

## Development of Digital Teaching Materials Based on Material: Revolution on the Edge of Jakarta 1945-1955 for Grade XI IPS at SMAN 4 Cibinong

Annida Fitri Nurhidayati<sup>1\*</sup>, Tubagus Umar Syarif Hadi Wibodo<sup>2</sup>, Rikza Fauzan<sup>3</sup>

<sup>1,2,3</sup>History Program, Faculty of Teacher Training and Education, Universitas Sultan Ageng Tirtayasa, Indonesia

\*correspondence email: annidanurhidayati@gmail.com

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### Abstrak

Penelitian ini bertujuan untuk mengembangkan bahan ajar digital berbasis sejarah lokal pada mata pelajaran sejarah kelas XI IPS di SMAN 4 Cibinong. Penelitian ini menggunakan pendekatan penelitian R&D dengan menggunakan model pengembangan ADDIE. Berdasarkan hasil analisis kebutuhan, pembelajaran sejarah belum mengembangkan bahan ajar berbasis sejarah lokal karena pembelajaran sejarah lokal juga belum optimal. Penelitian ini berfokus pada materi Proklamasi 17 Agustus 1945 dan Revolusi sosial di tepi Jakarta 1945-1955. Desain bahan ajar digital didesain berbentuk *e-book* dengan menggunakan aplikasi canva dan *flipbook pdf professional*. Berdasarkan hasil angket validasi uji kelayakan memperoleh kriteria sangat layak dengan presentase dari validasi ahli materi 90%, validasi ahli bahasa 90%, validasi media 98%, dan validasi praktisi 82,5%. Setelah uji validasi ahli dan praktisi dinyatakan layak maka penelitian dilanjutkan dengan implementasi uji coba terbatas. Uji coba pada kelas XI IPS 1 dengan jumlah 34 siswa. Berdasarkan hasil praktisi respon siswa memperoleh presentase penilaian 85,39% dengan kriteria sangat praktis. Berdasarkan hasil uji coba, bahan ajar digital Revolusi sosial di tepi Jakarta 1945-1955 layak digunakan dalam pembelajaran sejarah kelas XI IPS di SMAN 4 Cibinong.

**Kata kunci:** pengembangan, bahan ajar digital, sejarah lokal.

### Abstract

*This study aims to develop local history-based digital teaching materials for the XI IPS class history subject at SMAN 4 Cibinong. This study uses an R&D research approach using the ADDIE development model. Based on the results of the needs analysis, history learning has not developed teaching materials based on local history because learning local history has not been optimal. This research focuses on the proclamation of 17 August 1945 and the social revolution on the outskirts of Jakarta 1945-1955. The design of digital teaching materials is designed in the form of an e-book using the Canva application and professional pdf flipbook. Based on the results of the due diligence validation questionnaire, it obtained very feasible criteria with a percentage of material expert validation 90%, linguist validation 90%, media validation 98%, and practitioner validation 82.5%. After the expert and practitioner validation tests were declared feasible, the research continued with the implementation of limited trials. Trial in class XI IPS 1 with a total of 34 students. Based on the results of the practice of student responses, they obtained an assessment of the percentage of 85.39% with very practical criteria. Based on the trial results, digital teaching materials for the Social Revolution on the outskirts of Jakarta 1945-1955 are suitable for use in history lessons for class XI IPS at SMAN 4 Cibinong.*

**Keywords:** development, digital teaching materials, local history.

### INTRODUCTION

Learning is a process of interaction between students and educators and

learning resources in a learning environment. Learning activities must be interactive between teachers and

students, because if the learning activities are interactive, students will easily understand the learning delivered by the teacher and student learning motivation can increase (Wanhar, 2011).

Gagne (1985) defines learning as a regulation of events that make it effective. Every learning process always involves two active actors, namely teachers and students. The teacher as a teacher is the creator of student learning conditions that are designed intentionally, systematically and continuously.

Learning is a system consisting of objectives, methods, teaching materials, media, and evaluation (Basri, 2018). The teacher as a teacher is the creator of student learning conditions that are designed intentionally, systematically and continuously. In every learning activity, the teacher delivers material in accordance with the syllabus, to obtain learning materials, teaching materials are needed for learning activities. According to Sadjati (2012) teaching materials as a medium for learning activities can increase and improve the effectiveness of learning. The usefulness of a teaching material in the learning process depends on a teacher's ability to develop and utilize it (Sadjati, 2012).

