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Digital Literacy in Learning Media in the Vocational Education of Serving Dishes

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ABSTRAK

Penguatan sistem pendidikan yang dicanangkan pemerintah merupakan gerakan literasi baru yaitu literasi digital. Literasi digital pada pendidikan vokasi kuliner masih kurang dalam sistem dan integrasi. Salah satunya pengolahan web untuk menunjang proses pembelajaran yang belum maksimal. Oleh karena itu penelitian ini bertujuan untuk mengembangkan literasi digital berbasis web yang dapat memandu pembelajaran mandiri. Pendekatan yang dilakukan adalah melalui R&D media digital melalui WIX dengan model ADDIE. Subyek penelitian ini adalah mahasiswa program studi Pendidikan Tata Boga. Teknik analisis data deskriptif pada pengujian alpha dan beta. Hasil yang diperoleh ahli media sebesar 93,64% dan ahli materi sebesar 95% dengan kategori "sangat layak". Nilai gain sebesar 0,72 berada pada rentang G>0,7 yang berarti adanya peningkatan pengetahuan sebelum dan sesudah menggunakan media digital sajian F&B service berbasis web dengan kategori tinggi. Dengan demikian produk website pada mata kuliah F&B service layak digunakan sebagai salah satu bentuk inovasi pembelajaran dalam mendukung era 4.0. dan sistem pendidikan berbasis literasi digital, khususnya pendidikan vokasi.

ABSTRACT

The strengthening of the education system launched by the government is a new literacy movement, namely digital literacy. Digital literacy in culinary vocational education is still lacking in system and integration. One of them is web processing to support the learning process that has not been maximized. Therefore this study aims to develop web-based digital literacy that can guide independent learning. The approach taken is through R&D of digital media through WIX with the ADDIE model. The subjects of this study were students of the Culinary Education study program. Descriptive data analysis techniques on alpha and beta testing. The results obtained by media experts were 93.64% and material experts were 95% in the "very decent" category. The gain value of 0.72 is in the range G> 0.7 which means an increase in knowledge before and after using digital media for web-based F&B service dishes with a high category. Thus the website product in the F&B service course is appropriate to be used as a form of learning innovation in supporting the 4.0 era. and a digital literacy-based education system, especially vocational education.

1. INTRODUCTION

The implementation of learning for the Food & Beverage Service course so far still uses a textbook source, so that students have difficulty understanding the material because not all of the objects in the material are understood clearly (Oka, I, M et al., 2020; Tsui & Chen, 2020). Students still refer to the lecturer's PPT file which should only be used as an explanation when teaching in class. As a result, students find it more difficult to understand practical material that should be presented audio-visually (Adams Ogirima & Onyiyeche Emilia, 2018; Pilendia & Amalia, 2020). Besides that, the availability of gadgets and laptops is not used by lecturers to become student tools in learning to access material independently and can be done at any time, and with an attractive appearance. In its implementation, teaching activities at several meetings have been carried out properly and according to what has been planned. However, there are some that are not optimal. For example, there are still lecturers who have not been able to adapt to digital literacy (Prasetya, 2021; Soyemi et al., 2018). Consequently, few instructors

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are aware of how these technologies are reshaping learners' motivational goals, learning abilities and interactions. Collaborative and problem-based learning approaches, for example, have received significant scholarly attention recently, in terms of instructional design, pedagogical approach and educational technology contexts (Aprilliyah, 2014; Morrar et al., 2017). Some students have not reached the minimum standard value. The results of the interviews with the team of lecturers supporting the F&B Service course, the implementation of semester 117 of 2022/2023 the average score of students, especially in implementing practices, is still low. The scores achieved by some students ranged from 60 to 70. This led to a decrease in learning outcomes and had a continuous consequence because this basic material became the basis for the pre-requist MK for Restaurant Management and Service Course. The media used are in the form of power points and videos. The results of interviews with the supporting lecturers and students stated that the media used in learning the F&B Service course were in the form of power points and videos, so that students sometimes found it difficult to carry out independent learning. The power points given were also carried out at every meeting, some complained that the data/files were mixed up with other subject matter. In addition, videos require quite a lot of memory to store them. Other sources of reading material are still sourced from outside, such as YouTube. There are still many sources of reading material provided from YouTube, this provides speculation that the feasibility of videos that are accessed as learning resources has not been validated. Students have gadgets/smart phones. Most students have gadgets/smart phones that are used as communication tools. In addition, smart phones have the advantage that they can be used to access various things, one of which is learning tools. However, learning F&B Service has not optimized its use in digital-based learning resources. There is no place that accommodates digital literacy in the basic material for serving dishes. Material supports the learning process because without conveying this it will not achieve charged competence (Torres-Gastelú & Kiss, 2016; Yıldırım, 2016). The current material needs to be updated with an interesting embodiment, so that students have an interest in reading or studying the material. Good material in the current era of digital transformation is material that is presented systematically, the content is validated properly, has an attractive appearance, has complete features, and is integrated so that it is easier for students to access it. Practical implications in terms of informing teachers about appropriate instructional design practices for the enhancement of collaborative, problem-based and peer assessment learning strategies in technology-enabled settings (Keefe, 2020; Morrar et al., 2017).

