Development of website-based culinary art learning media in improving practical skills in the culinary arts study program

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ABSTRACT

This study is motivated by a lack of expertise in curving practice after learning theoretically. Of course, this makes learning conditions very difficult and ineffective with insufficient theoretical material to provide guidance to students in practice. Therefore, the research was conducted to develop a website-based learning media that can be accessed anytime and anywhere with the aim of improving curving skills in culinary arts courses. In this study, the Sugiyono development model has been simplified, the steps are: (1) preliminary studies, (2) Product design, (3) Product Validation, (4) Product revision, (5) Product trial, (6) The final product. The sample in this study were students of the 3rd semester of the Catering Study Program. The sample in this study were students of the 3rd semester of the Catering Study Program. Data analysis techniques by analyzing the results of media and material expert validation questionnaires and analyzing the effectiveness of website media on students. It is known from the research results, website-based learning media in Culinary Arts courses are good and feasible to use.

INTRODUCTION

Education is a series of learning for students to be able to understand, understand, and make people more critical in thinking (Dwianti, et al. 2021). Education can be achieved by learning, both in formal and non-formal education.

Along with the development and expansion of technology in the world of education that is increasingly rapidly making the world of education increasingly challenged in creating new breakthroughs in the form of learning applications that make it easier for students to listen to learning materials at school and outside school. The use of technology in the world of education is certainly very helpful for the educational process to be more advanced and of course updated. Therefore educators are required to be able to create learning media that are in accordance with technological advances such as utilizing the internet, web, etc.

The role of educational media is very much needed in learning where in its current development the educational media is no longer seen as just a tool but an integral part of the education and learning system (Asnawir & Usman.

2002). The purpose of using media in the learning process is to streamline and streamline the learning process (Ayuningtyas, Fadhilah, & Arifin. 2018). Therefore, teachers/facilitators need to learn how to determine learning media in order to effectively achieve learning objectives in the teaching and learning process.

The Culinary Arts course is one of the subjects in the field of study that must be followed by level III students with a weight of 2 credits. The Culinary Arts course has learning outcomes, namely: Students who have completed this course are expected to be able and apply the concepts of elements and principles of art design to culinary arts in food preparation for various occasions. In this course, both theory and practice must be mastered by students.

Based on observations, in the culinary arts course, there are still many students who do not understand the theory and practice various techniques of making culinary arts, including carving techniques from various fruits and vegetables, slicing technique from sunkist oranges, apples and tomatoes, printing technique on watermelon, chayote, carrots, incising technique on yam, watermelon, young papaya cutting technique on carrots, zucchini, onions, tomatoes to decorate various side dishes and

photographing techniques or known as food style. This can be seen from the practical results of the culinary arts course.

The unavailability of qualified media in culinary arts courses is also a problem in learning culinary arts. So far, learning is carried out only in teacher-oriented classes. Students only listen to lecturers without any other media assistance. In fact, this culinary arts course requires skills in making various techniques of making culinary arts by training yourself at home, not only at school. Therefore, it is necessary to have media that can be seen by students so that they can be studied independently anytime and anywhere.

The development of culinary arts materials should also be packaged interactively and attractively. One of them is by integrating various kinds of media or what is called multimedia.

The concept of multimedia is basically a combination of two or more media elements consisting of text, images, photos, audio, video and animation in an integrated manner. The advantages and benefits of delivering material with the concept of multimedia learning is that the learning process is more interesting, more interactive, the amount of teaching time can be reduced, the quality of student learning can be improved, improve student learning attitudes and the teaching and learning process can be done anywhere and anytime (Prabowo. 2011). Learning media in the form of multimedia is able to have a positive impact on student learning outcomes (Puspitasari, Miarsyah, &Rusdi. 2020). One of the multimedia-based media, namely websites.

