based E-Module Learning Media Innovation as a Support for Student Practicum in Basic Boga Subjects.

## Method

The type of research used falls into the R&D (research and development) development research category. R&D development is a method used for research that produces a product (Putri, 2021). The research and development method has several types of models. The model used is the 4D development model. The 4-D (Four D) development model is a learning device development model. This method and model was chosen because it aims to produce a product in the form of an e-Module. The developed product is then tested for feasibility with validity and product trials. The research and development method can be interpreted as a scientific way to research, design, produce and test the validity of the resulting product (Nesri, 2020). The research design used in this study consists of three stages, namely defining, designing, developing (Prasetiyo and Perwiraningtyas, 2017). The stages are as follows:

1. Define

   The defining stage is a needs analysis activity through interviews with lecturers teaching basic food courses. Activities at the defining stage are carried out as follows: a. Initial Analysis The initial analysis carried out was to find information about student needs related to learning media. Based on the results of the interview, learning media must be in line with the demands of the world of education and the progress of technological development, information in the era of industrial reform 4.0, one of which is the basic boga course which needs development and renewal. The existence of appropriate electronic-based media, one of which is e-Modul. b. Material Analysis New Tata Boga students come from vocational and high schools with different majors and not all come from the Tata Boga department, therefore the need to develop e-Modul. c. Formulating Objectives Formulating objectives is carried out to determine indicators of learning achievement based on material analysis. Formulating the objectives, researchers can find out what studies will be displayed in the e-Module.

2. Design

   The design stage is an activity of designing a prototype or concept of the e-Module framework that will be made and adjusted to the analysis of student needs in the era of the industrial revolution 4.0. The initial steps taken at this stage are a. Compiling learning tools (preparation of end-of-learning abilities, learning objectives, relevant material, giving assignments on evaluation sheets). b. Drafting the e-Module framework on ms.word and then converting it

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to pdf format which will then be used as a flipbook. c. Uploading all learning tools on google drive then the file will be designed, designed on a spreadsheet to become an e-Module application assisted by glideApps. d. Implementation of media preparation and design on glideApps. d. Implementation of media preparation and design on glideApps. The implementation of media preparation and design on glideApps is to open the glideApps url, log in first using the registered email, set the e-Module display on the spreadsheet and on the google sheet, see a preview of the e-Module display that we made on glideApps, change the navigation buttons; layout; text; media. Then publish the application we want and copy the link (url) to share with users. By paying attention to the relevant material, the module content can be seen in Figure 1 below:

