



Mobile Cooking Application in Bakery Courses to Improve Soft Skill Competencies

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ABSTRACT

This research aims to develop mobile cooking application media in bakery courses to improve soft skill competencies. This research is R&D research. The development model used in this research is the ADDIE (Analysis, Design, Development, Implementation & Evaluating) development model. Validation is carried out by material experts and media experts. The results of the needs analysis carried out on lecturers and students show that the mobile cooking application media is very necessary for learning bread. Material expert validation results obtained 90.5% in the very good category and media expert validation results obtained 95% in the very good category. Limited trials obtained 4.54 in the Very Good category. Field trials obtained 4.46 in the Very Good category. From these data it can be concluded that the mobile cooking application media in bakery courses is very suitable for use in learning. It is hoped that this mobile cooking application can help guide and direct students to practice independently. The implication of this research is that the mobile cooking application can be used by teachers and students to access recipe material precisely and in more detail so that students can build their knowledge independently.

Keywords: *cooking mobile applications, soft skills, bakery*

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INTRODUCTION

The impact of Covid-19 throughout the world has forced learning to stop in order to prevent the spread of Covid-19 in the education sector. The Indonesian Ministry of Education and Culture issued Circular No. 3 of 2020 concerning the prevention of COVID-19 in educational units (Susanto & Deapalupi, 2020). Following up on the Government's recommendations regarding preventing the spread of Corona Virus (Covid-19) infection in the campus environment, the implementation of academic activities is limited to online learning with various learning media. Through online learning, students can study as usual and not miss lecture material, and the time is more flexible. However, online learning has not been fully accepted by students. Some students find online learning more difficult than face-to-face learning. Some of the obstacles faced in online learning are internet network problems which are often unstable and limited learning devices (Nurfallah & Pradipta, 2021). Students' levels of understanding vary when teachers provide information through bold learning, causing the implementation of learning to be less than optimal (Ding et al., 2020). Apart from that, not all lecturers and students can operate online learning systems quickly, including preparing lecture materials digitally. Not a few students also feel bored and lazy about doing online learning, this is also a challenge for educators to continue to provide innovative and creative learning so that students remain enthusiastic about learning even during the pandemic (Amran, et al. 2021). Therefore, teachers must present interesting, creative and innovative learning media, so that students are expected to be active in the learning process which is ongoing and limited to being carried out online.

The rapid development of information technology in the current era of globalization cannot be avoided, its influence on the world of education even during the Covid-19 era. The need for the use of information technology in learning is related to preparing the skills needed by students to face the era of the industrial revolution 4.0 which is increasingly rapid and developing (Rafi et al., 2020). Teachers must make

every effort so that online learning can be carried out well and learning can be understood, so that learning objectives can be achieved optimally and implemented (Windi Setiawan, 2021). One form of technology that supports online learning is e-learning. E-learning is a system that involves information technology in the applied teaching and learning process (Nugraha et al., 2020). e-learning uses electronic applications that support learning activities with the help of a cellphone or computer.

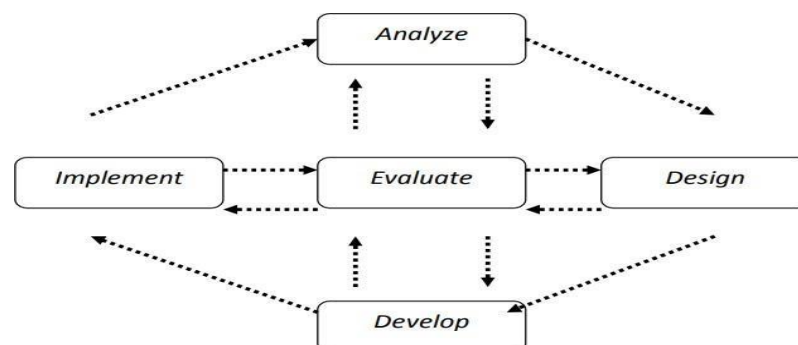
The Culinary Education Study Program provides Culinary Education with the aim of producing Bachelor's graduates in the field of Culinary Education who are superior, professional, skilled, competent and sensitive and contribute to environmental and cultural conservation. Catering Education graduates are also equipped with entrepreneurial skills in the culinary sector and managing food in various institutions and catering service businesses. One of the productive courses in the culinary arts study program is the bakery course. The bakery course did not run optimally during Covid-19 because the practicum was carried out online. Practical learning can be effective and can improve students' soft skill competencies if learning is carried out with the help of appropriate learning media and attracts students' attention. Soft skills competency is an important factor in producing quality graduates. Research results show that 75% of job success is determined by soft skills and only 25% is determined by hard skills (Abbas & Ghani, 2013). Vocational schools can develop soft skills through practice in the classroom learning process (Choudary & Ponnuru, 2015; Subramaniam, 2013; Al-Mamun, 2012).