The World Wide Web (www) also known as the web, site, website or website is an internet application and service that includes multimedia resources (Rusman et al., 2012). Web is a series of pages that one progressively navigates through (Lopuck 2013). Web is a collection of hypertext pages that offer information and links on trillions of pages(Guffey, et al, 2013). A website or site can be defined as a collection of pages that are used to display text information, still or motion pictures, animations, sounds, and or a combination of them both static and dynamic which form a series of interrelated buildings where each linked by web pages (hyperlinks) (Prabowo. 2011). web is a collection of pages that provide information. Web browsing is the web browser used to open a web page. now, there are many web browsers that can be used to browse in cyberspace such as google chrome, safari, Mozilla firefox, opera, and others(Irwansyah, 2013)

Web-based application learning media devices are application systems that contain material, tutorials and practical steps. Website-based learning media. Website-based learning media can help students improve learning outcomes independently and at school. This is in line with the research results of Rahman, Munawar, & Berman

(2014) which state that there is an influence of the use of website-based learning media on student cognitive learning outcomes and the use of website-based learning media can be implemented in the productive learning process.

Development of Website-Based Learning Media is expected to be able to Improve Practical Skills in Culinary Arts courses. Students are able to understand technical techniques in culinary arts which can then be practiced independently through the help of web-based learning media.

METHODS

The type of research conducted is research and development. As written in Sugiyono's book (2015) that Research and Development research is a research method used to produce certain products, and test the effectiveness of these products. According to Borg & Gall (2003) research and development (Reseach and Development) is a process used to develop effective products used in education and learning.

The Borg and Gall R & D model consists of ten implementation steps including (1) research and data collection (research and information colleting), (2) planning, (3) product draft development (develop preliminary form of product), (4) field trial, (5) initial product improvement, (6) field trial, (7) improve the product of field test results, (8) field implementation test, (9) final product refinement, and (10) dissemination and implementation (Hamdani, 2011).

These steps are not standard things that must be followed, the steps taken can be adapted to the needs of researchers, with necessary changes in research and development of website-based learning media.
Through the above procedure, it can be realized and developed into the form of technical planning targets and the types of activities that researchers will carry out at each stage. The steps from the development stage are as follows:
1. Doing preliminary research
2. Collecting Teaching Materials
3. Product planning and development
4. Product reviews and trials

Data collection technique

The data to be collected is data about the needs of the website in qualitative form. Qualitative data were collected using questionnaires and documentation. Data collection techniques used in this study are as follows:
1. Questionnaire
   Questionnaires are used to collect data on needs given to students, to identify needs and general learning objectives, to collect student opinions.
2. Documentation
   Documentation is used as research evidence. Documentation includes things that can strengthen

research statements such as photographs, correspondence and so on.

Data analysis technique

To analyze the data, namely regarding the feasibility of the media used non-test techniques to collect product data, by validating the website design which includes the activity process to assess the feasibility of the media before it is used as a learning material. The assessment is carried out by validators who are experts in their fields, namely experts in learning media and experts in the field of culinary arts learning materials. Trials were conducted on students with small, medium and large scale trials.

All data collected were analyzed using statistical techniques. Qualitative data in the form of statements that are not good, enough, good and very good are converted into quantitative data with a value scale of 1 to 5.

RESULTS AND DISCUSSIONS

Results

The subjects in this study amounted to 3 media experts, 3 material experts and 24 students. Research time in June 2022. The method used in this research is Research and Development which adapts the Brog & Gall model. Data collection techniques in this study used a questionnaire. Questionnaire data collected from material experts, media experts, and students were analyzed using descriptive statistics. The scale used in the analysis of research data refers to the Likert Scale where each one is made using 1-5 categories of answers given a score.

No	Category	Average Percentage (%)	Criteria
1	Content Feasibility Aspect	83,33	good
2	Presentation Aspect	78	good
3	Language Aspect	90	very good
Average		**82.86**	**good**

Table 1. Results of Material Expert Assessment

The validation carried out by the two material experts included aspects of the feasibility of content, presentation and language. The validation results from the two material experts have "good" criteria with an average rating of 82.86

No	Category	Average Percentage (%)	Criteria
1	Aspects of Presentation Quality	94.44	very good
2	Aspects of Graphic Quality	90	very good
Average		**92.5**	**very**

			good

Table 2. Media Expert Assessment Results

The data obtained from the validation results by the two media experts were then converted into 5 scales. The results of the data from the validation of two media experts can be seen that the quality of the media's feasibility is included in the "very good" category with an average of 92.5 percent.

