

# Development of Digital Teaching Materials about Surakarta Culinary in History Learning

Djono<sup>\*1</sup>, Sutiyah<sup>1</sup>, Sudiyanto<sup>2</sup>, Fatma Sukmawati<sup>3</sup>, Moh Salimi<sup>3</sup>

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**Abstract:** The development of educational technology in the 21st century must be in line with the preservation of the nation's culture. For this reason, digital teaching materials are needed that contain culinary culture to preserve the nation's culture and nationalism for the next generation. Therefore, this study aims to develop digital teaching materials about Surakarta culinary. This research was conducted as research and development by following the ADDIE research and development procedure (Analysis, Design, Development, Implementation, and Evaluation). This research was carried out until the development stage with the research subjects consisting of 278 high school students in Surakarta City. The research subjects were determined using a purposive technique with the consideration of the History teacher at the school. The data collection technique used a questionnaire distributed through google form. The questionnaire used in this study is a closed questionnaire with 21 statements to analyze the needs of the required teaching materials. Data analysis was then carried out using quantitative and qualitative techniques with a descriptive approach. The results of the study revealed that (1) most students expressed interest in using digital teaching materials, (2) Students hoped that teaching materials in the form of electronic books could facilitate the learning process from anywhere. (3) although students are familiar with various types of traditional culinary in the city of Surakarta, only a few understand the philosophy of the typical food of the city of Surakarta, and (4) the product of digital teaching materials for the history of the culinary city of Surakarta that was developed is suitable for use in the classroom learning process. The results of this research and development can be the basis for further research and development to develop innovative teaching materials that are suitable for use to improve the success of the learning process.

**Keywords:** Teaching materials, digital, culinary, Surakarta, history

## 1. Introduction

Indonesian culture is diverse, ranging from ideas, activities, and objects. Culture has several forms: first, the form of culture as an idea, thought, value, or norm; second, the form of culture as an activity or pattern of human action in society; third, the form of culture as objects made by humans [1], [2]. In addition, the culture that develops in Indonesia cannot be separated from the influence of other nations and globalization [3]–[5].

Specifically, the traditional culinary culture in several big cities in Indonesia has begun to fade. Many people, especially young people, prefer culinary from abroad, such as fast food and coffee [6], [7]. Unlike other big cities, the people of

Surakarta City still like traditional cuisine, such as *soto seger*, *nasi liwet*, and special village dishes (HIK) or *Angkringan* [8]–[10].

Moreover, every culture has a strong philosophy; likewise, Indonesian culinary culture spread in various regions. For example, *nasi liwet* Solo symbolizes rejecting bad things when a disaster occurs. When Java was rocked by earthquakes in the past, for example, nasi liwet was presented with prayers chanted for the safety of the entire universe and the hope that disaster would not happen again [11]. However, the history and meaning are not widely known by residents or culinary connoisseurs [12]. If it is left alone, this philosophy may be lost along with the culinary scarcity [13]. In this case, along with the information media development, Solo traditional culinary is increasingly being recognized by the younger generation. Many young people are involved in culinary as connoisseurs, food vloggers, traders, and entrepreneurs [14]–[16]. Nevertheless, traditional cuisine is dominantly known in terms of how to make and taste, not yet in terms of philosophy. For that, it is necessary to take action to introduce local cuisine and its philosophy to the younger generation through learning at school. Until now, education is still an effective means for cultural preservation [17]. For example, in senior high school, there is a history subject as a means for the preservation of history and culture. However, students view this subject as only memorizing, without any relation to the present. In

Associate Professor, Dept. of History Education, Universitas Sebelas Maret, Indonesia

Email: djono@staff.uns.ac.id

Associate Professor, Dept. of History Education, Universitas Sebelas Maret, Indonesia

Email: sutiyah@staff.uns.ac.id

Associate Professor, Dept. of Educational Technology, Universitas Sebelas Maret, Indonesia

Email: sudiyanto@staff.uns.ac.id

Lecture, Dept. of Educational Technology, Universitas Sebelas Maret, Indonesia

Email: fatmasukmawati@staff.uns.ac.id

Lecture, Dept. of Educational Science, Universitas Sebelas Maret, Indonesia

Email: salimi@staff.uns.ac.id

general, history learning in schools is still carried out in one direction, and there is no role for students in teaching and learning activities in class, thus making students less motivated in the subject of history. On this basis, there is a lack of student interest in Indonesian history subjects.