Vocational education that is on the professional path has different goals from academic education. Vocational education prioritizes preparing a skilled workforce for graduates from secondary education (SMK) and tertiary education. The nature of having to adapt to the needs of the world of work causes the nature of vocational education to be more flexible and must adapt quickly to change. Strengthening the four elements in the education system requires a new movement to respond to the industrial era 4.0. One of the movements launched by the government is the new literacy movement as a reinforcement and even replacing the old literacy movement (Made Sudana et al., 2019; Wagiran et al., 2019). Previous study state the new literacy movement is intended to focus on three main literacy namely, 1) digital literacy, 2) technological literacy, and 3) human literacy (Nuryana et al., 2020). Technology makes a positive effect not only on social life but also on education. As technology becomes increasingly prevalent in educational settings, there is an emerging expectation for educators to leverage digital tools to support teaching and learning in the classroom (Akyuz & Yavuz, 2015; All et al., 2016). The use of technology in education can be applied to learning models, both methods and media. Vocational learning at this time could not be carried out optimally during the co-19 pandemic. Covid-19 has forced the world of vocational education to change towards digital-based online learning. Practical implications for the implementation of technology in teacher education, suggesting the importance of establishing open discourse and collaboration between college stakeholders to enable enactment of a vision for equity-that allows programs to move swiftly from crisis-management to innova-tion and transformation during the Covid-19 pandemic (Dwivedi et al., 2020; Hayak & Avidov-Ungar, 2022). Even though this condition can certainly complicate the learning process for vocational or diploma students because in learning there is more direct hands-on practice than theory. Online learning is a learning system without face-to-face meetings between teachers, lecturers and students or students, but is carried out using the internet network (Gunawan et al., 2021; Hilburg et al., 2020). Online-based vocational learning must of course be able to measure student performance, either verbally or in writing, and produce works or products in accordance with the competencies to be achieved. Providing easy access for students through websites, smartphones without spending time and money, and can access them anywhere. Support from the government is also a hope for vocational education. This is done to increase the competency of vocational education graduates through an online-based technology innovation strategy (Rahmawati et al., 2021; Sobko et al., 2020). This digital literacy competency has a good contribution to the effective and efficient management of teacher learning. This good teacher-learning management really helps students to construct their understanding, especially

in the field of science. The positive values given in online learning such as high flexibility, varied content, and low costs, in fact have an impact felt by students, namely students experience boredom in carrying out learning activities, tend to be unmotivated, and not interested compared to studying as usual, besides that, online learning also experiences limitations, especially in terms of practice. The research results also show that students want a learning environment, a supportive curriculum, interaction with friends and teachers, and project-based learning (Hunt & Oyarzun, 2020). In addition, other findings highlight the importance of the teacher's role as a learning facilitator and the need to increase teacher competency so that online-based learning can use e-portfolios that can measure student performance validly (Sultana et al., 2020). This can be seen from the infrastructure and learning media used by a lecturer in delivering material to students. With advances in technology, it requires a lecturer as an educator to always innovate in creating learning media that is able to support student understanding in studying subject matter both theory and practice.