No	Category	Average Percentage (%)	Criteria
1	Material Quality Aspect	89.61	good
2	Aspects of Display Quality	84.03	good
Average		**86.82**	**good**

Table 3. Student Assessment Results Pend. Cullinary art

The data obtained from the validation results by students are then converted into 5 scales. The results of the data from the validation of 24 students can be seen that the quality of the material and media display is in the "good" category with an average of 86.82 percent.

Revised and refined aspects based on data analysis and testing as well as input from material experts, media experts and users aimed at exploring some common aspects in the process of developing a product. In the picture below, you can see the average percentage of assessment results on website-based learning media for Culinary Arts learning by material experts, media experts and users.
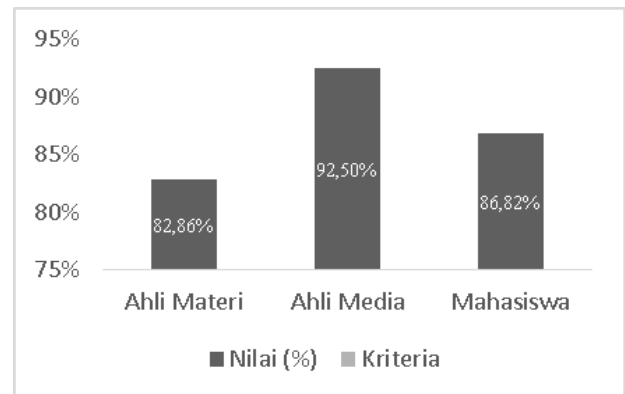

Figure 1. Diagram of the Average Percentage of Assessment Results on the Media

Some of the uses and benefits of using Website-based learning media in Culinary Arts learning are:: 1) The material is easy to understand because the concepts presented are planned to make it easier for students and systematic; 2) learning becomes faster and more interesting so that it does not cause boredom because it is equipped with pictures and video tutorials; 3) This

interactive learning media can also be used as an alternative to independent learning media.

DISCUSSIONS

This section discusses in detail about the website-based learning media that has been implemented using the prototype method. The design of website-based application media has several steps, namely; (1) Preliminary studies, (2) Product design, (3) Product Validation, (4) Product revision, (5) Product Trial, (6) The final product.

1. Preliminary Study

   At this stage, the instrument used is a questionnaire. Questionnaires were given to determine the learning process that had been carried out so far. Questionnaires were also given to students to determine students' abilities in participating in the learning carried out.

2. Product Design

   The second stage after the preliminary study is product planning and development. This stage is carried out to explain in more detail the plans of the media that are made. At this stage, the user analysis needed by students is also carried out. Users in this media are users or teaching staff and students are participants in the courses taken. The user acts as a visitor from the culinary arts website media, while the admin acts as a data manager on the website system.

3. Product Validation and Revision

   The validation stage is carried out on product reviews and trials to material experts, instructional design experts, graphic design experts. After going through the revision stage, it was continued to students with three stages, namely individual trials, small group trials and field trials so as to produce media that were suitable for use in accordance with the characteristics of the field of study and students as users. Learning media is declared suitable for use in learning after going through the revision results from the validation of media experts, material experts and testing to students

4. Product Trial

   The trial in this study was carried out by distributing questionnaires. Questionnaires were given to students to determine student interest in the developed media. The questionnaire is made on a scale of 1 to 5. The guidelines and assessment criteria for interpreting (response percentage criteria / scoring criteria guidelines) according to Sudijono (2009) can be seen in table 4 below:

