



The Development of Flipbook Based Learning Media on Indonesian Soup and Soto Materials at BOPKRI 2 Yogyakarta

I.D.W. Ningrum^{1*}, I. Chayati², B. Lastariwati³, F. Rahmawati⁴

¹Faculty of Engineering, Universitas Negeri Yogyakarta, Jl. Colombo No. 1 Yogyakarta, Indonesia

²Faculty of Engineering, Universitas Negeri Yogyakarta, Jl. Colombo No. 1 Yogyakarta, Indonesia

³Faculty of Engineering, Universitas Negeri Yogyakarta, Jl. Colombo No. 1 Yogyakarta, Indonesia

⁴ Faculty of Engineering, Universitas Negeri Yogyakarta, Jl. Colombo No. 1 Yogyakarta, Indonesia

ichda_chayati@uny.ac.id

Abstract

This research aims to: 1) develop flipbook-based Indonesian soup and soto learning media. 2) determine the feasibility of developing flipbook-based Indonesian soup and soto learning media. It was Research and Development (R & D) method with a 4D model, i.e. define, design, develop and disseminate stages. The research was carried out at SMK Bopkri 2 Yogyakarta from January to November 2022. Data collection was carried out using a closed questionnaire. Data were analysed descriptively. Flipbook learning media development used Canva and Hyzine applications. The results of this research were: 1) the product developed was digital-based learning media that could be used on laptops and cellphones accessed by clicking on the link shared. Flipbook-based learning media contained material on processing and serving Indonesian soup and soto, 2) the results of the feasibility of flipbook-based Indonesian soup and soto learning media validated by material experts obtained an overall average score of 3.29, categorized as "very feasible", while for media expert validation, an overall average score of 3.55 was obtained, categorized as "very feasible". Based on trials conducted at SMK Bopkri 2 Yogyakarta, an overall average score of 3.39 was obtained so that the flipbook-based Indonesian soup and soto learning media was categorized as "very feasible".

Keywords: Physical Education, Blended Learning, Physical Activity

1. INTRODUCTION

As time goes by, the 21st century competencies that students will face will also change. Where developments in this era will focus on the development of science and technology. So that students can face greater challenges in the 21st century, educational institutions must find solutions to this problem. As reported in news from the Ministry of Education and Culture, strengthening character education in schools must also be

technology. So that students can face greater challenges in the 21st century, educational institutions must find solutions to this problem. As reported in news from the Ministry of Education and Culture, strengthening character education in schools must also be able to develop the character of students to be able to think critically, creatively, be able to communicate and collaborate and be able to compete in the 21st century. This is in accordance with the four competencies that students must have in the 21st century, called the 4Cs, namely Critical Thinking and Problem Solving (thinking critically and solving problems), Creativity (Creativity), Communication Skills (Ability to communicate), and Ability to Work Collaboratively (Ability to work together). (Ministry of Education and Culture, 2017). Therefore, it is necessary to have an optimal role for educators in creating a framework design for the learning process using various methods so that education can carry out its function of forming individual students who have 21st century competencies.

The rapid development of science and technology will make challenges greater than in the past. According to news from the Indonesian Ministry of Information and Technology, it is predicted that in 2018 active smartphone users in Indonesia could reach up to 100 million people and in 2015 there were 24 Indonesian digital startup companies that received funding from foreign investors amounting to trillions of rupiah [1].

The increase in technological development and the number of information technology users is not accompanied by the use of this technology for more positive purposes. The majority of laptops are used for playing games, accessing social media, or for opening YouTube videos. In fact, the development of information technology can be used for more positive purposes, namely education. The information technology used for learning media must be in accordance with student behavior in using the information media.

Two instructional components, i.e. the instructional methods and the delivery media, must be aligned to facilitate learning [2]. Media is a component of communication, namely as a carrier from communicator to communicant [3]. Based on this definition, it can be said that the learning process is a communication process. The importance of media in the learning process is to clarify messages so that they are not too verbal, can overcome limitations of space, energy and sensory abilities, and create enthusiasm for learning [4]. The use of appropriate learning media is one of the factors for the success of classroom learning. The development of learning media can be carried out by teachers as an actualization of their abilities, as stated in the Minister of National Education Regulation Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies, it is explained that teachers must utilize information and communication technology for learning purposes. A learning media can help teachers convey material to students so that it is easier to receive the information obtained.