From extracting field data, the obstacles found were that teachers generally still used traditional teaching methods with existing printed teaching materials. It undoubtedly does not optimize the provision of information and stimulate students in optimally utilizing technology in obtaining knowledge. In addition, history teaching materials were still in print and less attractive [18], [19]. Therefore, Solo culinary exploration becomes a relatively urgent need in the context of preserving and enriching the library. Furthermore, digital teaching materials were developed to attract senior high school students who are millennials and digital generations.

In this case, digital teaching materials are a metamorphosis of conventional teaching materials developed but are still in accordance with the definition of teaching materials, i.e., a learning device packaged systematically and intact [20]. The teaching materials developed are different from those that already exist in general and teaching materials in digital form [21]. It is because the teaching materials are developed to combine the function of teaching materials as learning resources supported by multimedia features and teaching materials obtained from valid sources. Teaching material is good if it makes students active in learning, holistic, authentic (giving direct experience), interesting, and fun [22]. Ideally, teaching materials have complete and flexible materials to be used in classical, group, or independent learning [17]. Teaching materials should also follow the development of technology, art, and the realities of global community life. A teaching material can also be said to be good if it can create interaction between students and the environment in which they live [23]. Thus, learning is expected to be more effective in shaping students' understanding.

In general, the teaching materials are in the form of text including the materials listed in the history curriculum. They need review in some aspects, for instance: the context of the materials, student learning activities, and the questions used as evaluation. In reality, the use of historical teaching materials has helped students in the process of searching for additional information. However, materials focused on national history do not provide a new perception related to local history in each region, especially about local cuisine. Bannet argues that to understand the real conditions that occur in the student environment, teachers are advised to use the teaching of local history having the ability to bring students to real situations in the environment [24]. More specifically, it is stated that the teaching of local history seems to be able to break through the boundaries between the school world and the real world in the school environment [25]. In addition, it is still rare for educators to use digital teaching materials. In supporting learning activities in the 21st century, it is necessary to develop digital teaching materials that are in accordance with the characteristics of students [26].

Previous research on culinary and teaching materials was carried out using various methods. Teaching materials made specifically were to foster learning motivation and were made interesting according to the characteristics of students to increase understanding of concepts about local wisdom and create positive habits [17]; [27]. The most important thing is to include the culinary elements of Surakarta City as local wisdom in teaching materials so that learning becomes more meaningful [28][29].

Based on the problems above, this paper aims to analyze the need for digital teaching materials about the typical cuisine of Surakarta City in history learning. The needs analysis focuses on three aspects, namely analyzing the student's characteristics, analyzing the use of learning resources, and analyzing student's understanding of local cuisine [30]. Analysis of student's characteristics contains the analysis of initial knowledge about digital teaching materials, perceptions of digital teaching materials, ability to master digital teaching materials, motivation, and the potential for presenting teaching materials. Resource analysis contains content sources, technology availability, and learning facilities. Meanwhile, the analysis of students' understanding of local culinary contains knowledge about types of food and the relationship of local wisdom into learning history. This research is expected to contribute to education, especially in learning history, by using digital teaching materials about Surakarta culinary to supplement and foster the spirit of nationalism in students.

## 2. Material and Methods

This study uses the type of research and development that follows the design ADDIE (Analysis, Design, Development, Implementation, and Evaluation) [31], [32]. The product resulting from this research and development is a civics teaching material based on local wisdom that is suitable for use by educators and students in the learning process in order to maintain local culture in Indonesia. The stages of research and development in the ADDIE research design begin with analyzing the needs of the product being developed, designing the product, prioritizing the product, implementing the product, and implementing the product. The stages of research and development in the ADDIE procedure from the Branch are only up to the Development stage. Data were collected from respondents using a questionnaire that analyzed the need for digital teaching materials about Surakarta culinary in history learning. Then, the results are presented descriptively. The research was conducted in Surakarta City. The subjects of this study consisted of 278 high school students. The selection is done randomly using a purposive technique.

The questionnaire seeks to reveal the needs of digital media, which focuses on the three aspects: (a) analyzing the student's characteristics, (b) analyzing the use of learning resources, and (c) analyzing student's understanding of local cuisine [30].