Teaching materials in learning activities must make it easier for teachers to explain learning materials. Teaching materials used by teachers must convey knowledge from the material presented in

learning activities in the classroom. Good teaching materials are teaching materials that are designed by subject teachers themselves. This is because the teaching materials are designed according to the needs and are adjusted to the characteristics of students (Yulita, 2017).

21<sup>st</sup> century learning requires the entire learning process to follow increasingly sophisticated technological developments (Mardhiyah, et al. 2021; Puspitarini, 2022; Hasibuan & Prastowo, 2019). Currently, increasingly advanced technology makes it difficult for teachers to develop teaching materials using technology or also known as digital teaching materials. Prastowo (2014) explains that the rapid development of information technology has brought major changes and broad impacts to the field of education, including teaching materials. One of them is digital-based interactive teaching materials. These teaching materials are developing and have many variations, some are in the form of games, some are in the form of questions, or some are in the form of teaching materials. Teachers are expected to be agents of change who should not be technologically illiterate. In order for teachers to be able to design and develop their own teaching materials, they must utilize technology.

In each learning activity, teachers deliver material in accordance with the syllabus, to obtain learning materials,

teaching materials are needed for learning activities (Aditia & Muspiroh, 2013). The 2013 curriculum was implemented by the government, one of the aims of which is that in the world of education, both educators and students master IT (Ritonga, et al., 2022). In addition to being required to master IT, teachers and students are required to use, develop and teachers must be able to use digital teaching materials that can be used (Herwina, et al., 2020; Zebua, 2023).

Advanced technology can be utilized for the learning process, so teaching materials can also be made by utilizing technology and can be accessed by utilizing technology, namely in the form of digital teaching materials or teaching materials that can be accessed using electronic devices, or digital teaching materials. Digital teaching materials will make it easier for students to use them in the learning process (Widianto, et al., 2021; Larasati, 2020).

According to Daryanto (2017) the demands of teachers for 21<sup>st</sup> century learning are very heavy. Teachers are expected to be able to organize the learning process and implement the four pillars of learning recommended by the UNESCO International Commission for Education, namely learning to know, learning to do, learning to be, and learning to the together (Daryanto, 2016).

The right teaching source is the media used for teaching that can enrich

and clarify students' understanding of the learning material being studied. As an educator, you must be wise in choosing teaching sources for students. Choosing teaching materials for students can be reviewed from the material that is in accordance with the syllabus and curriculum, the order of presentation, appearance, and other things (Magdalena, et al., 2020).

Based on the results of observations and interviews with history teachers of class XI SMAN 4 Cibinong in October 2022, it was found that teaching materials for history subjects at SMAN 4 Cibinong are still minimal, even student textbooks are not available and students have to find their own materials, and use e-books from the internet.

The resource person said that teaching materials for history subjects are very important to obtain, because they are indeed very minimal and the school library only provides a few history books for students. The teaching materials used for history subjects must be interesting and not monotonous so that when learning history, students will not feel bored. Teaching materials must also be adjusted to the curriculum used in schools. The resource person said that there were obstacles in making other history teaching materials because history teachers did not have much time to make them, so if they spent a lot of time, students would be left behind in their learning materials. The

resource person also explained that history learning in this school still had few teachers who provided local history material because it was considered less in accordance with the history subject syllabus and the Bogor Regency History MGMP did not include local history elements in history subjects in high school. Local history learning is very important even though learning resources such as teaching materials for local history will be very difficult to obtain.

The use of current technology can produce teaching materials for history learning in the form of digital teaching materials that can include local history materials. This research is the development of digital teaching materials for history subjects based on the material of the Social Revolution events on the Edge of Jakarta 1945-1955.

## **METHOD**

This research method is Research and Development (R&D). This research method refers to creating new products or optimizing products that have been made. Sugiyono (2016) explains that the Research and Development research method is to create a product and test the effectiveness of the product. This research was conducted at SMAN 4 Cibinong, Jalan Raya Bojong Koneng, RT 01/RW 01, Cibinong Village, Cibinong District, Bogor Regency, West Java. The

research time was carried out in May-June 2023.