Based on these data it can be directed that website-based learning is one of the learning options that can be used. In general, web pages contain various information that can be accessed using the internet in which they can contain text, images, sounds, and even videos. Ease of access, an attractive appearance, and a variety of informational contents make the web suitable for use in the learning process. Web-based learning can also support student learning outcomes. Web processing to support the learning process has not been maximized. Web management can take advantage of free domains, such as blogspot or wordpress, and WIX. The use of this free domain makes it easier to access, no longer colliding with the problem of costs to be able to access it. The results of previous study show that the characteristics of internet technology are that it can always be accessed anytime, anywhere, multiuser and offers all the conveniences that have made the internet a very appropriate medium for the development of further distance education (Husamah, 2014). The utilisation and delivery of digital learning technologies have become prevalent globally, with a clear effect on student engagement in addition to other aspects of the learning experience (Bedenlier et al., 2020; Ng et al., 2020).The course that will be developed with web-based learning digital media is Food and Beveragse Servoce. Basic Competence in this course intersects with the competence of serving dishes. The product developed functions as a learning medium that can guide independent learning in carrying out learning that has so far been carried out in offline cooking laboratories. Based on the problems above, it is necessary to conduct research on the development and feasibility testing of web-based digital media. The results of this study are expected to be able to utilize ICT (Information and Communication Technology)-based facilities, support the needs of the vocational curriculum in the use of ICT-based learning media, meet the challenges of the 4.0 industrial revolution in the education sector, and improve the standard of competency learning for Meals in the Culinary Study Program, FT UNJ. The results of the research will later become suggestions and references as a precautionary measure for teachers/lecturers in vocational education in designing online learning. The update in this research is the development of website-based vocational digital media as independent learning in the Basic Practicum of Serving.

2. METHOD

The research conducted is research and development (Research & Development) or R&D. The development of this learning media uses the ADDIE model which includes Assessment/Analysis, Design, Development, Implementation and Evaluation (Branch, 2010; Cahyadi, 2019). This model was chosen to help create effective educational programs and have a more systematic process. **Figure 1** of the model design process used. The research subjects in alpha testing were 2 media experts and 2 material experts to test aspects of software engineering, learning design and visual communication. While the research subjects in beta testing were 30 Culinary Education S1 students. Menu cards, napkin folding clippings, videos on cooking practicum, and a collection of drinks books. The research subjects in alpha testing were 2 media experts and 2 material experts to test aspects of software engineering, learning design and visual communication (Lee, William & Owens, 2004; Sugiyono, 2016). While the research subjects in beta testing were 30 Culinary Education S1 students class of 2021. menu cards, napkin folding clippings, videos on cooking practicum, and a collection of drinks books. The research subjects in alpha testing were 2 media experts and 2 material experts to test aspects of software engineering, learning design and visual communication. While the research subjects in beta testing were 30 Culinary Education.

The development of digital media in the vocational field is carried out in the Food and Beverage Laboratory of the Culinary Study Program, Faculty of Engineering, Jakarta State University. Data collection through 5 stages, namely the first software instrument with black box testing based on the conclusions of the functional requirements in the needs analysis. The two instruments in the alpha test were carried out by experts (expert judgment) to obtain an assessment of the performance of website-based learning

media. The three beta testing instruments on digital media in the vocational field for Basic Food Administration courses via the WIX website. These four knowledge questionnaires are used to analyze how much the knowledge of cooking procedures has increased in relation to the use of the website. The five response questionnaires are a data collection technique that is carried out by giving a set of written questions to the respondent to answer. Sampling was carried out using purposive sampling technique. Purposive Sampling is a sampling technique with certain considerations. Data analisis consist of media feasibility analysis, practicality analysis, gain score test (knowledge improvement).

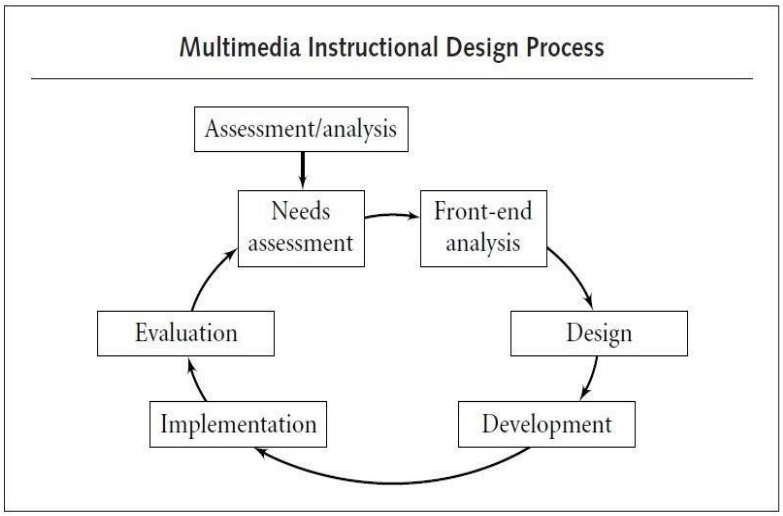

Figure 1. Multimedia Instructional Design Process

3. RESULT AND DISCUSSION

Result

The development research procedure is guided by the instructional materials development research design by ADDIE (Analyze, Design, Develop, Implementation, Evaluation). This web-based digital media can be used for various lecture activities, including: material delivery, syllabus room, assignments/quiz, grade room, attendance room, discussion room, and video room for each material, which is supported by several facilities including: menu final project for students.