Percentage	Criteria	score
81% ≤×≤ 100%	very good	A
61% ≤×≤ 80%	good	B
41% ≤×≤ 60%	enough	C
21% ≤×≤ 40%	not good	D
0% ≤×≤ 20%	Very Not Good	E

Table 4. Assessment Criteria Guidelines

From the table above, it can be seen that the response presentation criteria if you get a score of 81%≤×≤100% then it is categorized as "very good" and gets an "A" score, if the percentage score is 61%≤×≤80% then it can be categorized as "good" and gets a "B" score, if the percentage score is 41% ×≤ 60% then it can be categorized as "enough" and gets a "C" score, if the percentage score is 21% ×≤ 40% then it can be categorized as "not good" and get a "D" score, whereas if it is categorized as "0% × 20%" then it can be categorized as "very poor" and gets an "E" score.

Based on the categories above, web-based learning media for culinary arts courses are stated in the "good" category with an average material expert assessment of 82.86. assessment aspect in the form of Content Feasibility Aspect with an average score of 83.33, Presentation Aspect with an average score of 78 and Language Aspect with an average score of 90.

The media expert's assessment was stated in the "very good" category with an average score of 92.5. Aspects of assessment in the form of Aspects of Presentation Quality with an average score of 94.44 and Aspects of Graphic Quality with an average score of 90.

The trial conducted by 24 students obtained an average score of 86.82 which was categorized as "good". The aspects assessed are Material Quality Aspect with an average score of 89.61 and Aspects of Display Quality with an average score of 84.03.

Thus it can be concluded that web-based learning media for culinary arts courses are declared suitable for use in learning.

5. Final Product

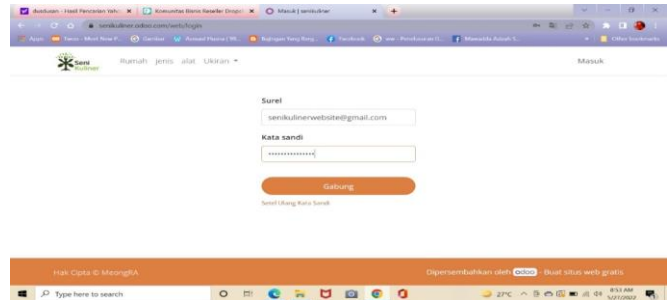   The results of the product are in the form of web-based learning media for culinary arts courses

Figure 2. The first main screen is logged in as a user.
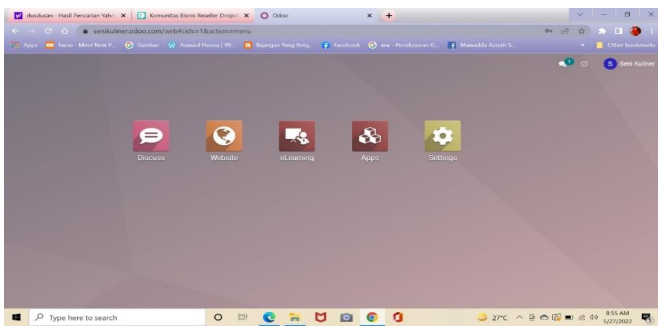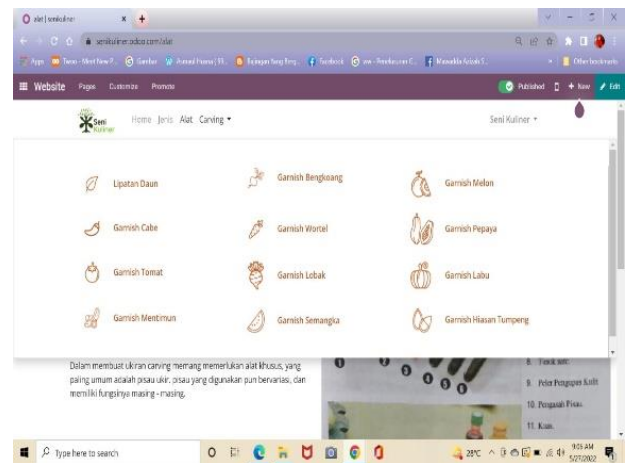
Figure 3. Website menu display.
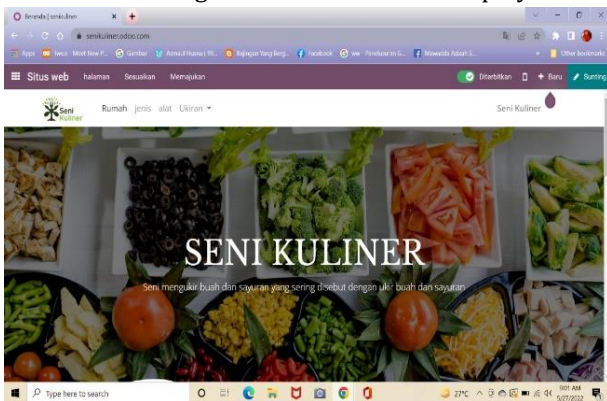