This research is to develop digital teaching material products to the product feasibility test stage and does not conduct product effectiveness tests. This research uses the ADDIE (Analysis, Design, Development, Implementation, Evaluation) development model. ADDIE emerged in the 1990s which was developed by Reisser and Mollenda. The ADDIE development model is implemented at each stage in this research (Hasyim, 2016).

**Analysis:** Curriculum analysis, analysis of teaching material needs, analysis of learning materials. **Design:** Creating a storyboard, forming a development team, preparing a schedule for developing teaching materials, determining the subject matter, the process of inserting material into the developed teaching materials, determining product specifications.

**Development:** Developing products through assessments from material experts, media experts, and education experts. **Implementation:** Implementing products that are already worthy of being tested and applied to students directly. **Evaluation:** The final stage to evaluate the products that have been developed.

The reason researchers use the ADDIE development model is because the ADDIE development model has a simple and systematic procedure so that it can

manage a series of development research to produce effective, efficient, and interesting teaching material products.

The data collection techniques used in this study were interviews, questionnaires, and literature studies. The product trial in this study was a limited-scale trial with a sample of 36 students and one subject teacher. The limited-scale product trial obtained 34 students as respondents.

## RESULTS AND DISCUSSION

### A. Preliminary Study Result

Preliminary study was conducted by observation and interview. Observation was conducted by teaching and entering class XI IPS 5 with a total of 30 students and conducting interviews with two other students. Interviews were also conducted with history subject teachers to find out what teaching materials were used in history learning and to what extent teachers used interesting, efficient and technology-based teaching materials.

Based on the results of the observation, the use of digital teaching materials in history learning is still minimal and students want digital teaching materials based on local history material that is often questioned by students, namely the Social Revolution on the Edge of Jakarta 1945-1955. History subject teachers also gave a positive response to digital teaching materials based on local history material, but the

teaching material must be in accordance with basic competencies and teaching materials must be in accordance with the criteria determined by BSNP and teaching materials must be interesting and not monotonous.

Curriculum analysis was carried out with the aim of finding out what curriculum is being implemented in the target school, curriculum analysis was carried out so that the history learning material developed does not deviate too far from the curriculum being implemented and is in accordance with the curriculum being implemented. The curriculum used for class XI students at SMAN 4 Cibinong is the 2013 curriculum.

Analysis of teaching material needs was conducted to find out about the use of teaching materials for learning activities. Based on the results of interviews with history teachers at SMAN 4 Cibinong, history learning only uses two teacher's handbooks, namely books published by Erlangga and Yudhistira, while students do not have handbooks as learning resources. SMAN 4 Cibinong has not developed local history-based teaching materials so that teachers give a positive response to the development of local history-based teaching materials and test local history-based teaching materials in history learning.

Analysis of the material conducted by researchers regarding the material in order to adjust the material to the

indicators that must be achieved in learning history of interest.

The development of teaching materials will be adjusted to the indicators that must be achieved in learning for the UN charter and the proclamation of August 17 and the state apparatus and its meaning for the life of the nation and state today and the material on the Gedoran Depok 1945 event, a social revolution on the edge of Jakarta in 1945-1955.

## B. Product Development

### 1. Preparation of Product Draft (Design)

Selecting the format of the developed teaching material content, Determining the tools or applications that support the development of products in this study, namely software in the form of a professional PDF flipbook, and premium canva, Creating a storyboard to compile a framework and initial description of the digital teaching materials developed. This storyboard is made to describe the flow of making the developed product, Compiling an instrument framework, which aims to determine the assessment of the quality of the developed teaching materials from a team of experts, history teachers of interest, and student respondents, and Determining a development team consisting of material expert validators, media expert validators, language expert validators, history teacher practitioners of

interest, and student respondents (Muhidin, & Ubaid, 2018).

The material expert validator is Mrs. Eko Ribawati, M.Pd as a lecturer in History Education. The media expert validator is Mr. Dr. Irwanto, M.T., MM., M.Pd., M.Si., M.Psi., M.A as a lecturer in Electrical Engineering Education. The language expert validator is Mrs. Ade Anggraini Kartika Devi, M.Pd as a lecturer in Indonesian Language Education. Practicing history teacher namely Mr. Kusmiarso, M.Pd as specialization history teacher at SMAN 4 Cibinong.



