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## Development of Digital Teaching Materials for Basic Excellent Service Based on Google Site for Culinary Vocational Students

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### Keywords:

*Development, digital teaching materials, basic excellent service*

### ABSTRACT

The purpose of this study is to find out: 1) the results of the development of basic digital teaching materials for excellent service based on Google site platform; 2) the feasibility of materials and media on the basic digital teaching materials of excellent service based on the google site; 3) Student / User Response of Basic Digital Teaching Materials Excellent Service Based on the Google site. This research used research and development (R&D), especially the 4D model according to Thiagarajan. The steps in this model include defining, designing, developing, and disseminating. The data collection technique was carried out using questionnaires with research subjects, consisting of 6 validators (material & media) and 33 culinary students of SMKN8 Surabaya. Data analysis techniques using quantitative descriptive techniques Research shows: 1) digital teaching materials in can be accessed using <https://bit.ly/DasarPelayananPrima> links; 2) the feasibility of the material and media was declared very feasible with average scores of 92% and 87% respectively: 3) Student response was excellent with an average of 84%. Based on these results, it can be concluded that basic digital teaching materials for excellent service based on Google sites for culinary vocational students are very feasible to apply in culinary basics learning.

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## Introduction

Vocational education in Indonesia is one of the strategies to prepare competent human resources in their respective fields. The purpose of vocational education is to produce skilled workers who can meet the demands of the needs of the business / industrial world and can develop their potential to adopt and adapt to the development of science, technology, and art. Currently, the government is trying to improve the quality of vocational education. Some of them are the government has developed many job training programs, helped the learning process in vocational schools or polytechnics, and provided opportunities for students to plunge directly into the world of work/ industry. To achieve these educational goals, several components must be considered in the learning process. One of these components is the curriculum.

Schools must invest in infrastructure, create high-quality curriculum, and set up effective teaching methods (Nguyen et al., 2023). The independent curriculum is the one

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followed in Indonesia. The independent curriculum is a curriculum with a variety of intracurricular learning opportunities, where the learning material is more optimally designed to give students ample time to investigate ideas and hone their competencies. This is not much different from the objectives of vocational education mentioned above. In addition to curriculum, learning resources, learning methods, learning media, and teaching materials also affect the success of educational goals. Teaching material is a material or object used by students to learn and achieve the minimum competence of students. The government has produced digital teaching materials in the form of e-books for use in autonomous curriculum learning. The e-book has material that is equipped with images, but it lacks audio and video to facilitate differentiated learning. Since every student learns content differently, digital teaching resources that are accessible to all students with varying personalities are required.

In order to build a learning community, foster a learning environment, and advance active learning to improve students' critical thinking skills, a sustainable digital learning ecosystem should be supported by technologies, infrastructure, contents, and administration (Nguyen et al., 2023). This is in accordance with research that the results of the questionnaire for the Screencast.com application showed that, out of the 25 students, 20 selected "strongly agree" and 5 selected "agree" that the resources uploaded to screen.cast.com, which were connected to iFolio and Wordpress, had been extremely helpful to them in understanding the lessons taught, could be easily accessed at any time, and could be used as a reference when revising. These links can include details about Japanese society and culture, particularly those that are relevant to the course material and are not included in textbooks (Shabudin et al., 2014).

Something similar was also stated that the educational goal and impact of digital anatomy teaching systems can be significantly increased by the integration of digital human systems, diverse interactive tools, and learning settings. Compared to other similar methods, these can more accurately convey the worth of digital anatomy teaching resources and instructional models. The advancement of anatomy education in medical schools and universities is further aided by the growth of digital and information technology (Zhang et al., 2021). Google Sites is one of the websites/applications that can be utilized to build digital teaching resources in the development of 21st-century learning.

This Google site-based digital teaching material can provide a more interesting and efficient learning display because it includes a variety of learning resources ranging from materials, images, videos, audio, quizzes, and evaluation questions. According Mahmudin (2022) with the research title "Development of Google Site Website-Based Cooling System E-Module for Vocational High School Students" Argues that the results of research and development of electronic product modules used for machine cooling system learning carried out obtained decent results. These results are known from expert validation and trials for learning carried out so that electronic products of machine cooling system modules can be used as viable teaching materials. This is in accordance with research that the website can be used as a resource for high school students in clinic settings, community after-school programs, and school-based health programs. Among undergraduate students and resident

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physicians, the [www.marshallteentalk.org](http://www.marshallteentalk.org) website was deemed to be generally helpful, acceptable, feasible, and accurate in this pilot trial (Yoost et al., 2021).