Based on observations in the bakery course, it was found that learning was not running optimally. Students tend to be less focused and less active when taking part in online learning. The practicum in the bakery course did not run optimally, because students carried out the practicum independently without the help of appropriate media. Students only use Android cellphones to search for information about learning materials. Apart from that, lecturers are also unable to control the practicum process for all students. Therefore, it is necessary to develop interesting, creative and innovative learning media, so that students are motivated in participating in learning both offline and online to improve students' soft skill competencies.

The mobile cooking application is an application of software which can be operated on a mobile device (Smartphone, Tablet, iPod, etc.), and has an operating system that supports standalone software which contains cooking recipes and videos on how to prepare it for practice. Mobile cooking is used because it is felt to be able to attract students' attention in practice and make it easier to find information via smartphone applications. The mobile cooking application is equipped with detailed and interesting bread and cake processing techniques, so it is easy for students to understand. The aim of this research is to develop mobile cooking application media in bakery courses to improve soft skill competencies.

METHOD

This research is a type of research and development (R&D). The development model used is the ADDIE development model. The ADDIE development model consists of Analysis, Design, Development, Implementation and Evaluation (Januszewski & Molenda, 2008).



The subjects of this research were second semester culinary students at Medan State University. The object of the research is the mobile cooking application in bakery courses. In this research, the research produces a mobile cooking application product. The research consists of 1) Analysis, namely analyzing the media needs of the mobile cooking application; 2) Design, namely creating initial designs, storyboards, compiling materials, formulating the appearance of the mobile cooking application and compiling instrument grids; 3) Development, namely developing mobile cooking application products, validating material experts and media experts; 4) Application, namely carrying out application trials on students taking bakery courses; 5) Evaluation, namely carrying out revisions in each process.

The instrument used was a questionnaire. The questionnaires used in this research were: student needs analysis questionnaire, material expert validation questionnaire and media expert validation questionnaire. All data collected was analyzed using statistical techniques. The feasibility of data in the form of quantitative data was reanalyzed with descriptive data. Descriptive data is data calculations that are used as an illustration of data that has been collected, presenting data in the form of tables, diagrams, mode calculations, medians, and percentage presentation (Sugiyono, 2013). Data measurement uses a Likert scale which is used to measure attitudes and opinions. The answer to each item can be in the form of words and then given a score.

Table 1. Likert Scale Score

Answer	score
Strongly agree	5
Agree	4
Disagree	3
Don't agree	2
Strongly Disagree	1

Source: Riduwan (2016)

RESULTS AND DISCUSSION

This research is research and development (R&D). The development model uses the ADDIE model which consists of analysis, design, development, implementation and evaluation. The results of research in this development produced a product in the form of a Mobile cooking application with the help of Wixsite. The material contained in the media is the types of bread preparations which are the topic of practical material for culinary arts students.

The initial stage of research starts from the analysis stage. The results of the analysis of student needs show that students really need mobile cooking application media in bakery courses. Students' ability to understand bakery material is still very low. students feel bored with conventional learning. Students need updating or packaging of bakery material which is packaged in the form of mobile cooking application media. The results of the analysis through field observations also revealed that lecturers teaching bakery courses still used PowerPoint learning media with material summarized from the internet so that students lacked knowledge and had low interest in learning. According to Prastowo (2015), the quality of learning is low if educators only focus on conventional teaching materials without any creativity to develop these teaching materials innovatively. Analysis was also carried out on practical competencies to determine the material used in the Mobile Application teaching materials.