Picture. 1 Book cover



Picture 2. Teaching material menu

## 2. Product Draft Trial (*Development*)

### a) Product Draft Trial Results

#### 1) Results of the Material Expert

##### Product Draft Trial

Based on the assessment data from material experts, the total score was 91 with a percentage of 91%, so the teaching material on the social revolution on the outskirts of Jakarta 1945-1955 is worthy of being tested according to the assessment indicators of the material expert validator with revision notes on the first page of the chapter to encourage students' curiosity about the material.

Tabel 1. Overall assessment data of material expert validators

No.	Assessment Indicator	Score
1.	Content Suitability	45
2.	Suitability of Presentation	46
Total Score		91
Percentage		91%
Criteria		Very Worthy

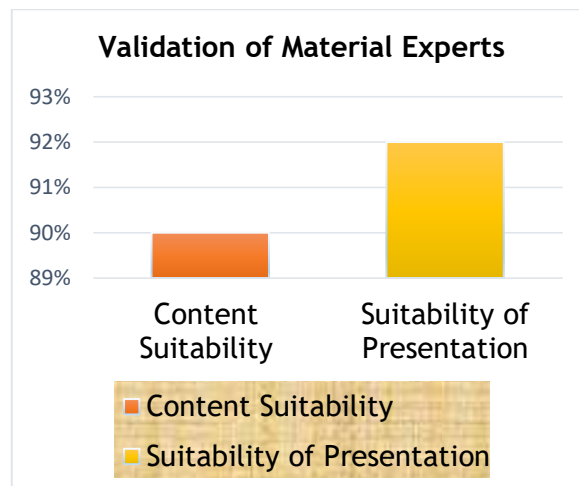


Diagram 1. Validation of Material Experts

#### 2) Results of the product draft trial by language expert

Based on the assessment data of language experts in the first trial, the score was 37 with a percentage of 53%, so the teaching material of the social revolution on the edge of Jakarta 1945-1955 is not yet worthy of being tested and has a revision note to improve according to the rules, sentences, spelling and writing. Based on the assessment data of language experts in the second trial after making revisions, the score was 37 with a percentage of 90%, so the teaching material of the social revolution on the edge of Jakarta 1945-1955 is very worthy of being tested.

Table 2. Overall assessment data of language expert validators

No.	Assessment Indicator	Score
1.	Straightforward	13
2.	Communicative	9
3.	Dialogic and interactive	10
4.	Conformity student development	10
5.	Conformity with language rules	13

6.	Use of symbols, terms and icons	8
Total Score		63
Maximum Score		70
Percentage		90%
Criteria		Very Worthy

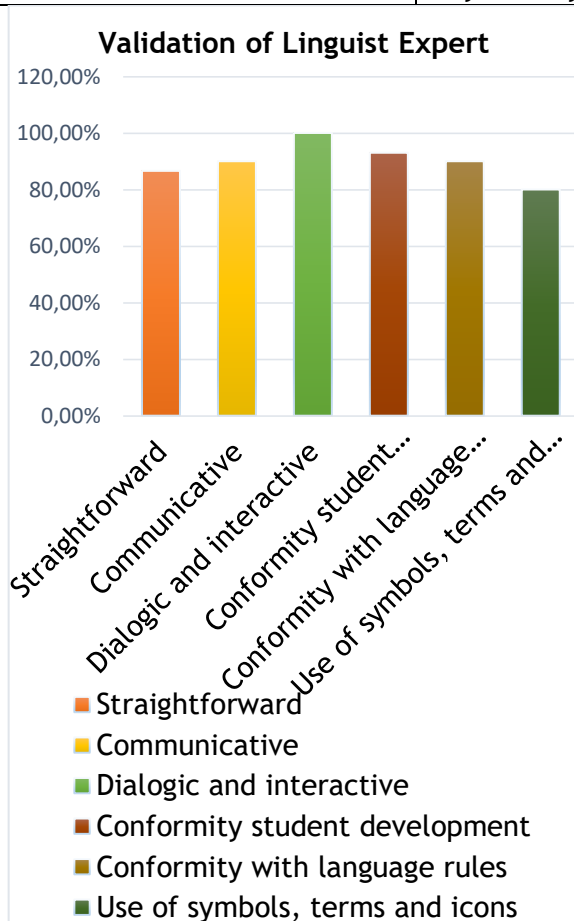


Diagram 2. Validation of Linguist Expert

### 3) Media expert product trial results

Based on the media expert assessment data, the total score was 132 with a percentage of 98%, so the teaching material on the social revolution on the outskirts of Jakarta 1945-1955 is worthy of being tested according to the media expert validator assessment indicators with a note that the revisions to the margins of each page are corrected.