Product Review

The result of the development of web-based digital media serving dishes (food and beverage service) is a WIX website that has been uploaded online with the url address: https://tatahidangbogaunj.wixsite.com/bogaunj. The results of the development and testing of learning media products that have been developed consist of several parts, such as the home page which is the main page or the Home page. Users will go directly to this page when typing in the website address. On the main page, there is a slide show of learning descriptions with an animated display for users to be more enthusiastic about learning. Furthermore, the Sign Up page is a page that contains a form to register as a member. Then this page contains the Semester Learning Plan (RPS) which forum members can download. The display of development is show in Figure 2.

Product Testing

Unit testingin this study was carried out using white-box testing with functionality as a test aspect. Unit testing on learning media is carried out by the developer during the development process or when web development is taking place. Developers do trial and error to test the smallest functionality on the web. The developer tests that all the links on the web work properly and the components on the web don't make mistakes. Integration testingin this study was carried out using black-box testing with functionality as a test aspect. The main concern of black-box testing is program functionality. The following is a black-box table for testing program functionality according to web functional requirements on Table 1.

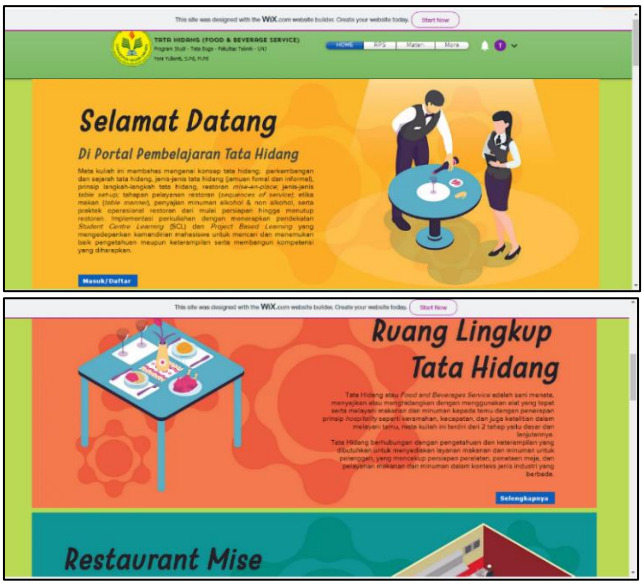

Figure 2. Home Page Display

Table 1. Black-box Testing Results

No.	Testing	Expected results	Test result
1.	Go to the web	*Web*can be opened properly without any problems	Get away
2.	Opens menus	All menus can run	Get away
3.	Opens navigation links	All navigation links on the web work properly	Get away
4.	Signup	The user has successfully registered	Get away
5.	Login :Student, Admin	The user has successfully logged in and can open pages that can only be opened by the user	Get away
6.	Logout	The user has successfully logged out of the web	Get away
7.	View my profile (View Profile)	The user has successfully displayed a complete profile	Get away
8.	Edit my profile (Edit Profile)	User can change/edit profile	Get away
9.	Changing the password (Change Password)	Users can change passwords smoothly	Get away
10.	Display material	Users can display all material without any problems	Get away
11.	Do practice questions	Users can work on practice questions easily without problems	Get away
12.	View the results of the exercise	Users can see the results of practice questions easily	Get away
13.	Download material	Users can download material from the web without any problems	Get away
14.	View video tutorials	Users can view video tutorials contained in one of the materials.	Get away
15.	Displays the forum page	Users can display forum pages without problems	Get away

System Testing

System testing in this study was carried out using Stress Testing to test the reliability (reliability) and Installation/Launch Testing to test compatibility (compatibility). Stress Testing intended to test the performance of the system in learning media. Stress testing in this study uses the Webserver Stress Tool application. The type of test is a RAMP test involving 10 users in 5 minutes of testing time. Tests are conducted to determine the number of error responses and system performance when accessed by more than one user. The results of the test show that the server is still able to accept requests from 10 users

simultaneously. An error occurred when the system started being used by 10 users. The error is caused by an unstable connection during the experiment. The results of this test are calculated as the time between the user clicking and when the server receives the request. This test aims to find out how fast the performance of the system is in processing information from the server to the user's device and the accuracy of the results of the information according to user requests. The results of this experiment show that the number of system users affects the performance of the information system, especially when the system is accessed at the same time by many users. The process of exchanging data on the application is also affected by the speed level of the internet connection on the device.