After the analysis stage, the design stage is then carried out. At this stage, the initial design, storyboard, arranging materials, formulating the appearance of the mobile cooking application and designing the application site design are carried out. The mobile cooking application media uses the help of Wixsite. The display of the mobile cooking application consists of an Introduction, Contents (material) and a Closing section accompanied by a processing video.

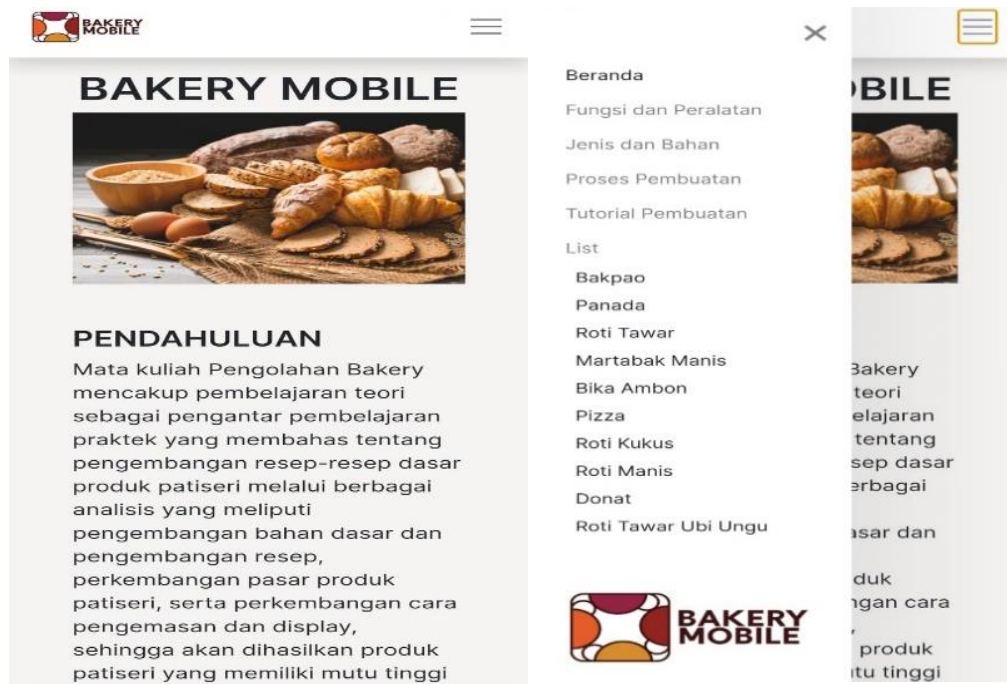


Figure 2. Opening menu display

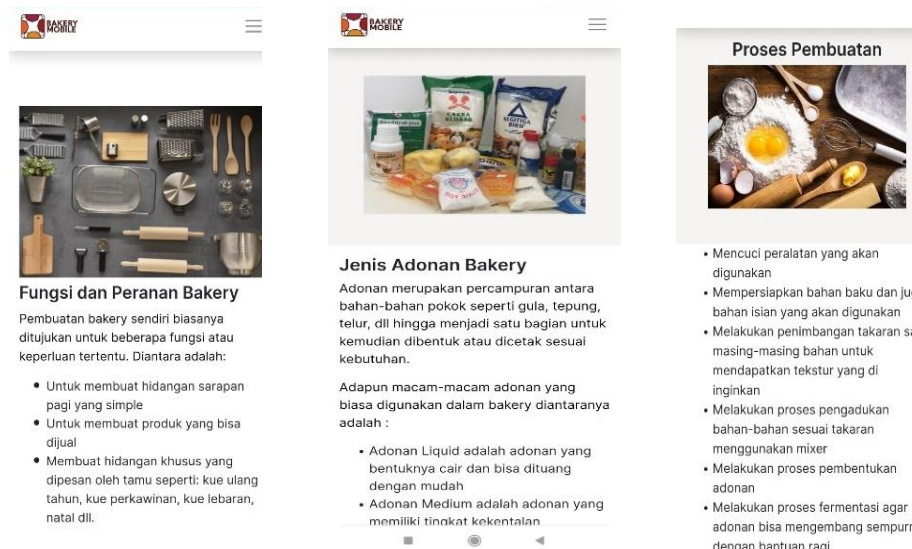


Figure 2. Material Content Section

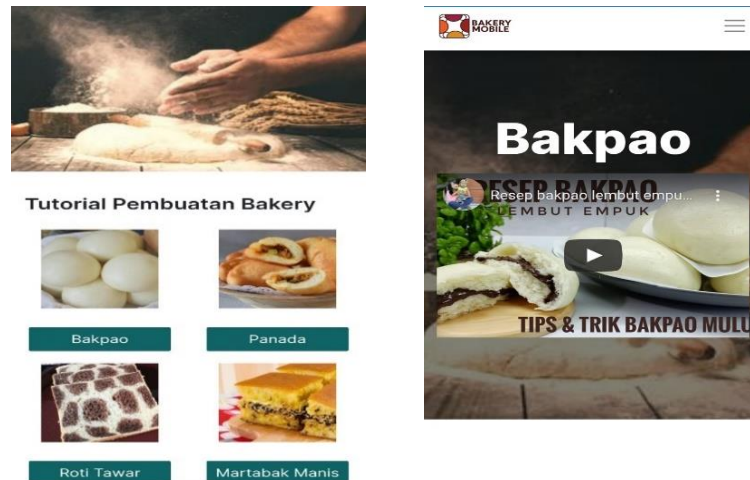


Figure 3. Closing (Video Processing)

At the development stage, the mobile cooking application media was validated by material experts and media experts. Validation by experts is carried out to see the suitability of the media that has been developed. Based on suggestions from material and media experts, media improvements were made to improve the quality and suitability of the media.

In this research, the material expert validators consisted of 3 experts in their fields. Validation by material experts consists of two aspects, namely the learning aspect and the material aspect. In the learning aspect, there are 6 indicators, namely suitability of material, suitability of learning objectives, clarity of instructions for use, consistency of evaluation with learning objectives, suitability of tests with material and Interactivity of students. Assessment of the material aspect consists of 8 indicators, namely suitability of material needs with learning objectives, up-to-date material, description of concepts or theories, complete and high-quality learning material assistance, systematic presentation of material, use of terms, duration of time for material and use of grammar.