Learning media according to [5] is an educational facility or tool that can be used as an intermediary in the learning process. Learning media in the form of flipbooks is one of the multimedia-based learning media which can be one of the media solutions used in the learning process. According to [6], a flipbook is a sheet of

paper like an album or calendar with dimensions of 21 x 28 cm. This application can change the appearance of a PDF file to make it more attractive, like a real book [7]. Not only that, flipbook is able to make PDF files into digital magazines, company catalog flipbooks, digital catalogs and so on. By using this application the display of learning media will be more varied, not only text but images, sound and video can be inserted in this media so that the learning process will be more interesting [8]

During the previous Educational Practice, researchers observed that there was a shortage of teaching materials in the form of textbooks or learning modules, especially material on Indonesian soups and soto. Usually teachers only distribute powerpoints and job sheets for students to study. Based on the results of interviews with subject teachers, information was obtained that students sometimes did not pay close attention when the teacher explained the material, in addition to the lack of preparation of students in receiving learning. The school's minimum completion criteria (KKM) for the Indonesian Food Processing and Presentation subject is 75. This means that not all students are 100% complete in this theoretical subject.

The development of flipbook-based learning media is made simply but designed as creatively as possible so that it can be hoped that the development of this learning media can make it easier and help teachers in conveying learning material to students and achieving learning objectives. Flipbooks can be designed according to the material needs that must be taught by the teacher and of course by paying attention to the students' learning steps. Apart from that, the limited learning media on the subject of Indonesian Food Processing and Serving, especially the Basic Competency of Indonesian Soup and Soto, motivates the author to be able to develop it.

The questions in this research were 1) how to develop flipbook-based Indonesian soup and soto learning media. 2) how was the feasibility of developed flipbook-based Indonesian soup and soto learning media from material expert, media expert, and user viewpoints.

2. METHODS

- 1.
- 2.

2.1. *Type of Research*

The type of research used in this research is the Research and Development method [9]. The product in question is a flipbook learning medium on the subject of Indonesian soup and soto at SMK Bopkri 2 Yogyakarta. Meanwhile, the development model uses a model developed by Thiagarajan et al (1974) known as 4D which consists of Define, Design, Development, and Disseminate. [10]. Some researcher also used 4D method for developing digital flipbook media learning [11] [12] while others used ADDIE method [13] [14] [15] [16] [17].

2.2. *Time and Place of Research*

The research was carried out at SMK Bopkri 2 Yogyakarta. The research is specifically for class XII Culinary which will be carried out from January 2022 to November 2022.

2.3. Research Subjects

The subjects in this research were students in class XII Culinary at SMK Bopkri 2 Yogyakarta. Other subjects who played a role in this research were material experts and media experts as validators as well as 12 students in the phase 1 feasibility test.

2.4. Procedures

The define stage aims to determine the goals and obstacles for the learning process materials. The define stage includes five main steps, namely front-end analysis, learning analysis, task analysis, concept analysis and the formulation of learning objectives (specifying instructional objectives) using the method observations and interviews. The design stage in this stage aims to design instructional learning materials. Three steps that must be taken at this stage are media selection; format selection (format selection); and initial design.

The Develop (development) stage is the stage for producing a development product which is carried out through two stages, namely: 1) expert appraisal followed by revision, and 2) development trials (developmental testing). This stage aims to produce the final form of learning tools after going through revisions based on expert input and trial data. The disseminate stage is the final stage of development. Dissemination of this media is limited to SMK Bopkri 2 Yogyakarta, specifically handed over to teachers teaching Indonesian Food and Processing subjects.

2.5. Data Collection Techniques

Data collection used in this research was observation, interviews and questionnaires. Observations in this research were used to determine the problems that exist in the learning process, especially in the Indonesian Food Processing and Presentation class XII Culinary subject. The interview data collection technique was carried out to determine the state of the learning media for processing and serving Indonesian soto soup food for class XII at SMK Bopkri 2 Yogyakarta. The interviews were conducted in an unstructured manner, namely free interviews where the researcher did not use a structured and systematic interview guide for data collection. [9] explained that a questionnaire or questionnaire is a data collection technique that is carried out by scoring written questions or statements for respondents to answer.