Acceptance Testing

Alpha testing is a test performed on the developer side by a customer in a controlled environment. In this study, alpha testing was carried out by two media experts and two material experts. Beta testing in this study was carried out on a group of students in the Class of Basic Culinary Education Study Program Culinary Education class of 2021. Media experts provide an assessment of website-based digital media seen from the aspects of software engineering and visual communication. The learning media testing questionnaire was carried out by 2 media experts based on score calculations using a Likert scale with a score range of 1 to 5. The result is show in Table 2.

Table 2. Analysis of Media Expert Test Results

No	Assessment Aspects	Amount grain	Score Expert	score that expected	Percentage Appropriateness
1	*usability*	8	73	80	91.25%
2	*Functionality*	13	123	130	94.62%
3	Visual Communication	12	113	120	94.16%
Amount		**33**	**309**	**330**	
Average Score					**93.64%**

Base on Table 2 the average result of the eligibility percentage is 93.64% Based on the eligibility category, web-based digital media serving dishes (laying dishes) is in the "Very Eligible" eligibility criteria. Material experts provide an assessment of the learning design aspects carried out by 2 material experts, the result is show in Table 3.

Table 3. Analysis of Material Expert Testing Results

No	Assessment Aspects	Amount grain	Score lecturer	score that expected	Percentage Appropriateness
1	Learning Design	6	57	60	95%
2	Content Material (Content)	8	76	80	95%
3	Language and Communication	6	57	60	95%
Amount		**20**	**190**	**200**	
Average Score					**95%**

Base on Table 3 show the average yield of the three aspects is 95%. Based on the eligibility category, web-based digital media serving dishes (laying dishes) is in the "Very Eligible" eligibility criteria.

User Feedback/Response Results

From the results of research on student responses to the use of digital media serving web-based dishes (laying dishes). The questionnaire used was filled in by respondents as many as 25 students representing the population. Furthermore, respondents filled out a questionnaire consisting of 17 statements with 5 alternative answers, namely SS (Strongly Agree), S (Agree), AS (Somewhat Agree), TS (Disagree) and STS (Strongly Disagree). Student responses are described in the form of statements consisting of 5 indicators, namely healthy sensory organs, focused attention, clear stimulation and sufficient time. The result of statistical analysis is show in Table 4.

Table 4. Results of Statistical Analysis of Student Response Data

No	Analysis	Results
1.	Maximum Value	85
2.	Min Value	65
3.	*Means*	80
4.	*Median*	80
5.	*Mode*	80
6.	*Standard Deviation*	3.72

Referring to **Table 4**, it can be seen the frequency distribution of student responses to the use of web-based digital media serving dishes (laying dishes). Next, we will explain the frequency distribution which will be presented in **Table 5**.

Table 5. Distribution of Student Response Frequency

No	Intervals	Frequency	Percentage	Category
1	85.55 < X	5	20%	Very high
2	81.85 < X ≤ 85.55	13	52%	Tall
3	78.15 < X ≤ 81.85	4	16%	Currently
4	74.45 < X ≤ 78.15	2	8%	Low
5	X ≤ 74.45	1	4%	Very low
	Amount	**25**	**100%**	

Based on **Table 8**, the results obtained were that 5 participants (20%) were in the very high category, 13 participants (52%) had high category responses, 4 participants (16%) had moderate category responses, 2 participants (8%) had low category responses. and 1 participant (4%) was in the very low category. Thus, when viewed from the frequency of each category, it can be seen that the participants' responses to the use of web-based digital media serving dishes (food and beverage service) are high.

Prior Knowledge Data (Pre Test) Using Website-Based Digital Media

The following are the results of descriptive data on knowledge before using digital media for serving web-based dishes (setting dishes) with a total of 25 students in **Table 9**.