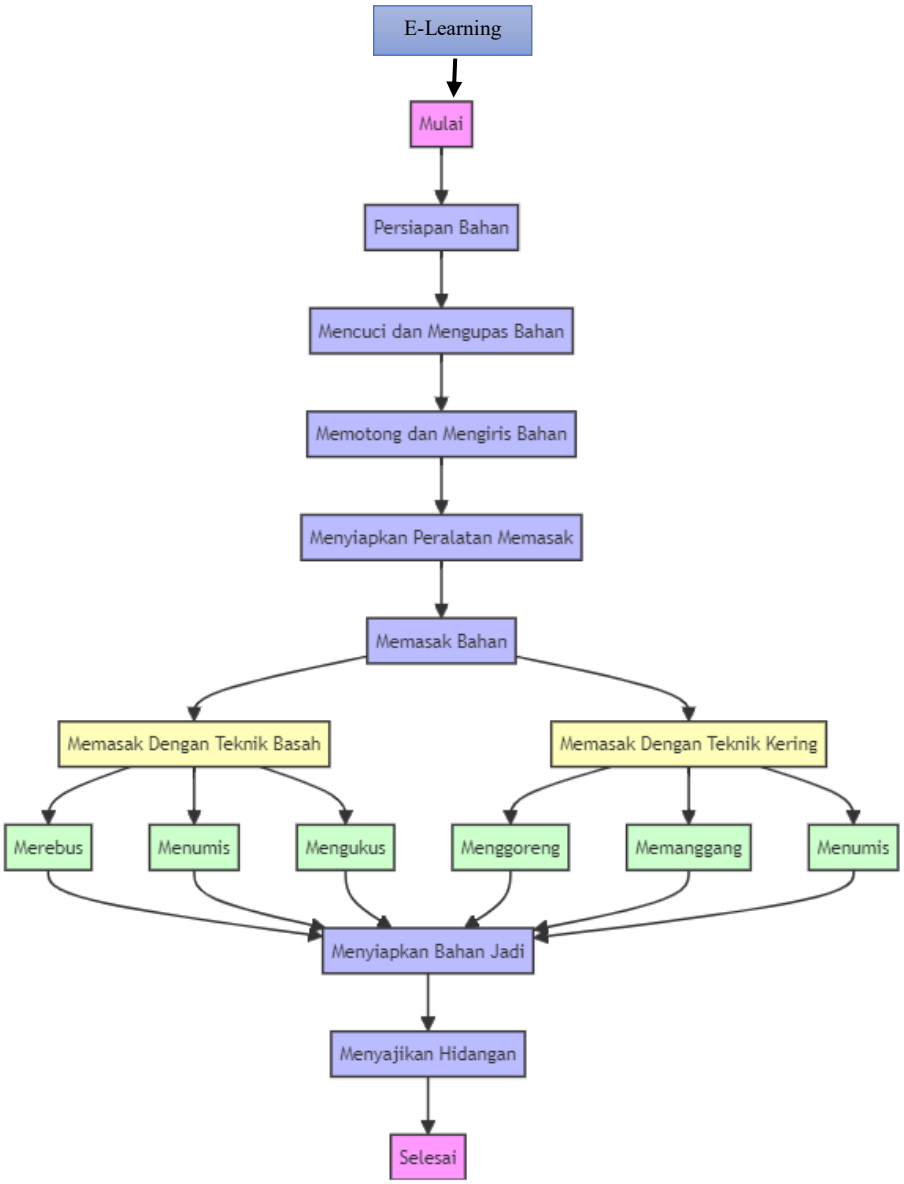


Figure 1. Flowchart of Basic Boga Module

The implementation of e-modules in glideapps is presented in the following figure:

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Figure 2. E-Modul in Glideapps

1. Develop

   The Development Stage is the validation stage of the e-Module by material experts and media experts. This validation aims to control the content of the e-Module in accordance with student needs. Furthermore, to perfect the e-Module from various aspects, a revision process is carried out. Revisions are based on suggestions and input provided by material experts, as well as media experts. At this stage, testing activities will be carried out on the e-Modules with glide apps that have been made. There are 4 stages, namely: a. Researchers can equalize the appearance and failures when running the application. The information was used to revise the application. b. Test the e-Module framework by the supervisor to get input and suggestions so that the media made is better. c. Test the application by media and material expert validators. d. User response test by Catering students. User response test by Tata Boga students.

2. Disseminate

   In this study, the disseminate stage was not carried out due to limited time, cost, and energy. Only the e-module was launched: Publishing the e-module to make it accessible to the target audience, learning platform. The research stages were carried out with the flow as presented in Figure 4.

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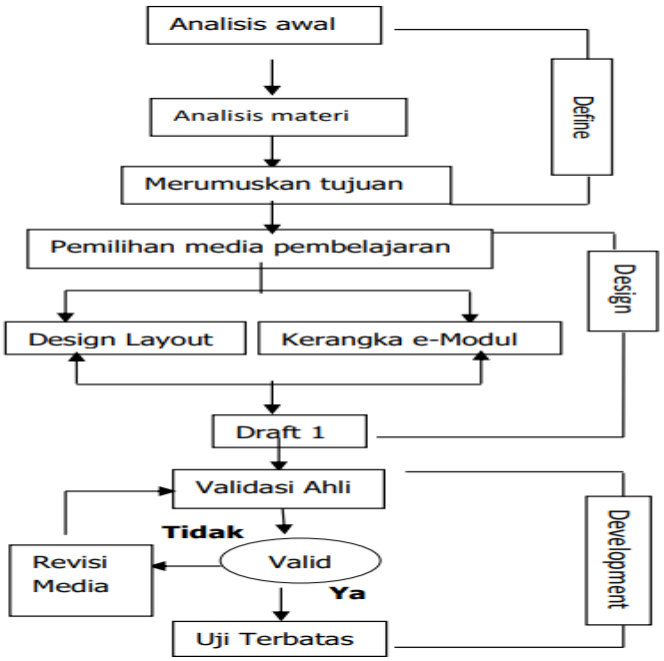


Figure 3. Flowchart Development E-Modul Berbasis Glideapps

Data Collection Technique

The data collection technique used by researchers is the interview method to find out teaching materials that meet the demands of the industrial revolution 4.0 era, as well as through the questionnaire method. The instruments used are observation sheets of the feasibility of media experts, material experts and user responses (students). Feasibility observation sheet by 2 material experts and media experts. Material expert validators are carried out by 2 Catering Education lecturers who are competent in their fields. Media expert validators are carried out by 2 media experts who are competent in their fields. The questionnaire instrument uses a Likert scale with a range of 1-5 criteria, namely (1) very poor, (2) less good, (3) good, (4) quite good, (5) very good.