2.6. Instrument Validity Test

Instrument validation is validity regarding the accuracy of the assessment tool for the concept being assessed so that it really assesses what must be assessed [18]. This research uses construct validity. Construct validity is validity that measures the question items as truly capable of measuring according to the established concept. There are 2 instruments used to measure feasibility, namely media instruments and material instruments. The media instrument contains questions related to the media presented in the learning media that will be assessed. Meanwhile, the material instrument contains questions related to the content of the material in the learning media that will be assessed.

2.7. Data Analysis Techniques

The data analysis technique used in this research is descriptive analysis technique. This research uses criteria by converting the scores on the instrument to a Likert scale. The Likert scale used was modified with 4 alternative answers, namely strongly agree, agree, disagree, and strongly disagree. [19].

The presentation technique used to determine the suitability category for flipbook-based learning media is by finding the average score value from each material expert validation result, media expert validation and student suitability test into the Ms formula. Excel. After getting the average results from each validation and feasibility trial, adjust the average results to the feasibility category. To determine the appropriateness category for the learning media being developed, the interval distance must be determined first and the user uses the formula:

$$\text{Interval Range} = (\text{Maximum score} - \text{minimum score}) / (\text{number of interval class})$$

$$\text{Interval Range} = (4-1)/4 = 0,75$$

In accordance with the calculation using the class interval distance formula above, the calculation results are determined with a score range of 0.75. Starting from the lowest value of 1, the value will increase with a range of 0.75 to the highest value of 4.

Table 1. Feasibility categories

Score range	Category
>3.25 - 4.00	Very feasible
>2.50 - 3.25	Feasible
>1.75 - 2.50	Less Feasible
1.00 - 1.75	Not feasible

3. RESULTS AND DISCUSSION

- 1.
- 2.
- 3.

3.1. Flipbook-based Indonesian Soup and Soto Learning Media

This research produces a product in the form of flipbook learning media on material for processing and serving Indonesian soup and soto in vocational schools. A flipbook is a sheet of paper that resembles an album or calendar measuring 21 x 28 cm which can change the appearance of a PDF file to make it more attractive, like a real book.

Data from the results of each stage, namely the first Define stage which was carried out using observation and interview methods, showed that in the teaching and learning process there was still limited use of learning media and continuous use of existing teaching materials without any development. Apart from that, the use of the 2013 curriculum in Indonesian food processing and serving subjects also requires

students to learn independently and be active in activities, but in reality students are still passive in activities.

The next stage is the Design stage, where in this stage there are 3 processes, namely the first is media selection, the media used to assist in the editing process is with the help of the Canva application which is then converted to an online website, namely Heyzine Flipbook, the second is format selection, format selection process In this flipbook learning media, various templates and features are used in the Canva application but do not disturb the reader while reading, and finally the initial design, where this process is to design the flipbook learning media which contains material about Indonesian soup and soto.

The contents of this flipbook learning media were created based on several sources including books about Indonesian soup and soto, literature studies and determining pictures, because this flipbook learning media is equipped with pictures. The flipbook learning media developed also consists of several parts including: a) cover; b) introductory remarks; c) table of contents; d) core competencies, basic competencies and achievement indicators; e) theoretical studies; f) prescription; g) summary of material; h) practice questions; and i) bibliography. Several examples of components in flipbook learning media can be seen in Figure 1 and Figure 2.



Figure 1. Flipbook cover



Figure 2. Study of Material in Flipbook

Continuing with design validation, validation was carried out by material experts and media experts obtained from 2 lecturers in Culinary Education, FT Yogyakarta State University, namely Dr. Dra. Badraningsih Lastariwati, M. Kes and Dr. Fitri Rahmawati, M.P and the teacher at SMK Bopkri 2 Yogyakarta, namely Omega Padmanatali, S.Pd. The validation data obtained is in the form of a validation sheet instrument and suggestions and comments on the flipbook learning media being developed. The data analysis used uses the calculation of the total average value of the assessment aspects of all validators.

3.2. *Material Expert Validation*

Material expert validation aims to test the completeness of the material, the correctness of the material, and the systematics of the material. The results of validation analysis by material experts on flipbook learning media are presented in Figure 3.