The questionnaire sheet on this instrument contains statements regarding students' perceptions of the need for digital teaching materials about Surakarta culinary. The questionnaire used in this study was a closed questionnaire with 21 statements.

Closed questionnaires are used to reveal the type of data whose responses are exploratory by using a numerical scale rating technique or a rating scale.

In this descriptive survey research, researchers used quantitative data analysis techniques with a descriptive approach. The results of quantitative data were calculated using the Microsoft Excel program. While the descriptive approach is carried out by referring to interactive analysis, according to Miles and Huberman, with the stages of data reduction or selection and simplification of raw data, presenting data/information obtained during the study, and drawing conclusions [33], [34]. The next stages of survey research in this research include (1) formulating research problems and determining research objectives, (2) exploring literature and determining concepts, (3) determining research samples, (4) making questionnaires using the google application form, (5) distributing form link from google form, (6) questionnaire data processing using Microsoft excel program, (7) compiling research data descriptively from average data acquisition and percentage value, and (8) identifying success rates, drawing conclusions, and making recommendations. The research data were analyzed by tabulating product validation data from media experts, calculating the average feasibility assessment results obtained from media expert assessments and converting the expert assessment values into the category intervals for the feasibility of teaching materials. The results of data analysis are compared to determine the feasibility of teaching materials.

### 3. Results and Discussions

The result of this research and development is the product of digital historical teaching materials about the culinary city of Surakarta in order to maintain local culture in the midst of a rapidly growing globalization era. This development was carried out to create a product for the development of history teaching materials about the culinary arts of the city of Surakarta for use by students and educators in high school.

#### Analysis

The need analysis for digital teaching materials in this study was to determine the teaching materials needed by students to improve the quality of learning. To produce good teaching materials, a needs analysis was required at the beginning to collect information and analyze student needs.

The collection of information on the needs for product development in the form of digital teaching materials was performed by distributing questionnaires to respondents about the needs in the field. From the questionnaire results, all student needs were described and analyzed as the first step in developing products in the form of digital teaching materials for history subjects in senior high school. In this study, several important parts need to be analyzed, including (a) the characteristics of students, (b) the use of learning resources, and (c) students' understanding of local cuisine.

The analysis of the student characteristics comprised the initial knowledge about digital teaching materials, perceptions of

digital teaching materials, the ability to master digital teaching materials, motivation, and the potential for presenting teaching materials. The substance of the student characteristics was offered to students and became a choice of answers in the distributed questionnaires. Meanwhile, the needs analysis results for students in detail can be seen in Table 1 below.

**Table 1.** Analysis of Student Characteristics

Indicator	Variable Analysis	Percentage
Initial knowledge	Have knowledge of the use of digital teaching materials	87.8 %
Perception	Have a positive view of the use of digital teaching materials	86.5 %
Ability to master	Have a habit of using digital resources in everyday life	76%
Motivation	Have an interest in the use of digital teaching materials	95.1%
Presentation potential	Have an interest in digital teaching materials to foster independent learning	86.5%

The student characteristics in senior high schools in Surakarta were analyzed by distributing questionnaires to respondents. From the analysis results, students had initial knowledge of the use of digital teaching materials in learning as much as 87.8%, had a positive view of the use of digital teaching materials as much as 86.5%, had a habit of using digital resources in everyday life as much as 76%, had an interest in the use of digital teaching materials as much as 95.1%, and had an interest in digital teaching materials to foster independent learning as much as 86.5%.

Based on the analysis results of the student characteristics in Table 1, most students expressed interest in using digital teaching materials. It is a positive step because communication technology in learning can provide a dynamic teaching and learning environment. Apart from that, learning in the 21st century leads to online learning. The teaching materials developed referred to the development of digital teaching materials, where students perceive that digital-based teaching materials will facilitate their learning process since they can be done anytime and anywhere [23]. Innovatively developed teaching materials can also encourage effective and independent learning and help students acquire the skills needed in learning. Moreover, good teaching materials can support the distance learning process, where teaching materials will be more easily accessed and learned by students [35].

Furthermore, the resource analysis containing content sources, technology availability, and learning facilities used a questionnaire via a google form. The resource substance was offered to students and became a choice of answers in the

distributed questionnaire. Respondents were given a link integrated into the google form, and the respondents then chose the answer options provided. Meanwhile, the analysis results of student resources in detail are in Table 2 below.