Data Analysis Technique

The data analysis used in this research is quantitative descriptive analysis with a percentage. Completion of questionnaires and feasibility observation sheets using a Likert scale with 5 options. The numbers are converted into quantitative with a percentage so that it can be concluded the level of validity of the "Glideapp-Based E-Module as a Support for Student Practicum in Basic Boga Subjects". To convert the average feasibility score in percentage form with the Descriptive Percentage (DP) formula.

$$\text{Result} = \frac{\text{total score obtained}}{\text{max eligibility score}} \text{ x } 100\ \%$$

The results of the analysis are then converted to the eligibility criteria table with categories as in Table 1.

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Table 1. Learning Media Assessment Score with Likert Scale

| Nilai | Criteria | Persentage |
|---|---|---|
| 5 | Very good | 80% ≤X≤ 100% |
| 4 | Good | 60%≤ X < 80% |
| 3 | Medium | 40% ≤ X < 60% |
| 2 | Not good | 20% ≤ X < 40% |
| 1 | Not very good | 0% ≤ X < 20% |

X = Score Empiris

Knowing the final score uses an average analysis of the items concerned in the expert validation questionnaire, namely by calculating the questionnaire eligibility value for each aspect divided by the number of statements. The percentage score results obtained from the research are interpreted in the following table criteria.

Learning Media Feasibility Scale

| Percentage | Criteria |
|---|---|
| 80% −100% | Very Decent |
| 60%−80% | Feasible |
| 40% −60% | Decent Enough |
| 20% −40% | Not Decent |
| 0% −20% | Very less worthy |

The percentage analysis feasibility criteria table is used as a reference to see the percentage of product trials. categorized as very feasible if X> 80%; feasible if 60% < X ≤ 80%; Fair if 40% < X ≤ 60%; Less if 20% < X ≤ 40% and Very Less if X ≤ 20% (Asyhari & Silvia, 2016).

## Result and Discussion

### Result

Module is a collection of subject matter used by students for self-study, which is studied gradually and thoroughly, arranged systematically, equipped with tasks, exercises or evaluation materials, as well as other supporting materials to support the learning process in certain subjects. e-Module is a modification of conventional modules by combining the use of information technology, so that existing modules can be more interesting and interactive. Because with e-Modules we can add multimedia facilities (images, animations, audio and video) in it. We can also add interactive test or evaluation facilities so that students can interact more with their learning resources. Its function in learning as a multiplatform is needed because it is paperless. With the potential studied, e-modules are needed in learning basic food courses.

Basic food is a productive subject, namely a practicum course, which is a prerequisite for initial knowledge before taking other food processing courses. Being the basic capital of students, it is an obligation to learn it, therefore the need to build motivation and interest in culinary education students to focus and understand each basic culinary learning material by utilizing e-module learning media.

Innovated module learning media into e-modules applied to the Glideapps mobile application. Provides easy access and interaction in supporting practicum in basic culinary courses.

1. Material Validation

The results of data analysis by material experts 1 and 2, as follows.

Table 3. Results of Material Feasibility Data Analysis

| No | Pernyataan | Jumlah Skor | |
|---|---|---|---|
| | | 1 | 2 |
| 1 | Introduction Aspect | 14 | 12 |
| 2 | Learning Aspects | 33 | 32 |
| 3 | Evaluation and Closing Aspects | 13 | 14 |
| 4 | Grammar Aspect | 23 | 22 |
| Total | | 83 | 80 |
| Percentage | | 87,40% | 84,20% |
| Category | | Very Feasible | Very Feasible |

Based on the table above, the number of scores obtained from the two material experts is 83 and 80 with a percentage of 87.40% and 84.20% with a very feasible category. In this case, the feasibility of the material reaches an average percentage of 85.80% that the basic food material in the e-module is feasible to use for culinary education students after going through revisions.

2. Media Validation

The results of data analysis by media experts 1 and 2 are as follows.