SMK N 8 Surabaya is one of the SMK in Surabaya which is located at Jl. Cambodia No.18, Ketabang, Kec. Genteng, Surabaya. One of the expertise competencies at SMK N 8 Surabaya is Culinary, where in these competencies there are basic culinary subjects for phase E. These subjects consist of several elements, one of the elements is the basis of excellent service in the culinary industry. This element is one of the elements that must be understood by students because it relates to how to interact and provide the best service for consumers. This element must not only be understood cognitively but also effectively and psychomotorically. Therefore, starting from the material to practice, all must be mastered. However, some students cannot master this material until practice, so interactive and complete teaching materials are needed starting from giving material to practice.

Based on the results of observations made at SMK Negeri 8 Surabaya by interviewing culinary class X students, information was obtained that students felt the learning process carried out by the teacher was quite fun, but teachers tended to explain the material through power points that were displayed using LCD. The material delivered through the LCD is only points in the material, the rest students learn independently using package books borrowed from libraries with limited numbers and e-books from the government.

Printed package books contain only materials and images. This makes their motivation to learn decrease because printed teaching materials cannot provide audio and video to make it easier for them to learn. Based on the results of direct observation, students stated that the teaching materials they need for the basic material of excellent service in the culinary industry are digital teaching materials. Where, these digital teaching materials can accommodate students to access several learning resources such as images, audio, and video that can be accessed anytime and anywhere with the condition that there must be an internet network connection.

Based on the background above, the author is interested in developing Google site-based digital teaching materials for basic material of excellent service in the culinary industry. The formulation of the problem in this study is:

1. How is results of the development of basic digital teaching materials for excellent service based on Google site?
2. How is feasible of the materials and media on basic digital teaching materials for excellent service based on the Google site?
3. How is student response/user of digital teaching materials for basic excellent service based on the Google site?

## **Research Methods**

Research and development (R&D) is the research methodology employed in this study. Research and development techniques are employed to create specific items and evaluate their efficacy (Sugiyono, 2017). A 4D model by Thiagarajan was employed as the research model. According to Thiagarajan (1974) the 4D model has four research steps: defining,

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designing, developing, and disseminating. The stages of this investigation were limited by time and money, and they only completed the development stage.

1. The stages that can be done in the defining step according to Thiagarajan (1974) are:
  - a. The initial analysis, namely at SMKN 8 Surabaya students get learning materials with power point media and the books used only contain material and images.
  - b. Curriculum analysis, namely the curriculum used at SMKN 8 Surabaya is an independent curriculum.
  - c. Analysis of student character, namely students bring devices and teachers allow students to use them in the learning process.
  - d. Material analysis, namely the material presented in accordance with learning objectives. The element of implementing excellent service in the culinary industry has the aim of explaining the meaning of excellent service, describing the importance of excellent service, working with colleagues and customers, working in different social environments and communicating using the telephone.
  - e. Task analysis, that is, the tasks given include cognitive, affective and psychomotor aspects.
  - f. Formulating learning objectives, this is done so that digital teaching materials are made in accordance with learning objectives.
2. The stages that can be done in the design stage according to Sudikan (2023) are:
  - a. Preparation of materials
  - b. Flowchart & storyboard creation
  - c. Layout and appearance design
  - d. Making digital teaching material designs
  - e. Making product prototypes
  - f. Finishing digital teaching materials
3. The stages of development can be carried out according to Sudikan (2023) namely:
  - a. Validation of the feasibility of digital teaching materials, validation is carried out by material experts and media experts
  - b. The trial of digital teaching materials was conducted to determine student responses carried out by culinary students of SMKN 8 Surabaya.

Students at SMKN 8 Surabaya, material and media experts serve as the research subjects. Quantitative research data were used in this study. This information was gathered from student replies in trials 1 and 2 of the foundational digital training resources for providing exceptional service in the culinary industry, as well as the outcomes of expert validation. Questionnaires were distributed to two media validators, two material validators, and phase E students at SMK N 8 Surabaya as part of the offline data collection approach. Researchers use quantitative descriptive data analysis techniques in this studies on the creation of foundational digital instructional resources and excellent customer service in the culinary sector. Following the acquisition of the results, the following formula will be applied to the data:

$$\text{Eligibility Percentage} = \frac{\text{Score}}{\text{Maximum Score}} \times 100\%$$

After obtaining the results of the percentage of feasibility of digital teaching materials made, conclusions will be obtained regarding the feasibility of media and materials developed in accordance with the conversion in Table 1.