**Table 2.** Analysis of Learning Resources

Indicator	Variable Analysis	Percentage
Use of learning resources	The textbooks that have been used in schools are printed books/ modules.	90.3 %
Availability of technology	Students have laptops/gadgets that can support digital teaching materials.	97.6%
Technology understanding	Students have an understanding of the use of digital technology in learning.	95.1%

Analysis of learning resources was conducted by distributing questionnaires to respondents. From the analysis results, 90.3% of the textbooks used in schools were printed books/modules; 97.6% of students had laptops/gadgets that could support digital teaching materials; 95.1% of students had an understanding of the use of digital technology in learning. From Table 2, information was obtained that students hoped that teaching materials in the form of electronic books could facilitate the learning process from anywhere. Digital teaching materials also allowed students to study each topic of learning materials individually according to their abilities and competencies. In addition, through learning with the help of these digital teaching materials, students' learning experiences could be increased [20]. Based on the analysis results of the needs for teaching materials, most teachers tended to use existing printed books and then photocopy them and distribute them to students. This condition is an obstacle. Because of the urgency of 21st-century education, teachers are required to integrate technology in teaching and replace their traditional methods with more modern tools and facilities [36]. Good teaching materials certainly contain the theory to be studied, summarized, and equipped with various learning activities, which students can do, even though they do not meet directly with the teacher [22]. Thus, the development of learning needs should pay attention to the characteristics of students from various aspects, such as the development of their potential, intellectual intelligence, and psychology [37].

The ability of students to use digital devices, such as laptops and gadgets, greatly supports the development of digital teaching materials. With these teaching materials, students have no difficulty using and learning them since the availability of devices owned by students can display teaching materials properly. It can also support online learning so that teachers can meet learning needs by developing digital-based teaching materials.

Analysis of students' understanding of local culinary consisted of knowledge of the types of typical Surakarta culinary, food

philosophy, cooking methods and ingredients, and the linkage of local wisdom to history learning. The analysis was carried out utilizing a questionnaire via a google form. Meanwhile, the analysis results of students' local culinary understanding in detail can be seen in Table 3 below.

**Table 3.** Analysis of Local Culinary Understanding

Indicator	Variable Analysis	Percentage
Knowledge of the types of typical Surakarta food	Students know various types of traditional culinary in Surakarta City.	98.6 %
Food philosophy	Learners know the philosophy of traditional Solo food.	19.8%
Cooking methods and ingredients	Learners know cooking methods and ingredients for making typical Surakarta food.	64.5 %
The linkage of local wisdom to history learning	Teachers rarely associate history learning materials with local culinary wisdom in Solo.	75.5%
	Teachers need to integrate philosophical values from the local culinary wisdom of Solo with history learning materials in class.	93.1%

Analysis of local culinary understanding was done by distributing questionnaires to respondents. From the analysis results, 98.6% of students knew various types of traditional culinary in Surakarta City; 19.8% of students were familiar with the philosophy of traditional Solo food; 64.5% of students knew cooking methods and ingredients for making typical Surakarta food; 75.5% of teachers rarely associated history learning materials with local culinary wisdom in Solo; 93.1% was important for teachers in integrating philosophical values from local culinary wisdom of Solo with history learning materials in class.

Based on the analysis in Table 3, students were familiar with various types of traditional culinary in Surakarta City, but there were still very few who understood the philosophy of the typical food of Surakarta City. Students are used to consuming traditional foods from Surakarta City, such as *Kue Serabi* Solo. It is a kind of pancake that is round like a plate with a bit of crust. Here, 64.5% of students knew the cooking methods and ingredients for making Surakarta specialties, such as pancakes. Meanwhile, making it was still traditional by cooking *Serabi* dough, consisting of rice flour, coconut milk, sugar, salt, and pandan leaves, as a fragrance. Then, the dough was cooked using a small '*waja*' skillet and heated over a charcoal stove for about three minutes. Once cooked, *Serabi* was rolled up in banana leaves to make it easier to eat [38].