Table 9. Pretest data

Range	Category	N	%
≥ 76-100 %	Good	2	8
60–75 %	Enough	9	36
≤ 60 %	Not enough	14	56
Total		25	100
Means		58.74	
Median		57.14	
mode		57.14	
Standard Deviation		11.64	
Maximum Value		80	
Min Value		34.29	

Based on Table 9, it shows that 2 students (8%) have good knowledge of cooking procedures with a range of ≥ 76-100%. Then as many as 9 students (36%) have sufficient knowledge with a range of 60 - 75%. And 14 students (56%) have less knowledge with a range of values≤ 60%. So that the most data shows that knowledge about the material for serving dishes is still lacking. The average value before being given the media was 58.74 in the less category.

Knowledge Data After (Post Test) Using Web-Based Digital Media

The following are the results of descriptive knowledge data after using digital media serving web-based dishes (laying dishes) with a total of 25 students in Table 10.

Table 10. Post Test Data

Range	Category	N	%
≥ 76-100 %	Good	22	88
60–75 %	Enough	2	8
≤ 60 %	Not enough	1	4
Total		25	100
Means		88.34	
Median		91.43	
mode		97.14	
Standard Deviation		10.94	
Maximum Value		100	
Min Value		57.14	

Based on Table 10, it shows that 22 students (88%) have good personal hygiene knowledge with a range of ≥ 76-100%. Then as many as 2 students (8%) have sufficient knowledge with a range of 60-75%. And only 1 student (4%) still has insufficient knowledge with a range of ≤ 60%.So that the most data shows that knowledge of the material for serving dishes is good after being given digital media in the vocational field for arranging and serving web-based dishes. The average value after being given digital media for serving web-based dishes (laying dishes) was 88.34 which was in the good category. The gain test is intended to find out the results of pre-test and post-test student data calculations using web-based digital media serving dishes (setting dishes) with an increase difference of 29.6. The results of the gain score on the dish management knowledge before and after the poster media was applied showed a gain value of 0.72 in the rangeG > 0.7 means an increase in knowledge of dishwashing before and after using digital media serving website-based dishes (laying dishes) in the high category.

Discussion

Learning Media Development

This study refers to the procedure for developing Multimedia-based Instructional Design. In general, the steps that must be passed to produce this learning media product are Assessment/Analysis, Design, Development, Implementation and Evaluation (ADDIE). The development of learning media begins with an assessment/analysis to find out the state of learning in schools and what is needed in the media development process, including materials, technology (hardware & software), task analysis needed to develop learning media according to needs. Based on the assessment/analysis that has been collected, the design process is carried out. At this stage the researcher designs the components that will be contained in the learning media, namely the selection of specific material, the selection of the media approach used and the design of the menu. There are six main menus in this learning media, namely: 1) Home, which is the main page or start page of the learning media, contains motivational slide shows and a button for a description of learning material; 2) Semester Learning Plan (RPS), contains course descriptions, course learning achievements, sub cpmk, assessment, learning methods, teaching activities, and references; 3) Material, contains the material for the dish layout, which contains several subject matter, including the scope of the dish layout, restaurant noodles en place, table set up, sequence of service, serving beverage, and planning practicum. Each material can be downloaded, through Google Drive which has been registered on the website to download/download the material so that it can be accessed offline 4) Final Project and Final Test Questions; 5) Forum, contains discussion forum facilities intended for users to communicate with each other; 6) Contact Us, contains developer information and a form to send messages to developers if they need help.

Based on this design, development is carried out into a storyboard in the form of a rough layout of the learning media which is then realized in the form of a real website/website. Android media and websites are created using Wix.com: Free Website Builder, a free website builder that provides a variety of innovative and attractive templates and designs. The steps taken to develop this android and website were selecting templates available on the wix.com website and then the researcher entered the appropriate logos, images, photos, writings and videos. The next step is to adjust the layout, font size, images, photos and videos. After the website is finished, all that remains is to publish it so that it can be accessed by students. Apart from being displayed in the form of a website, Wix. com can also present it in Android form which can be accessed from a smartphone (mobile view). The next stage is implementation, namely evoking online learning media so that it can be used directly by users. Researchers uploaded learning media online with the address https://tatahidangbogaunj.wixsite.com/bogaunj Website development in this study used the type of service provider in the form of the Wix website. Wix.com is also a website creation site that is specifically for people who haven't created a website before. This