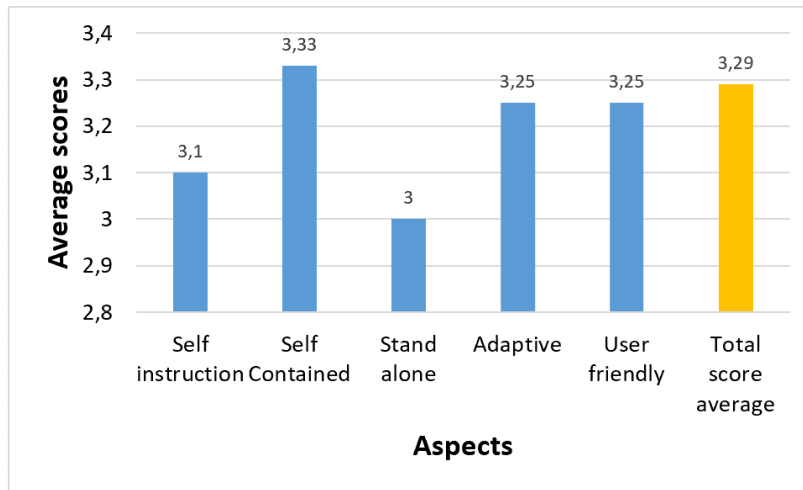


Figure 3. Results of Material Expert Validation

Based on the results of assessment data from material experts in Figure 3 which was assessed from 5 aspects, namely the self-instruction, self-contained, stand-alone, adaptive and user-friendly aspects, an overall average score of 3.29 was obtained in the "Very Appropriate" category. From the results of this material expert validation, input and suggestions were obtained for adding material according to trusted book references, adding images that suggested using personal documents/images, and improving the layout which was intended to avoid full learning media with writing so that readers would not easily get bored while reading.

3.3. Media Expert Validation

Media expert validation aims to test the attractiveness and presentation of flipbook learning media. The results of validation analysis by media experts on flipbook learning media are presented in Figure 4.

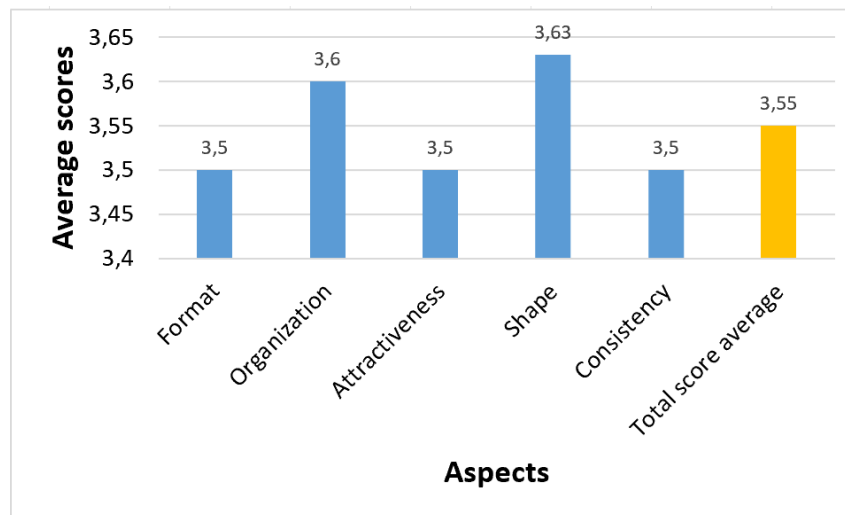


Figure 4. Results of media expert validation

Based on the results of the assessment data from media experts in Figure 4 which was assessed from 5 aspects, namely format, organization, attractiveness, form and consistency, an overall average score of 3.55 was obtained in the "Very Appropriate" category. From the media expert validation results, several inputs were obtained and Suggestions are in the form of improving basic competencies, which means that basic competencies cannot stand alone and must be paired, for example KD 3.1 must be paired with KD 4.1. Apart from that, other input and suggestions obtained are for improvements in making the bibliography.

Furthermore, after the design has been improved and declared "Very Feasible", a product trial is carried out. The results of trials related to attractiveness were carried out in two stages, namely stage 1 trials carried out by 12 culinary students at SMK Bopkri 2 Yogyakarta and stage 2 trials carried out by all 12 culinary classes at SMK Bopkri 2 Yogyakarta.

3.4. Phase 1 Trial

The results of the phase 1 trial of the flipbook learning media are presented in Figure 5.