In addition to the *Kue Serabi*, based on the data obtained, the typical food of Surakarta City that students usually consumed

was *Selat Solo*. The *Selat Solo* is a typical food of Surakarta City, a legacy from the Dutch colonial era. The word '*selat*' was adopted from the Dutch language '*slachtje*', which means the result of slaughtering meat into small pieces. However, at that time, the tongue of the natives was difficult to pronounce the word *slachtje*, so they often said it with the word '*selat*'. The beginning the birth of this dish dates back to when the Vastenburg fort was built, right in front of the gate of the Surakarta palace, where meetings often took place between the palace and the Dutch. At each meeting, food had to be provided. However, the food did not suit the tastes of the Dutch people, who wanted food made from meat, while the king was used to serving vegetables [39].

The next typical culinary of Surakarta City that could be consumed by the student based on the survey results was *nasi liwet*. *Nasi liwet* is one of the famous culinary specialties of Surakarta City. *Nasi liwet* is savory rice (cooked with coconut) similar to *nasi uduk*, served with chayote vegetables, *opor suwiran ayam* (chicken cut into small pieces), and *areh*. The way of presenting this liwet rice is unique by using *pinchuk* (banana leaves) as a place to eat. Besides *nasi liwet*, there is *Timlo Solo*. *Timlo Solo* is a clear soupy dish consisting of sliced Solo sausage, pindang chicken eggs, and sliced chicken gizzard liver. This dish is usually eaten with white rice sprinkled with fried onions. The taste of this dish is almost similar to Soto. The difference is that Timlo does not use vegetables, and the only ingredients found in Timlo are pieces of sausage Solo (a type of spring roll filled with minced chicken) [40].

There is also a special culinary from Surakarta City, which comes from processed goat meat, namely *Tengkleng*. *Tengkleng* is one of the culinary specialties of Surakarta City because it is not found in other areas. The history of the creation of this dish began during the Dutch occupation of Surakarta. Because goat meat was expensive at that time, only Dutch officials and Europeans could enjoy goat meat, and the bones were thrown away. For natives who could not afford goat meat, they tried to use the remains of goat bones for cooking with simple spices, and then this *Tengkleng* dish was created [38]. Besides *Tengkleng*, there is also *sate buntel*. *Sate buntel* is a type of satay dish made from goat meat. The uniqueness of this satay dish is that it is made from finely chopped mutton, seasoned with onions and pepper, and then wrapped (*buntel*) with goat fat [28]. Usually, this dish is eaten with soy sauce, sliced cayenne pepper, shallots, sliced cabbage, and tomatoes.

From the students' answers, most teaching materials available in schools did not show or relate to the local wisdom of the area where they lived. Teachers linked local wisdom in learning only to the extent of verbal delivery. Thus, almost half of the students ticked the same answer choices; namely, teaching materials presented examples in general. In addition, according to teachers and students, the development of teaching materials based on local wisdom needs to be done. Students expressed their desire for the availability of digital teaching materials.

The primary and complementary teaching materials should be prepared by linking them with local wisdom in the neighborhood. Learning packaged using objects, events, and problems close to the children will make the learning more meaningful. It aligns with Vitasurya [41], who asserted that education is an essential process in the existing cultural value inheritance to students. Here, cultural values need to be transformed to provide them with knowledge and understanding to be accepted, internalized, and implemented in life. At this time, the increasingly rapid development of technology allows educational practitioners to develop more varied teaching materials. With the development of technology at this time, teaching materials can also be made more interesting, interactive, and environmentally friendly. The need to innovate and issue ideas and creativity in compiling teaching materials is reinforced by Kanematsu et al. [42], stating that the educational process in the era of information and communication technology developing rapidly as it is today makes it possible to optimize learning in the 21st-century. Thus, the resulting teaching materials are fully beneficial for students, not only to increase cognitive, affective, and psychomotor abilities but also to bring out positive habits in students.

## Design

The second stage of research and development carried out by researchers is designing research and development products. At the design stage, researchers have planned the shape and purpose of the product. This research and development product is prepared by creating a framework to suit the learning objectives and curriculum applicable in schools. The design stage is the preparation of products starting from determining the theme of teaching materials based on the needs of each student in the developed teaching materials. The local culinary theme is a major theme that is obtained based on a needs analysis on relevant subject matter based on local wisdom values. This is because, socio-cultural resilience is formed from efforts to preserve by maintaining, developing, and utilizing the potential of local wealth owned.