**Table 1** Conversion of eligibility results

Criteria	Score
Very Feasible	81% - 100%
Feasible	61% - 80%
Quite Feasible	41% - 60%
Less Feasible	21% - 40%
No Feasible	0% - 20%

After obtaining the results of the percentage of student responses of digital teaching materials made, conclusions will be obtained regarding the feasibility of media and materials developed in accordance with the conversion in Table 2.

**Table 2** Student response conversion

Criteria	Score
Very good	81% - 100%
Good	61% - 80%
Quite Good	41% - 60%
Less Quite	21% - 40%
Not Good	0% - 20%

## Findings

This research produces basic digital teaching materials for excellent service in the website-based culinary industry for culinary vocational students. This digital teaching material is created using the googlesites platform.

### **Results of Digital Teaching Material Development**

Basic digital teaching materials for excellent service based on google site consist of 8 pages, namely home page, lighter questions, materials, LKPD, practical assignments, evaluations, bibliography and glossary. This teaching material is accessed using a link or QR code and can be accessed using electronic media such as devices, laptops or computers. The advantages of this digital teaching material compared to existing teaching materials are:

1. This digital teaching material is in the form of a website so that users do not need to download and need storage space to use it provided that there must be an internet network connection.
2. This teaching material not only contains material, but also contains images, audio and video that can be directly used without opening other website pages.
3. The navigation contained in the website is well easy to use
4. This teaching material can be used anywhere and anytime making it easier for students to get information provided that there is an internet network connection. If the user will use digital teaching materials offline, then the user must download the available pdf, audio and video files by providing a minimum storage capacity of 20 mb.
5. The material is equipped with several questions, namely lighter questions on perception, case study questions and evaluation questions that are useful for strengthening student understanding

Here is a QR code and link that can be used to access digital teaching materials:



<https://bit.ly/DasarPelayananPrima>

The outcomes of the previously described digital teaching materials development correlate with Kosasih's viewpoints. According to Kosasih (2021) digital teaching materials are computer-based and come with additional multimedia devices. To encourage students to study and facilitate their comprehension of the topic, educators have created digital teaching materials that incorporate a variety of features, such as visuals, audio, video, and case studies. This is also consistent with research findings by Dermawan & Fahmi (2020) which indicate that using web-based e-modules has improved student learning outcomes. Based on the results of the value effectiveness test, it can be concluded that e-modules are appropriate for use in the learning process and can significantly improve student learning outcomes.

### ***Feasibility of the Material***

The feasibility of the material is obtained from the results of validation that has been carried out by the three validators who are experts related to the basic material of excellent service in the culinary industry. The three material experts assess the aspects contained in the material expert validation sheet that has been provided, namely containing aspects of module components, content quality, instructional quality, and technical quality. Based on the assessment of the three validators on the four aspects above, the overall average score is 92%. This average value is included in the very feasible interpretation criteria (Mahendri et al., 2022). The result of material feasibility can be seen in Table 3.

**Table 3** Results of material feasibility

Aspects	Score
Module Components	93%
Content Quality	93%
Intructional Quality	91%
Technical Quality	91%

The results of the assessment of aspects of the module components obtained a final average score of 93% with a very feasible interpretation. This value is obtained because in basic digital teaching materials, and excellent service there are module components that should be present in making teaching materials or e-modules. Some of these components are module identity, learning outcomes, learning objectives, descriptions of teaching materials, instructions for use, bibliography, glossary, and so on. This is following Kosasih (2021) that teaching materials can be used effectively if the components are complete and integrated,

starting from the preface, instructions for using the teaching materials themselves, material presentation, performances/exercises, and summaries to further reviews/feedback.

The results of the assessment of aspects of content quality obtained a final average score of 93% with a very feasible interpretation. This value is obtained because in basic digital teaching materials, excellent service presents material, images, audio, video, case studies, and evaluations following the achievement of elements, learning outcomes, and existing learning objectives. The feasibility of content quality aspect material in the development of a Google site-based cooling system e-module for vocational high school students obtained a score of 94.75% with a decent interpretation (Mahmudin et al., 2022).