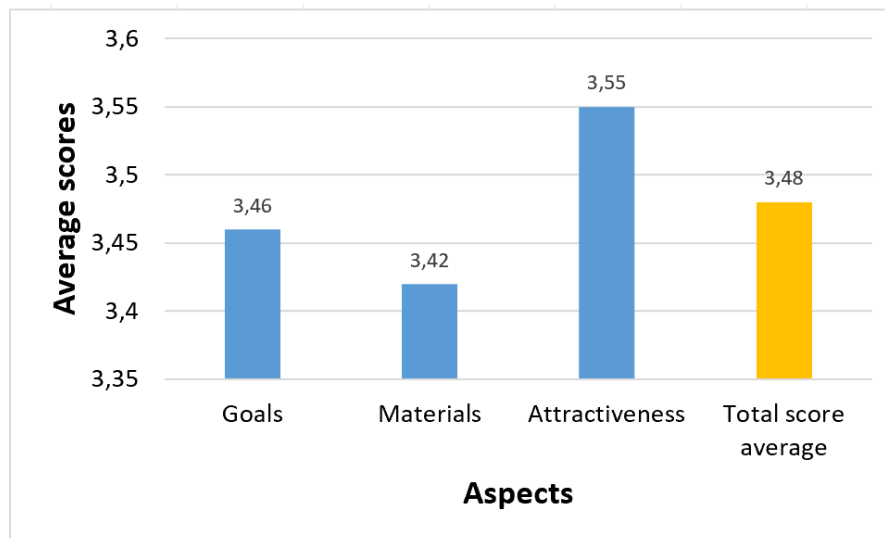


Figure 5. Results of phase 1 trial

Based on the results of the phase 1 trial feasibility data in Figure 5, which was assessed from 3 aspects, namely objectives, material and attractiveness, the overall average score was 3.48 in the "Very Feasible" category. From these results, the media was declared very suitable for use so that there were no further revisions and it could be continued to phase 2 trials.

3.5. Phase 2 Trial

The results of phase 2 trials on flipbook learning media are presented in Figure 6.

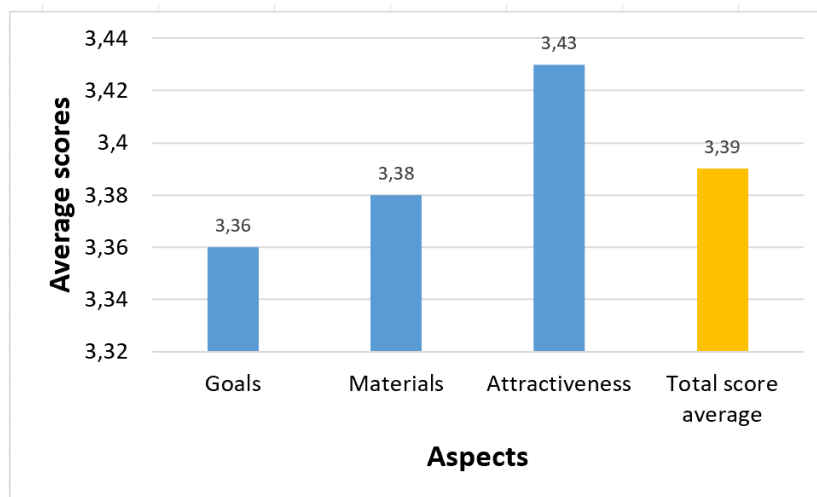


Figure 6. Results of phase 2 trial

Figure 6 shows the results of the phase 2 trial which was tested on all class 12 culinary students at SMK Bopkri 2 Yogyakarta with an overall average score of 3.39 in the "Very Eligible" category. Although it is very appropriate, this shows that the flipbook learning media developed is very suitable for use and has been proven to be valid, practical and effective. Apart from that, several inputs from students were also obtained that: a) with the use of flipbook-based learning media, students were able to understand the material, b) the learning media created was quite interesting, c) the use of language and sentences in it were easy to understand, d) The use of images is appropriate, interesting, and sufficient to help understand the content of the material.

The results of the phase 1 and phase 2 trials showed differences, these differences were found in the average results of each aspect, such as in the objective aspect in the phase 1 test the average score was 3.46, while in the phase 2 test the average score was 3.36, then the material aspect in the phase 1 test had the average score was 3.42, while the stage 2 test had an average score of 3.38, for the attractiveness aspect in the stage 1 test, the average score was 3.55, while in stage 2 the average score was 3.39. The overall mean score at stage 1 and stage 2 also differs with the mean score at stage 1 being around 3.48 while at stage 2 the average score is 3.39. From these results it can be seen that the decrease in scores for several aspects which have the largest decrease in scores is in the aspect of attractiveness. However, from the decrease in score, the learning media that has been tested at stage 1 and stage 2 are still suitable for use.