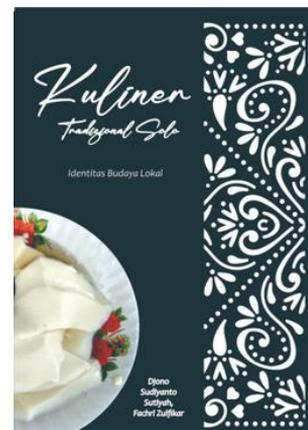


Fig. 1. Initial Cover of Teaching Material Products

1. Tengkleng Kambing



Tengkleng kambing merupakan salah satu kuliner khas Kota Surakarta, karena tidak ditemukan di daerah lain. Sejenis terdapatnya masakan ini dimulai ketika jaman pendudukan Belanda di Kota Surakarta. Mahalnya daging kambing di masa itu, masyarakat hanya mampu membeli "limbah" dari kambing yaitu bagian tulang dan jeroan akhirnya mereka memasaknya dengan bumbu sederhana. Dimasak tengkleng karena, jika saat ditaruh di piring yang terbuat dari seng akan mengeluarkan bunyi klong-klong-klong. Sehingga saat tulang itu ditaruh dipiring akan menimbulkan suara yang nyaring.

yang dijual kebanyakan hanya menyuguhkan tulang dan jeroan kambing dengan sedikit daging, namun biasanya sudah ditambah dengan jeroan dari kambing. Tengkleng adalah masakan sejenis sup dengan bahan utama kepala, kaki, dan tulang kambing. Bentuk fisik dari Tengkleng berbeda dengan gulai kambing, terutama pada kuahnya, bila gulai kental maka tengkleng kuahnya encer. Rasa kuah tengkleng kambing ini gurih, asam, manis, asin karena berasal dari campuran berbagai bumbu seperti lengkuas, serai, kemiri, kunyit, bawang merah, bawang putih, daun salam, dan ketumbar. Nama "tengkleng" juga mencerminkan kehidupan rakyat jelata di masa penjajahan dulu. Saat itu, masyarakat hanya mampu membeli "limbah" dari kambing yaitu bagian tulang dan jeroan akhirnya mereka memasaknya dengan bumbu sederhana. Dimasak tengkleng karena, jika saat ditaruh di piring yang terbuat dari seng akan mengeluarkan bunyi klong-klong-klong. Sehingga saat tulang itu ditaruh dipiring akan menimbulkan suara yang nyaring.

Fig. 2. Contents of Teaching Materials

The determination of the local culinary theme as a major theme in research and development is carried out due to the need for efforts to preserve various kinds of Indonesian culinary riches. Therefore, research and development products are arranged with sub-theme designs consisting of types of local culinary, understanding, culinary philosophy values, recipes, ingredients, and ways of making food or culinary typical of the city of Surakarta. The sub-themes are arranged in digital teaching material products to form History teaching resources by utilizing local values that meet the criteria for use by students and educators in the learning process.

**Development**

Based on the product development that is arranged based on the needs and learning orientation, the next step is to validate the research and development product for experienced teachers. The research and development product validation phase carried out in this study was still limited to the validation of the learning environment.

According to the results of the media expert's assessment, it proves that the research and development product is very feasible to use. The media aspect feasibility score is obtained after making several product improvements according to media expert input. Improvements made in the form of clarifying image illustrations, changing product background colors, and improving the layout of images, and improving the position of writing. The results of the revised product development related to the product cover of teaching materials are presented in Figure 3. While the results of the revision of the development product related to the content of teaching materials such as background, and headers, footers, late layout of images and writing are shown in Figures 4 and 5