Table 4. Results of Media Feasibility Data Analysis

| No | Pernyataan | Jumlah Skor | |
|---|---|---|---|
| | | 1 | 2 |
| 1 | Graphic Aspects | 32 | 32 |
| 2 | Ease of Use Aspects | 28 | 29 |
| Total | | 60 | 61 |
| Percentage | | 80,00% | 81,30% |
| Category | | Suitable | Very suitable |

Based on the table above, the scores obtained from the two media experts were 60 and 61 with percentages of 80.00% and 81.30% in the acceptable category. This shows that the basic e-module culinary learning media is acceptable for use by culinary education students after revision, with an average percentage of 80.65%.

Trial (User Response)

The trial was conducted on 26 culinary education students using a questionnaire on user responses to basic culinary e-modules, as follows.

Table 5. Results of User Response Data Analysis to Basic Food E-Module

| No | Statement | Total Score |
|---|---|---|
| 1 | Learning Material Aspects | 1083 |
| 2 | Technical Quality/Appearance Aspects | 731 |
| Total | | 1814 |
| Percentage | | 93,03% |
| Kategori | | Sangat Layak |

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Based on the results of the analysis of the test in the table above, the score obtained from both aspects of the assessment of the Glideapps-based e-module was 1814 with a percentage of 93.03% in the very feasible category. Therefore, student response to the Glideapps-based e-module in the basic culinary arts course was positive.

**Discussion**

Innovation is a new change that leads to improvement. In the world of education, the influence of technology is rapidly advancing, especially in the processing of learning media. Educators are constantly demonstrating their commitment to innovation. They develop learning media to deliver teaching materials that are tailored to the needs of students. A module is one type of educational media that is typically printed. In this study, the module was designed based on the learning outcomes of basic culinary arts material. It was developed with consideration for learning needs analysis, both from educators and students. It was designed to capture students' interest in learning. The module was then developed into an E-Module.

This E-Module was developed to assist students in understanding the material independently, aligning with advancements in science and technology while remaining flexible for use. This research produced an E-Module using the GlideApps platform for the basic culinary arts course as a practical support tool. The product development research conducted aimed to produce an E-Module based on GlideApps, assessing its feasibility as a new medium to support learning. This innovative learning medium is expected to complement and improve previous learning methods, which still have some shortcomings, thereby minimizing challenges in the learning process. Therefore, the role of media has great potential to stimulate students to respond well to learning. For this reason, learning media provides learning resources that can assist educators or lecturers in enriching students' knowledge.

Designed on a spreadsheet to become an e-module application assisted by GlideApps. The process of developing and designing the media on glideApps involves opening the glideApps URL, logging in first using a registered email address, customizing the e-Module interface on the spreadsheet or Google Sheet, previewing the e-Module interface created on glideApps, modifying navigation buttons; layout; text; media. Then publishing the desired application and copying the link (URL) to share with users.

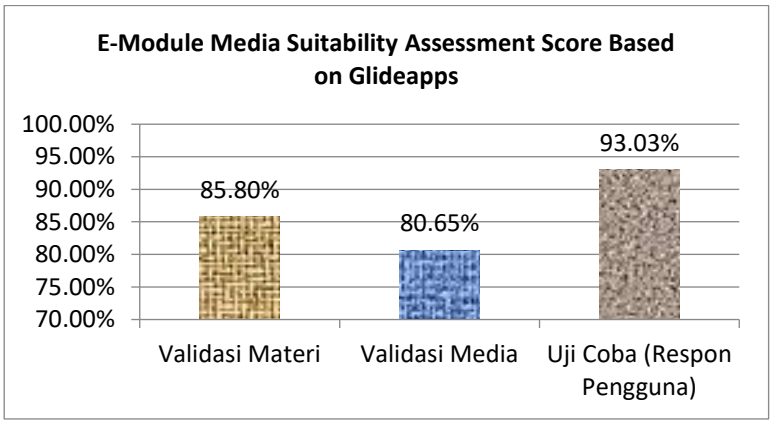


Figure 4. E-Module Media Suitability Assessment Score Based on Glideapps.

Based on the development and results of feasibility data analysis, the average percentage in the feasible category proves that the glideapps-based e-module is feasible for use in basic culinary education as a practical learning aid.

## Conclusion

Based on the results of data analysis and discussion, it can be concluded that:

1. The Glideapps-based e-module for basic culinary arts material is suitable for use by students to support practical work, with 85.80% material validation and 80.65% media validation.
2. User response to the trial of the Glideapps-based e-module was 93.03%.

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