The results of validation by material and media experts as well as feasibility tests stages 1 and 2 can be seen in Table 2.

Table 2. Result of overall feasibility

No	Feasibility test	Average scores	Categories
1.	Material expert	3.29	Very feasible
2.	Media expert	3.55	Very feasible
3.	Phase 1 test	3.48	Very feasible
4.	Phase 2 test	3.39	Very feasible
Overall average		3.43	Very feasible

From the results of the data that has been obtained starting from validation by material experts with an average score of 3.29 (Very Eligible), media experts with an average score of 3.55 (Very Eligible), stage 1 trials with an average score of 3.48 (Very Eligible) and stage 2 trials with an average score obtained 3.39 (Very Decent) obtained an overall average score of 3.43 for flipbook-based learning media for

processing and serving Indonesian soup and soto food, so it can be concluded from the results of calculations and students' input that the flipbook learning media is processing and serving Indonesian soup and soto food “Very Appropriate” is used as a learning medium. Figure 7 is a bar diagram of the overall feasibility test data for flipbook-based learning media.

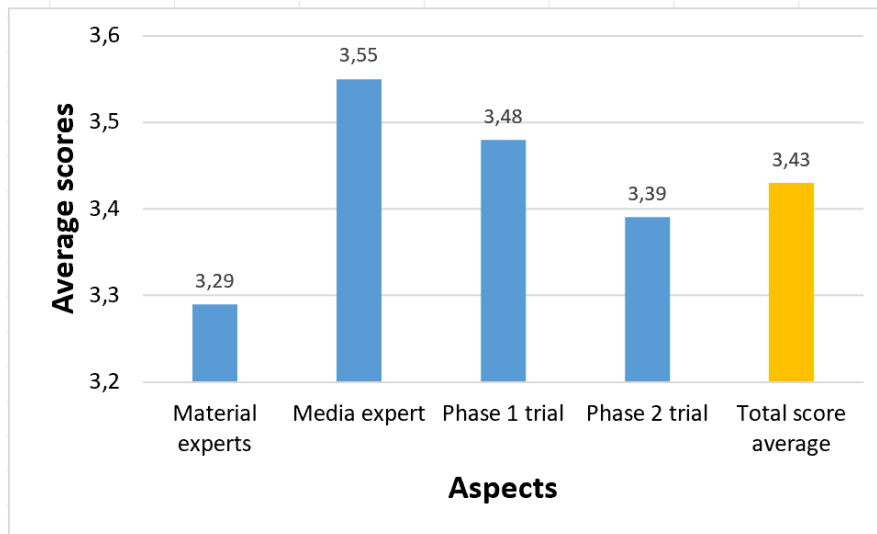


Figure 7. Results of overall flipbook feasibility test

This research did not examine the effectiveness of using flipbook media. However, several studies have shown that the use of flipbook learning media can improve learning outcomes and student learning activities, from elementary school, junior high school, senior high school, to university students [13] [15] [16] [20], [21], [22] [23] [24]. Research showed that the use of flipbook media can be used optimally if the school institution has supporting facilities or facilities, such as personal computers, display projectors, and sound systems as well as good teacher and student resources in the field of technology [25].

4. CONCLUSION

Based on the data obtained from the results and discussion of the flipbook-based learning media that was developed, it can be concluded that: (1) The flipbook learning media developed consists of several parts including: a) cover; b) introductory remarks; c) table of contents; d) core competencies, basic competencies and achievement indicators; e) theoretical studies; f) prescription; g) summary of material; h) practice questions; and i) bibliography, (2) the feasibility of the flipbook media were that: (a) material expert validation test resulted an overall average score of 3.29 in “Very feasible” category, (b) media expert validation test resulted an overall

average score of 3.53 in the "Very feasible" category, (c) at the phase 1 trial, the overall average score was 3.48 in the "Very feasible" category, while at the phase 2 trial carried out by 37 students, the overall mean score was 3.39 in the "Very feasible" category.

Based on the research carried out, the suggestions obtained include: (1) it is hoped that the results of the development can be used as a learning medium for class Indonesian soups and soto. (2) Flipbook-based learning media can be tested for its effectiveness to determine student learning outcomes using learning media.

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