The results of the assessment of aspects of instructional quality obtained a final average score of 91% with a very feasible interpretation. This score is obtained because basic digital teaching materials for excellent service are considered to be able to be used independently by students and can be used for students to develop and learn material anywhere and anytime. This is in line with Daryanto (2013) assertion that modules contain self-instructional and user-friendly learning resources that are simple to use and allow students to use them on their own. This is consistent with study by Dewi (2023) which found that because the modules created must be able to support students' independent learning, an average score of 96% with interpretation is extremely realistic in the area of instructional quality.

The results of the assessment of technical quality aspects obtained a final average score of 91% with a very feasible interpretation. This score is obtained because the basic digital teaching materials of excellent service use language, sentences, images, audio, and video that are easy to understand. This is following Kosasih (2021) that the language used in teaching materials must be easy for students to understand, and use effective sentences and familiar words or terminology. This is also in accordance with previous research, that the linguistic aspect gets an average score of 85% with conversion very feasible because the language used in the e-module is easy to understand (Maulidiyah et al., 2023).

### ***Feasibility of Media***

Media service is obtained from the results of validation by the three validators who are experts in developing teaching materials. The three media experts assess digital teaching materials through six aspects, namely the feasibility of screen design display, ease of use, tidiness in presentation, timeliness, usefulness, and module characteristics. Based on the assessment by the three validators of the six aspects above, basic digital teaching materials for excellent service obtained an overall final average score of 87% with a very feasible interpretation (Mahendri et al., 2022). The result of media feasibility can be seen in Table 4.

**Table 4** Results of media feasibility

Criteria	Score
Feasibility of Display Design Screen	85%
Ease of Use	90%
Neatness in Presentation	92%

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Timeliness	83%
Expediency	87%
Module Characteristics	87%

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The results of assessing the feasibility aspect of the display of the screen design obtained a final average score of 85% with a very feasible interpretation. This score is obtained because the background color and writing in the teaching materials contrast so that users can read the text well, the text and images presented also have the same size with a consistent layout to make users feel comfortable in using basic digital teaching materials excellent service. A good website must have a good and consistent color composition (Suyanto, 2009). This is in accordance with research, that the display aspect of screen design obtained an average score of 84% with a very decent interpretation (Maulidiyah et al., 2023).

The results of the assessment of the ease of use aspect obtained an average score of 90% with a very decent interpretation. This score is obtained because basic digital teaching materials for excellent service can be operated using various electronic media by pressing the link that has been shared. The navigation and features featured in the digital teaching materials are easy to use and work well. One of the characteristics of digital teaching materials in the form of e-modules is user-friendly or easy to use by users (Daryanto, 2013). A good website has navigation that can help users find an easy way or direction when users use the website (Suyanto, 2009). This is in accordance with research conducted by Dewi (2023) that the ease of use aspect obtained an average score of 87% with a very decent interpretation.

The results of the assessment of neatness aspects in a presentation obtained an average score of 85% with a very decent interpretation. This score is obtained because the type and text size are legible and consistent on each page. The layout on the website must be consistent and the text on the website is easy to read (Suyanto, 2009). This is in accordance with research conducted by Dewi (2023) that in the aspect of tidiness in presentation, it obtained an average score of 90% with a very decent interpretation.

The results of the punctuality aspect assessment obtained an average score of 83% with a very decent interpretation. This score is obtained because teaching materials can be used directly or quickly to direct the desired feature according to the available network. This is in accordance with Kosasih (2021) that one of the advantages of digital teaching materials must be fast and practical in utilizing them. Websites that appear faster are more likely to be revisited, especially with attractive content and appearance (Suyanto, 2009).

The results of the expediency aspect assessment obtained a score of 85% with a very feasible interpretation. This is in accordance with Kosasih (2021) which reveals that digital teaching materials can increase learning effectiveness and learning efficiency independently. This is in accordance with research conducted by Maulidiyah (2023) that in the aspect of expediency, the e-module obtained an average score of 85% with a very feasible interpretation.

The results of the assessment of the characteristic aspects of the module obtained an average score of 86% with a very decent interpretation. This score is obtained because basic digital teaching materials of excellent service can be used independently by students

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anywhere and anytime with material that is in accordance with learning outcomes. Characteristics that must be possessed by a module, namely self-instructional, self-contained, stand-alone, adaptive, and user-friendly (Daryanto, 2013).

### **Student Responses**

The results of the application of basic digital teaching materials for web-based excellent service obtained an overall score of 84% with very good interpretation (Mahendri et al., 2022). The result of student responses can be seen in Table 5.