clearly makes it very easy for students who are not proficient in using the website in compiling website-based teaching materials. In addition, the Wix service which is provided free of charge also makes students interested in developing web-based teaching materials using this Wix service provider (Paul et al., 2021; Susanti, 2019). The final stage of the learning media development process is the evaluation stage. This process is used to measure the feasibility of a learning media, the learning media developed is assessed by several experts and then revised to produce learning media that is ready to be tested on students in the form of one to one tests, small group tests and field group tests to find out the feasibility of learning media. Previous study states that the use of web-based learning media can reduce a static atmosphere and can create an effective, interesting, interactive learning process and can arouse student learning motivation (Salam, 2015). The use of the web as a learning medium provides several advantages namely: 1) students can do independent learning so they can increase and expand knowledge, 2) students do more learning activities, because students not only listen to the teacher's description, but also do other activities, for example observing and trying, and 3) web-based learning media provide additional learning resources that can be used to enrich learning material.

Supported by the research results state the advantages of web-based learning media that have been developed are 1) the appearance of learning media is simple but elegant, 2) has a complete variety of materials as student learning materials independently, 3) integrated materials allows students to gain an interesting learning experience because it is more interactive, 4) materials and exercises for sequences and series questions in this media use Indonesian and English, and 5) android games in the form of practice questions are able to arouse students' interest in learning mathematics (Setiyadi & Qohar, 2017). Learning using the online web is an e-learning development model. As according to previous study that the e-learning model must be designed carefully and precisely so that it is able to realize what is desired. Flexible learning can be done anywhere and anytime without space and time limitations (Yustina et al., 2022). According to other study e-learning is a form of web-based learning that can be accessed from the internet (Saraswati et al., 2018). E-learning as an innovation in vocational education and training has the potential to change new ways of teaching. Based on the results obtained, in general evaluation which is good for every aspect. However, educational websites require a strong signal to be accessed so they don't take up consumers' opening time. Since schools and universities had to close, teacher educators and students had to adapt to online learning. The shift to online learning in the colleges of education was massive and disruptive, moving all exist-ing courses to online learning in a matter of days. A complete online course requires an elaborate les-son plan design, teaching materials such as audio and video content, as well as technology support teams (Huang et al., 2020; Varenina et al., 2021). In essence, the use of media has the goal of creating more communicative and meaningful learning for students. Along with the development of increasingly advanced technology, there are many alternative media that educators can use to help students learn, one of the technologies that is currently in great demand by the public is mobile learning using smartphones or laptop PCs. Students as students are a group of people who generally follow the trend of the latest technological developments in this case smartphones, both content and functions which have so far been dominated by entertainment content.

The feasibility of web-based digital media serving dishes (laying order) which was developed for learning the Basic Course of Serving in the Culinary Study Program-FT-UNJ

In line with research that evaluating the validity of web-based e-learning media refers to the aspects and criteria for evaluating the learning media used (Huda et al., 2020). The media expert validation stage involved two media experts, namely education and information technology lecturers and experts working in the IT field. The overall result for each of these aspects was a score of 309 out of 330 and was included in the "very decent" category with a percentage of 93.64%. The material expert validation stage involves lecturers as well as food and beverage service practitioners and food and beverage service teachers. The overall result for each of these aspects is a score of 190 out of 200 and is included in the "very decent" category with a percentage of 95%. In addition, it is reinforced by the research results of study showing that the Hybrid learning media website based on digital literacy skills is "very feasible" to use based on product feasibility testing in the form of media expert validation obtained content validity index (CVI) results of 1 and student response results to media 79.85% in the "good" category (Rahayu et al., 2019). Furthermore, the results of the study show that the average value given by the evaluator gets a value of 83 which is included in the good category. Teaching materials developed by students vary greatly. The teaching materials consist of wordpress (28%), wix (24%), webnode (16%), prezi (16%), other websites and the UIN Website each with 8%.In addition, the response is the result to be achieved from a communication process. In this study, participants' responses to media use were a form of communication. And based on the data generated, the student responses are included in the high category. Many studies have been conducted in the development of this web-based learning media which

produces good changes to the process and learning outcomes. In addition, by increasing the number of learning resources on websites (internet) which provide various kinds of learning facilities and opportunities. Research is in line with the results of the analysis and research findings regarding the effectiveness of the implementation of hybrid learning using e-learning madrasas in mathematics subjects, it shows that learning using e-learning madrasas is quite effective to implement (Bali et al., 2022; Heliawati et al., 2022). Students can more easily follow teaching and learning activities wherever they are while using interactive multimedia in the science learning process during the current pandemic.