Table 2. Overall results of Material Expert Validators

Aspect	Average total amount	Percentage (%)	Category
Learning	26,7	89%	Very Decent
Material	36,9	92%	Very Decent
Eligibility Percentage (P)		90,5%	Very Decent

From the data above, it can be seen that the average assessment result from the 3 material expert validators is 90.5% in the very good category. This means that the mobile cooking application media on the material is suitable for use in bakery learning.

Media expert validation consists of 2 aspects, namely the usability aspect and the media appearance aspect. The usability aspect consists of 3 indicators, namely the usefulness of the media, supporting learning and students' interest in the media. The media display aspect consists of 11 indicators, namely menu display, menu facilities, font size, writing format, color composition, color quality, background display, interactive media, suitability of video to material, video quality, and display proportions.

Table 3. Overall results of Media Expert Validators

Aspect	Average total amount	Percentage (%)	Category
Benefits	14.2	94%	Very Decent
Media Design	53.1	96%	Very Decent
Eligibility Percentage (P)		95%	Very Decent

The overall assessment data from the three media experts obtained 95% in the very good category. This shows that the mobile cooking application media is suitable for use in bakery learning. The implementation stage was carried out by testing 30 culinary students who took bakery courses. The trial was carried out in two stages, namely a limited trial with 10 students and a field trial with 30 students. In the small group trial, the average rating was 4.54 in the Very Good category. Field trials obtained an average score of 4.46 in the Very Good category. From these data it can be seen that the mobile cooking application media is suitable for use in bakery learning.