Table 3. Overall assessment data of media expert graphich validators

No.	Assessment Indicator	Score
1.	Teaching materials format size	10
2.	Teaching materials cover design	39
3.	Teaching materials content design	83
Total Score		132
Percentage		98%
Criteria		Very Worthy

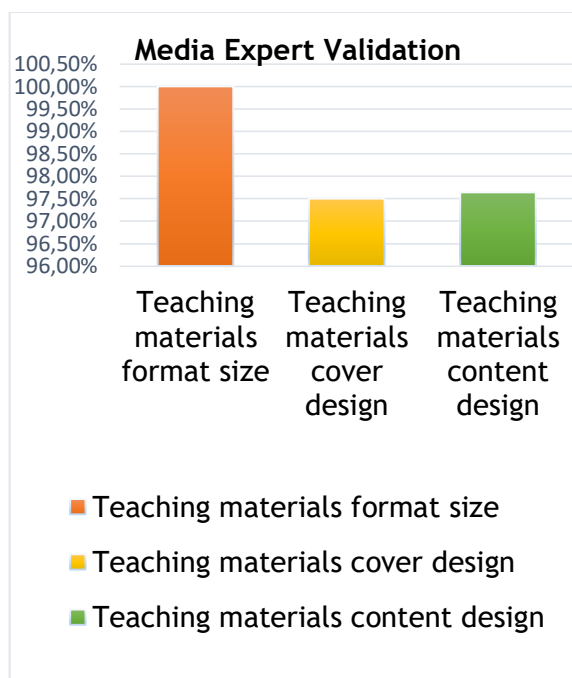


Diagram 3. Validasi Media Expert Vaidation

### 4) Results of Practitioner Product Draft Trial

Based on the practitioner validation assessment data, the score obtained was 70 with a percentage of 87.5%, so the teaching material on the social revolution

on the outskirts of Jakarta 1945-1955 is worthy of being tested according to the practitioner validator assessment indicators with the note that revisions on several pages are accelerated when opening them on Android because using Android on pages with buttons are very slow to open.

Table 4. Overall assessment data of the practitioner validation practicality test

No.	Assessment Indicator	Score
1.	Material/Content	31
2.	Appearance	19
3.	Language	20
Total Score		70
Maximum Score		80
Average		4.3
Percentage		87.5%
Criteria		Very Practical

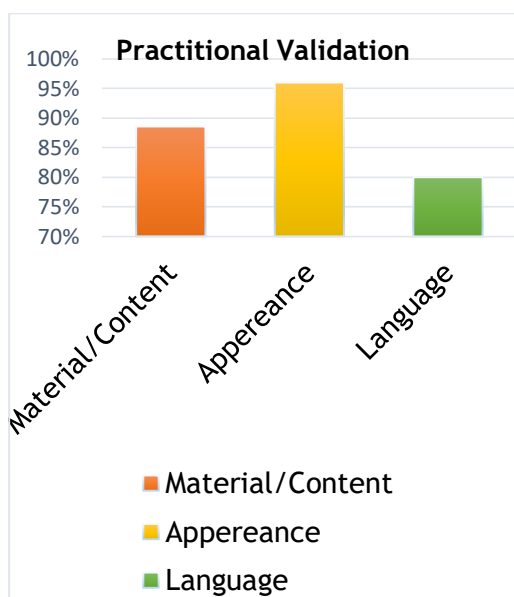


Diagram 4. Validasi Praktisi

### C. Product Testing

#### 1. Implementaiton (*Implementation*)

The Implementation Stage is carried out after the teaching material product

has gone through the revision stage and received an assessment of being very suitable for use in learning activities from expert validators and practitioner validators. In this study, teaching materials that have been created and received assessments from expert validators and practitioner validators were implemented and tested at SMAN 4 Cibinong.

This study conducted a trial on class XI IPS 1 students of SMAN 4 Cibinong with a sample of 34 students. The limited trial of this study used Basic Competency 3.12. The teaching materials used were digital teaching materials on the history subject of interest with the material Social Revolution on the Edge of Jakarta 1945-1955 which had received an assessment of being very suitable for testing by expert validators and practitioner validators.