**Table 5** Results of student responses

Criteria	Score
Contents Quality	83%
Form and Accuracy	81%
Instructional Quality	86%
Timeliness	82%
Technical Quality	85%
Ease of Use	83%
User Satisfaction	84%

Assessment of student responses on aspects of content quality obtained an average score of 83% with excellent interpretation. This is because the material, images, audio, and video are presented according to the learning material and are easily understood by them. This is in accordance with Kosasih (2021), that teaching materials are something used by teachers or students to help facilitate the learning process. A good website must have content or material content on a good website, relevant to the purpose of creating a website (Suyanto, 2009). This is also in accordance with research that FCN website received 80 to 100% acceptance from experts for it being easy to use, having a clear structure and being consistency of sufficient information (Youhasan et al., 2022).

The evaluation of students' answers based on form and accuracy yielded an 81% average score with excellent interpretation. This is so that the website appears appealing to use by using colors that contrast with the wording, typeface, and size that are frequently utilized in basic digital instructional resources. This is consistent with Suyanto (2009) assertion that a good website should at the very least have a well-balanced color scheme, easily readable text, graphics that bolster the text content, appropriate use of animation, and animation that, taken together, creates a pleasing pattern.

Assessment of student responses on aspects of instructional quality obtained an average score of 86% with excellent interpretation. This is because basic digital teaching materials of excellent service can motivate students to learn. This is in accordance with research conducted by Dewi (2023) that in the aspect of instructional quality obtaining an average score of 91% with interpretation is very feasible because the e-module is considered easy to use both in video playback and image clarity.

The assessment of student responses on the timeliness aspect obtained an average score of 82% with excellent interpretation. This is because digital teaching materials can be used without waiting for a pause that is too long and adjusted to the available internet network. This is in accordance with Suyanto (2009) that websites that appear faster are likely to be revisited, especially with attractive content and appearance Kosasih (2021) also

argues that one of the advantages of digital teaching materials must be fast and practical in utilizing them.

Assessment of student responses on aspects of technical quality obtained an average score of 85% with excellent interpretation. This is because digital teaching materials are considered quite easy to understand from the aspects of language, writing, and sentences. This is in accordance with Syafei (2019) that the language used in digital teaching materials must be quite straightforward because students only deal with digital teaching materials when learning independently.

The assessment of student responses on the aspect of ease of use obtained an average score of 83% with excellent interpretation. This is because the menus and features provided can be used easily by respondents and function properly. One of the characteristics of teaching materials in the form of a good e-module is user-friendly or easy to use by users using various electronic devices (Daryanto, 2013).

The assessment of student responses on the aspect of user satisfaction obtained an average score of 84% with very good interpretation. This is because basic digital teaching materials can make it easier for students to learn and understand learning by providing material, audio, video, and images on one page. At the end of the material, a case study is also provided that can clarify students' understanding.

Digital teaching materials are also considered not boring because they look different from e-books, text teaching materials, or printed books that are already available. This is because printed books or e-books provided by the government only contain materials and images that can make students feel bored. This is in line with Kosasih (2021), computer-based teaching materials are one the teaching materials that are very interesting and able to increase student learning motivation, in addition to facilitating and accelerating the learning process. Suyanto (2009) also argues that satisfaction is an important thing that must be considered in making a website for the sustainability of the website. The availability of free and simple computer tools for creating or editing audio-visuals makes this type of content a very interesting option (Valenzuela-Pascual et al., 2022)

## **Discussion**

Based on the stages of creating Google site -based digital teaching materials starting from definition, design and development, it can be seen that digital teaching materials-based website which can be accessed using the link <https://bit.ly/DasarPelayananPrima> using electronic media such as devices, tablets and laptops. The display of teaching materials will follow the electronic media used. Digital teaching materials contain learning outcomes, learning objectives, trigger questions, materials, images, audio, video, practical assignments and evaluation questions. Questions and case studies can be answered directly in the comment's column provided, while practical assignments and evaluation questions can be done according to the instructions provided using help from the Google Docs and Google Form platforms. For evaluation questions, students can immediately see the score after completing it.