DISCUSSION

Mobile learning is a facility that provides electronic information to learners and educational content that helps achieve knowledge flexibly anywhere and anytime (Darmawan, 2013; Kim, 2013). Furthermore, Abu, et al. (2012) defines mobile learning as e-learning using mobile devices and wireless transmission. This mobile learning system takes advantage of the mobility of handheld/mobile devices, such as cellphones. Nowadays, students very often use cellphones to search for information on learning materials. This can also be seen in bakery courses, students tend to search for assignments via the internet using their cellphones.

Based on the results of the needs analysis, it is known that lecturers and students really need mobile cooking application media to improve students' soft skill competencies in bakery learning. The validation results from material experts obtained 90.5% in the very good category. The results of this assessment are based on learning aspects and material aspects. The use of media means that teachers must master the content of core competency material and basic competencies so that it will have a good impact on students in understanding the content (Ulfa Hidayah et al., 2016). The media validation results obtained an assessment of 95% in the very feasible category. This assessment is based on aspects of the usefulness and appearance of the media. This is in accordance with the opinion of Mawaddah, et al. (2019) which states that a media that is said to be very suitable is media that provides good aspects of the benefits and functions of the media. The designed mobile application has four characteristics, namely: 1) Content, in the form of learning material according to learning objectives; 2) Capture, the material contained in the mobile learning application can be updated or uploaded by educators and downloaded by students; 3) Compute, the application can perform calculations, both in terms of displaying evaluation results to students and educators can provide points for the results of assignments/quiz/online independent exercises that have been completed by students; 4) Communicate, online communication can occur between educators and students, fellow students, for example through online discussion forums (online chat) (Efriyanti & Annas, 2020).

Based on the validation results from media experts and material experts, it was stated that the mobile cooking application media was suitable for use in bakery learning. This is in line with the research results of Astuti, et al. (2017) which states that Android-based mobile applications are suitable for use in learning. The learning process utilizes mobile learning (Android-based smartphone) which is presented with interactive and fun multimedia so that it has an impact on improving student learning outcomes, especially students who better understand the core content/subject matter. The use of mobile learning with an Android-based operating system (SO) or others will feel fun, interactive and interesting, and will also make students have the ability to

master technology according to its development and speed up the process of achieving the goals of a theme being studied (Arista & Kuswanto, 2018).

The ease of accessing learning content in mobile learning will provide options for independent learning and can be used as an evaluation and feedback tool (Eschenbrenner & Nah, 2007). Mobile learning has an impact on students learning individually and online, so that it is easy to update, they can assess themselves as feedback, this is considered as several advantages of mobile learning (Jacob & Issac, 2008). Mobile learning has helped many types and types of learning (Sharples, 2000; Bulun, 2004; Vavoula, 2009). Learning with mobile learning makes it easier for users to control when they have time to study and a comfortable place to study in terms of accessing material, so that the flexibility offered by mobile learning gives users freedom to improve their quality of life and also educators can innovate in creating appropriate learning materials. delivered more interactively and creatively (Ali & Richardson, 2018).

CONCLUSIONS AND RECOMMENDATION

Based on the results and discussion, it can be concluded that this research produces a product in the form of a mobile cooking application in the Bakery course. Media development uses the ADDIE model. The mobile cooking app was developed with the help of Wixsite. The validation results from material experts obtained 90.5% in the very good category. The validation results from media experts obtained 95% in the very good category. The results of the limited trials carried out by students obtained 4.54 in the very good category. The results of the field trial obtained 4.46 in the very good category. From these data it can be concluded that the mobile cooking media application is declared suitable for use in bakery courses. Media development Mobile cooking applications can make it easier to express material, especially practical material. The implication of this research is that the mobile cooking application can be used by lecturers in Bakery learning because it provides more detailed practical material so that it helps students improve their soft skill competencies.

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