The results of student responses regarding digital teaching materials based on the material Social Revolution on the Edge of Jakarta 1945-1955 with an assessment of three aspects, namely appearance, material, and language. The three indicators overall received a score of 85.39%. The first indicator, appearance, received 81.17% with the criteria "very practical". In the second indicator, the material gets 81.10% with the criteria of "very practical". In the third indicator, the language gets 85.29% with the criteria of "very practical".

Table 5. Student Response Results

No	Indicator	Score	Percentage
1.	Appereance	966	81.17%
2.	Material	1103	81.10%
3.	Language	290	85.29%
The total of student response scores obtained (n)		2.430	
Maximum Score (N)		2.890	
Percentage of overall student response results (P)		84.08%	
Criteria		Very Practical	

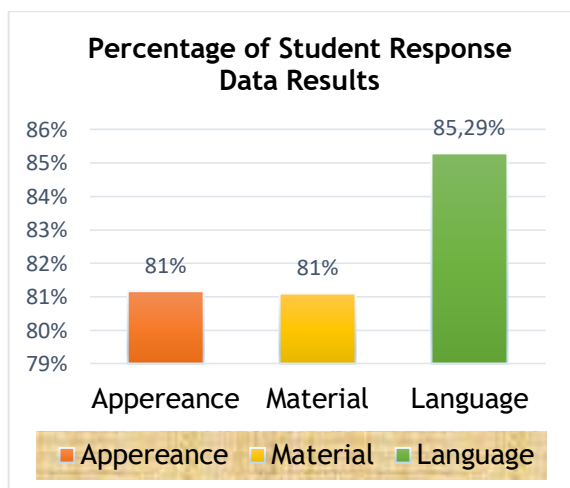


Diagram 5. Percentage of Student Response Data Results

## 2. Evaluation (*Evaluation*)

The assessment results by expert validators and practitioner validators obtained an assessment with very feasible criteria from media expert validators obtaining an assessment percentage of 91%, material expert validators obtaining an assessment percentage of 90%, and language expert validators obtaining an assessment percentage of 90%. Meanwhile, the assessment results from practitioner

validators obtained a very practical assessment and obtained an assessment percentage of 87.5% both in terms of appearance, material/content, and language aspects. This digital teaching material has shortcomings in the trial process, namely product testing time, animation on Android, illustrations and colors in the teaching material.

The advantages of the digital teaching material product that was developed also have the following advantages:

1. The digital teaching material Social Revolution on the Edge of Jakarta 1945-1955 can be used for history learning for grade XI SMA/MA students.
2. The digital teaching material Social Revolution on the Edge of Jakarta 1945-1955 is equipped with practice questions, learning reflections, quizzes, learning videos, and interesting illustrations.
3. Students can access the teaching materials easily by simply clicking on the shared link.
4. Students can understand and get an overview of the material in the teaching materials by watching videos at the beginning of each chapter.

Students can watch an animated video of the Gedoran Depok 1945 event.

## CONCLUSION

Based on the researcher's statement in the discussion and research results described in the research on the development of digital teaching materials based on the material of the Social Revolution on the Edge of Jakarta 1945-1955 for class XI IPS students at SMA Negeri 4 Cibinong, it can be concluded as follows. The development of this digital teaching material uses the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation).

Based on the results of the curriculum analysis, the researcher conducted a research on the development of digital teaching materials based on the material of the Social Revolution on the Edge of Jakarta 1945-1955. The results of the feasibility of digital teaching materials on the material of the Social Revolution on the Edge of Jakarta 1945-1955 obtained an assessment from the validation of material experts, validation of language experts, validation of media experts and validation of practitioners. Validation of material experts obtained a percentage of the feasibility level of 90% with the criteria of "very feasible". Validation of language experts obtained a percentage of the feasibility level of 90% with the criteria of "very feasible". Validation of media experts obtained a percentage of the feasibility level of 98% with the criteria of "very feasible". Validation of practitioners obtained a percentage of the

feasibility level of 82.5% with the criteria of "very practical". The results of the trial of teaching materials on students obtained an assessment of 85.39% with the criteria of "practical". Based on the results of the expert validation assessment, practitioner validation and student responses, digital teaching materials based on the material Social revolution on the outskirts of Jakarta 1945-1955 are suitable for use in history learning.

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