Based on the evaluation's findings, it was determined that using googlesites as the basis for fundamental digital teaching materials for basic excellent service is highly practical when it comes to facilitating learning. This is in line with the findings of other studies that

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were carried out in order to compare this research. The comments of media experts and material experts in the valid category are used to determine the validity of web-based E-modules (Dermawan & Fahmi, 2020). A further research finding indicates that web-based e-Modules Indonesian are appropriate for use as teaching resources for Indonesian in class XI SMK, based on the average percentage of all teacher responses of 92.30% with the criterion "Very Practical" (Oktavia et al., 2021).

This is accordance with several studies regarding website development for learning process. The FCN is an online learning resource created to give instructors and students in undergraduate HPE asynchronous training. The educational concepts of successful learning served as a guide for the creation and development of the FCN (Youhasan et al., 2022). Something similar was also stated that the website can be used as a resource for high school students in clinic settings, community after-school programs, and school-based health programs. Among undergraduate students and resident physicians, the [www.marshallteentalk.org](http://www.marshallteentalk.org) website was deemed to be generally helpful, acceptable, feasible, and accurate in this pilot trial (Yoost et al., 2021).

According to earlier research findings, web-based E-modules can greatly enhance student learning outcomes and are a practical tool for usage in the educational process (Dermawan & Fahmi, 2020). According to the findings of a different study, web-based e-Modules in Indonesian are appropriate for use as instructional resources for Indonesian in class XI SMK, with an average proportion of all student replies of 94.46% meeting the "Very Practical" criterion (Oktavia et al., 2021). Something similar was also stated that according to the respondents' evaluations and a comparison with earlier studies, basic digital teaching materials great service is deemed to be "very good" for use in the educational process. The information provided here indicates that students are mostly satisfied with their virtual learning environment. This is corroborated not just by examination of the course satisfaction overall item but also by multiple other items on specific components of instruction (Tietz et al., 2022).

Based on the research results, basic digital teaching materials based on Google site excellent service are feasible and can be used in the learning process. This is in accordance with validation by media and material experts as well as responses given by students. The limitation of this research is that the teaching materials were only developed for basic material on excellent service. For future researchers who are interested in developing digital teaching materials based on the Google site, it is hoped that more materials can be developed.

### **Conclusion**

Based on the results of validation and student responses to basic digital teaching materials, website-based excellent service can be concluded that:

1. The results of basic digital teaching materials for excellent service based on the Google site can be accessed using a link or by scanning a QR code that will be directed to the website page provided that you have an internet network connection. The research model used in the development of Google Site-based digital teaching materials is a 4D model. The stages used in this study are defining, designing, and disseminating. The digital teaching materials website contains materials, images, audio, video, case studies, and evaluations that can be used and done by students when using these digital teaching materials.
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2. The feasibility of Google site-based digital teaching materials in the form of e-modules, both material and media experts, obtained interpretation results "very feasible" for use in the learning process (92% and 87%).
3. Assessment of student responses to Google site-based digital teaching materials in the form of e-modules gets results with "very good" interpretation so that they can be used in the learning process (84%).

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### **References**

- Daryanto. (2013). *Menyusun Modul (Bahan Ajar untuk Persiapan Guru dalam Mengajar)*. Gava Media.
- Dermawan, & Fahmi, R. (2020). Pengembangan E-Modul Berbasis Web Pada Mata Pelajaran Pembuatan Busana Industri. *Jurnal Pedagogi Dan Pembelajaran*, 3(3), 508–515. <https://doi.org/10.23887/jp2.v3i3.29123>
- Dewi, D. K., Tri Pangesthi, L., Handajani, S., & Fatkhur Romadhoni, I. (2023). Pengembangan E-Modul Berbasis Flip PDF Corporate Edition Pada Kompetensi Dasar Puff Pastry Siswa Kelas XII SMK. *Journal of Creative Student Research (JCSR)*, 1(2), 279–292. <https://doi.org/10.55606/jcsrpolitama.v1i2.1503>
- Kosasih. (2021). *Pengembangan Bahan Ajar*. Sinar Grafika Offset.
- Mahendri, R. P., Amanda, M., & Latifah, U. (2022). Pengembangan E-Modul Interaktif Berbasis Flipbook sebagai Media Pembelajaran Distance Learning. *J-HyTEL: Journal of Hypermedia & Technology-Enhanced Learning*, 1(1), 1–14. <https://doi.org/10.58536/j-hytel.v1i1.18>
- Mahmudin, Ratnawati, D., & Khaharsyah, A. (2022). *Pengembangan E-Modul Sistem Pendingin Berbasis*. 7(April), 29–34. <https://doi.org/10.21831/dinamika.v7i1.48726>
- Maulidiyah, S. R., Pangesthi, L. T., Bahar, A., & Purwidiani, N. (2023). Pengembangan E-Modul Berbasis Glideapps Pada Materi Hidangan Penutup Di Smk Dharma Wanita Gresik. *Jurnal Riset Sosial Humaniora Dan Ilmu Pendidikan*, 2(3), 47–59. <https://doi.org/10.58192/sidu.v2i3.1106>
- Nguyen, L. T., Kanjug, I., Lowatcharin, G., Manakul, T., Poonpon, K., Sarakorn, W., Somabut, A., Srisawasdi, N., Traiyarach, S., & Tuamsuk, K. (2023). Digital Learning Ecosystem for Classroom Teaching in Thailand High Schools. *SAGE Open*, 13(1), 1–14. <https://doi.org/10.1177/21582440231158303>
- Oktavia, A. S., Djumingin, S., & Munirah. (2021). Pengembangan E-Modul Bahasa Indonesia Berbasis Web di SMK Negeri 2 Wajo. *Jurnal Universitas Negeri Makasar*, 1(1), 1–14. <https://eprints.unm.ac.id/id/eprint/19603>
- Shabudin, M., Aisyah, A., Darus, S., & Mimiko, N. (2014). Development of Teaching Materials
-