Figure 4. Home screen after login.
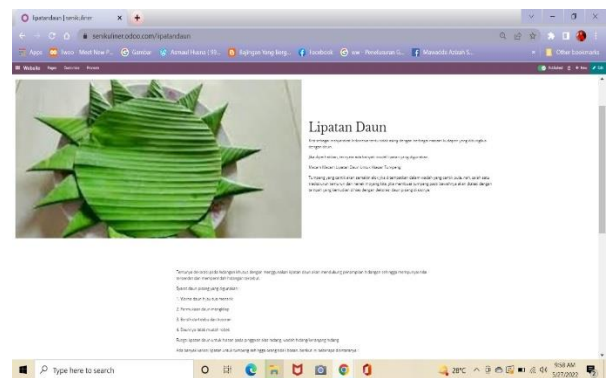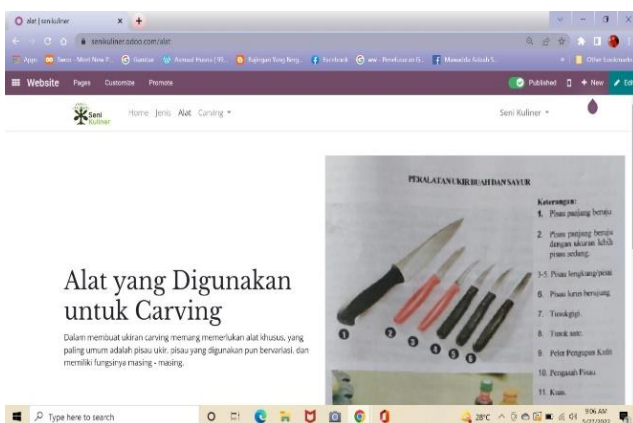

Figure 5. Website Menu Display.

Figure 6. Website Content Display.

At this stage the product has been applied to students, the learning media has gone through the revisions of media experts, material experts and small, medium and large scale trials.

From the results of the development of website-based media for culinary arts courses, it can be seen that the media is suitable for use in learning. Web-based media are able to improve learning outcomes and provide student interest to be able to study independently at home and practice various techniques of making culinary arts. This is in line with the results of research by Suhada, Nulhakim, Sudarto, & Kristiadi (2019) which states that web-based media can improve quality and independence in learning. This is reinforced by the results of Mugaya's research

(2020) which states that Web-based learning is appropriate for use in learning and can improve language learning outcomes through the use of ICT tools such as using computers, mobile phones and accessing the internet

CONCLUSIONS

Based on the explanation described above, the research on the development of website-based learning media can be concluded as follows:

1. This learning media is based on an interactive website where its use must use the internet.
2. Website-based learning media is very good in improving student practicum.
3. Website-based learning media is appropriate for use in culinary arts courses in increasing student understanding.

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Author's Contribution

All authors discussed the result and contributed to from the start to final manuscript.

Conflict of Interest

All authors in this study declare that they have no competing interests to all parties

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