Based on student responses obtained from the frequency of each category, it can be seen that the participants' responses to the use of web-based digital media serving dishes (laying dishes) were high. The student response recapitulation data shows that the learning process with Android-based learning media in integrated learning subjects is interesting and fun. The percentage of respondents who stated this was 100%. This is because learning has several advantages, one of which is inviting students to be active in learning. Results indicate that the kinesthetic learning activity had a positive impact on stu-dent learning outcomes. Active learning, independent and utilizing technology will create a conducive classroom where learning is not teacher-centered. In addition, the development of this learning is a form of excellent service provided to students and study programs in achieving learning goals and constructs providing varied learning resources.

Enhancing Knowledge of Serving Through the Development of Web-Based Digital Media

The average value before being given the media was 58.74 in the less category. The average value after being given web-based digital media serving dishes (laying dishes) was 88.34 in the good category. The results of the score gain value on dishware knowledge before and after the application of web-based digital media shows a gain value of 0.72 in the range G > 0.7 meaning that the increase in dishwashing knowledge before and after using digital media based on serving dishes (setting dishes) high category website. This is reinforced by the results of research showing that Android-based nutritional education media and websites with the theme of balanced nutrition have been successfully developed by demonstrating a good level of acceptance and liking. Android-based nutritional education media shows better results when compared to websites and other media. There have been positive changes in the knowledge, attitudes, and practices of elementary school children after nutrition education. The result of digital material application training is that students can easily use the application because it can be accessed via a smartphone, material can be opened via a smartphone, material can be studied via a smartphone, so it can be accessed anywhere (Asri, 2018; Krüger & Bodemer, 2022). In line with the results of the study concluded that the obstacles to online learning at Halu Oleo Kendari University were more than the advantages (Hindaryatiningsih, 2023). Some of the found factors that become obstacles or support for the success of online learning are social factors from peers teachers and parents, completeness of technological devices for learning, physical and psychological readiness of students, parents and teachers, internet network, environmental factors.

The results of the study show that the teaching materials developed with the Wix service provider have a good presentation of the material. This is inseparable from the ease of operating Wix in web development. The development of web-based teaching materials will not be complete if only presented with one form of media. Therefore, teaching materials resulting from student development are also evaluated based on the use of media devices. Complete web-based teaching materials consist of three good media components, namely audio, visual, and audio-visual. The last aspect that is used as a reference in this assessment is the ease of use of the device. This means that teaching materials developed by students must be easy to use and used by students. The results of the study show that all types of service providers used by students get the same score, which is more than 80. This means that all aspects of teaching materials have ease of operation. The development of a website-based E-learning system application in this study can facilitate the teaching and learning process for vocational education students (Leksono et al., 2020; Muharto et al., 2019). Teachers should apply online learning and master technology more because implementing online learning will allow teachers to teach from anywhere and at any time. Online learning can also provide engaging learning so that students are not bored and are enthusiastic about learning (Arifin et al., 2022; Putra, 2021).

Implementation of innovative and interactive learning and students can improve their ability to serve dishes through an initial understanding before implementing the material with the availability of digital literacy and ease of learning. The potential and prospects for website development in the future are very wide open considering the tendency of people to become more dynamic and mobile as well as the demands for quality and diverse educational needs. The learning concept is expected to encourage the creation of an effective and innovative learning environment so that it can motivate students and lecturers to learn. Website-based digital learning media can be used in independent learning, supporting technology

and information in the field of vocational education. Other researchers can develop web-based learning media using web builder facilities such as Wix, Moodle, Druppal, and so on with different materials to produce more varied learning media.

4. CONCLUSION

The product results are in the form of digital media in the vocational field in the presentation and service of web-based dishes for the F&B service course through the WIX website contains food layout material with sub-materials on the scope of dish layout, restaurant mise en place, table set up, sequence of service, serving beverage, and planning practicum. The results of the feasibility validation of two media experts and the material expert tested the quality of learning media in the "very decent" category. The results of value on F&B service knowledge before and after the application of web-based digital media be increase in knowledge of dish preparation before and after using web-based digital media serving dishes (laying order) with a high category. Website-based digital literacy in F&B service courses can have implications in producing learning resources, learning media that adapt to technological advances and the needs of students to produce more effective learning. Contribute in supporting digital literacy transformation in education.

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