- and Utilization of Web 2.0 in Japanese Language Teaching and Learning. *Procedia - Social and Behavioral Sciences*, 118, 433–441.  
<https://doi.org/10.1016/j.sbspro.2014.02.059>
- Sudikan, S. Y., Indari, T., & Faizin. (2023). *Metode Penelitian dan Pengembangan (Research & Development) Dalam Pendidikan dan Pembelajaran*.
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
- Suyanto, A. H. (2009). *Step by Step Web Design Theory and Practices*. CV. Andi Offset.
- Syafei, I. (2019). Pengembangan Bahan Ajar Pendidikan Agama Islam Berbasis Problem Based Learning Untuk Menangkal Radikalisme Pada Peserta Didik Sma Negeri Di Kota Bandar Lampung. *Al-Tadzkiyyah: Jurnal Pendidikan Islam*, 10(1), 137–158.  
<https://doi.org/10.24042/atjpi.v10i1.3631>
- Thiagarajan, Semmel, D. S., & Semmel, M. I. (1974). *Instructional Development for Training Teachers of Exceptional Children : A Sourcebook Leadership Training Institute/ Special Education*. University of Minnesota.
- Tietz, S., Bodenbeck, L., Riedel, F., Wallwiener, M., Hennigs, A., & Heublein, S. (2022). How to make students satisfied with digital teaching? Investigative results from teaching evaluations in Gynecology and Obstetrics. *Archives of Gynecology and Obstetrics*, 306(5), 1587–1596. <https://doi.org/10.1007/s00404-022-06645-7>
- Valenzuela-Pascual, F., Pàmies-Fabra, J., García-Martínez, E., Martínez-Navarro, O., Climent-Sanz, C., Gea-Sánchez, M., Virgili-Gomà, J., Rubí-Carnacea, F., Garcia-Escudero, M., & Blanco-Blanco, J. (2022). Use of a gamified website to increase pain neurophysiology knowledge and improve satisfaction and motivation among students studying for a degree in physiotherapy: a quasi-experimental study. *BMC Medical Education*, 22(1), 1–9. <https://doi.org/10.1186/s12909-022-03457-w>
- Yoost, J., Ruley, M., & Durfee, L. (2021). Acceptability of a Comprehensive Sex Education Self-Study Website for Teaching Reproductive Health: A Pilot Study Among College Students and Obstetrics and Gynecology Resident Physicians. *Sexual Medicine*, 9(1), 100302. <https://doi.org/10.1016/j.esxm.2020.100302>
- Youhasan, P., Henning, M. A., Chen, Y., & Lyndon, M. P. (2022). Developing and evaluating an educational web-based tool for health professions education: the Flipped Classroom Navigator. *BMC Medical Education*, 22(1), 1–9. <https://doi.org/10.1186/s12909-022-03647-6>
- Zhang, N., Tan, L., Li, F., Han, B., & Xu, Y. (2021). Development and application of digital assistive teaching system for anatomy. *Virtual Reality and Intelligent Hardware*, 3(4), 315–335. <https://doi.org/10.1016/j.vrih.2021.08.005>
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