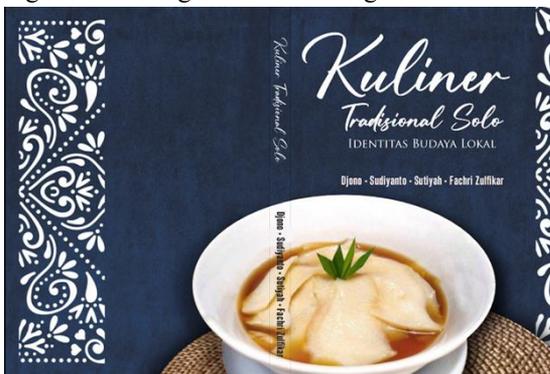


Fig. 3. Textbook Cover After Revision

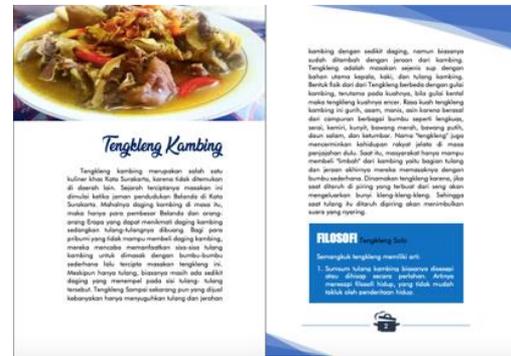


Fig. 4. Textbook Contents After Revision



Fig. 5. Textbook Contents After Revision

The results of the assessment carried out by media experts obtained that the empirical value of the product feasibility on the media aspect (Y) on average was 85.5. The score proves that the media aspect is in the eligibility interval of 85 Y 100 which is in the very appropriate category to be used in the teaching and learning process. The feasibility value of media expert lecturers can be shown in table 4.

Table 4. Media Expert Validation Score

Assessment Aspect	Score
Appearance	86
Illustration	85
Average	85,5

While the feasibility interval of teaching material media is presented in table 5

Table 5. Eligibility Criteria for Teaching Materials

No	Interval	Category
1	85 < Y ≤ 100	Very Worthy
2	85 < Y ≤ 70	Worthy
3	70 < Y ≤ 55	Lessworthy
4	55 < Y ≤ 40	Not feasible

The feasibility of media products is also influenced by whether or not students accept the teaching materials. In this study, the results showed that the teaching materials after revision obtained a high feasibility score, both in terms of appearance and illustration. In line with previous findings that the development of electronic-based culinary learning media has met reasonable criteria, especially in the aspect of media display and material [43]. In line with the findings of Silaen and Silaban [44] that the components of the assessment so that product development is declared feasible can be identified by fulfilling the components of the assessment of the content/material, presentation/appearance, and language of the teaching materials. From these findings, information was also obtained that the teaching materials developed were suitable for use as learning media in schools.

Based on the results of needs analysis, design and development shows that educators and students can use the developed product in their teaching and learning activities. This is supported by previous research, which recommends the use of local wisdom values in the process of teaching and learning activities in environmentally sound schools. Erawati & Rahmayanti informed that the development of teaching materials associated with environmental-based local wisdom has provided real understanding to students. This is because the content of the lessons learned is considered more interesting and innovative, as well as very implementable in social practice.

It is also supported by the results of other literature studies that the development of digital learning content about the history and culinary culture in Korea has expanded knowledge and insight for students in the current digital era. According to Huh et al. [45], digital-type media about culinary helps media users to explore subject matter more easily, ethically, and humanistically. In addition, critical awareness of culinary is also increasingly formed so that students will consider studying it more deeply.

The results of this development provide an option for teachers and other education practitioners to use local knowledge-based research findings or to innovate on their own to develop innovative learning resources. The concept of student cultural diversity. From this development, research or development of other learning resources that are suitable for use in the process of teaching and learning activities in schools is carried out to advance the learning objectives of teachers and students. Optimizing the development of media or teaching materials is a must for every teacher to prove that they have good educational competence [46]. In addition, the development of teaching materials can support students and teachers to achieve certain aspects of learning objectives and the needs of the teaching and learning process in schools. Educational resources in the form of materials that come from the environment also facilitate the learning process because students think learning is more meaningful and easy to understand [47].

#### 4. Conclusions

The findings of this study are (1) most students expressed interest in using digital teaching materials, especially in the aspects of initial knowledge and motivation for digital teaching materials. (2) Students hope that teaching materials in the form of electronic books can facilitate the learning process from anywhere because all students have access to facilities such as laptops and gadgets. (3) Students are familiar with various types of traditional culinary in the city of Surakarta, but very few understand the philosophy of the typical food of the city of Surakarta, (4) the teaching materials developed in the form of digital teaching materials for the history of the culinary arts of Surakarta are proven to be in the very appropriate category to be used in the process of teaching and learning history subjects. The results of this research and development can then be used as the basis for developing innovative teaching materials in accordance with the curriculum and the conditions of the learning environment.

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