# Developing Interactive Multimedia for History Subject in Senior High School

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## Abstract

This study is aimed to produce interactive multimedia for History subject, which is valid, practical, and has a potential effect on students' learning outcomes. This development research used Ellis and Levy's model using six stages of development procedures: problem identification, goal identification, media and design development, product trials, evaluations, and publications. The formative evaluation of this research refers to Suparman. Interviews, questionnaires, observations, and learning outcomes tests were used here. Three experts carried the validation on the material, teaching media, and lesson plans at the expert review stage. The result was valid. One-to-one evaluation and small group evaluation stages were carried out to determine practicality. This stage got 83.2% for the excellent category and 81.95% for the very active category. The students' learning pretest's potential effect resulted in 51.07% and post-test 83.03% with the augmented score 31.96 while the N pretest score 1.88 referring to high category. The result shows that the development of interactive multimedia on the French Revolution, the American Revolution, the Russian Revolution, and its influence on the development of the Indonesian National Movement History subjects are valid and practical and potentially affect student activity and learning outcomes.

**Keywords:** Developmental Research, Interactive Multimedia, History Subject

## I. INTRODUCTION

Today, the 21st Learning Century issue associated with the global situation of the 4.0 industry and society 5.0 has always been a hot issue to be discussed. Therefore, historical education must be a part that corresponds to those issues. Moreover, this lesson is suspected of not fully overcoming the classical problem, which is considered a boring subject for its students (Abubakar, G.B, 2019; [1; 2]. The researcher sees that to overcome that latest issue is by developing technology-based learning media.

Teaching aids (Tas), according to Shukla (2018) [28], are any kinds of materials that are usually used in an educational context such as books, pictures, or maps, including any other devices such as DVD or computer used by teachers as classroom interactions.

Whereas, Hamalik (2008) [17] explained its usefulness is to raise new desires and interests and generate motivation and stimulation of learning activities, or to illustrate concepts so

that the students obtain long term memory from material given [12; 25].

Meanwhile, Kuntowijoyo (1995) [21] proposed that History Subject is a study of events in the past and can be proven by authentic evidence, which is studied in the present time and used as a reference for future subjects.

Historical systematics are built by the chronology of time. Therefore, history cannot be separated from aspects of time and space. Thus, History subject has its characteristics, namely, history, which happened once in a lifetime (*einmalig*) and chronological in nature. The implication in organizing the subject matter, learning history must be based on the chronological order of historical events; through three essential elements, including humans, space, and time [23]. These three past dimensions occur on an ongoing basis; and in the form of cause and effect, with the scope covering the society's development in various aspects of life such as politics, social, culture, religion, or beliefs. Therefore, it is known in history subjects interdisciplinary and multidisciplinary approaches.

At Senior High School, History subject views society's problems and development from past till present; by emphasizing critical and logical perspectives through sociological and historical approaches.

A previous study showed that teachers still used printed media, such as books or students' works book. In contrast, the students only listen to the teacher's explanation verbally without knowing what the teacher has explained. It emerges boredom for the students, and the learning outcomes cannot be reached optimally. Along with that case, Asokhia (2017) [10] found that most schools' poor performances are the facts that the textbook's teaching is book dominated. Teachers do not have a regular supply of teaching aids where they are available. They are so inadequate and obsolete.

Based on those reasons, the writer conveys innovation and ideas to develop contextual learning media in interactive multimedia for the history subject, Macromedia Flash Professional 8 program.  This program is chosen because it relates to media use for learning [4; 7].

Multimedia can be defined as several medium such as texts, graphics,  animation, voice, and videos. The combination emphasizes two or more media as a motor to that combined media [10; 27; 13; 14; 3]. Meanwhile, Hofstetter in Komalasari and Saripudin (2017) [20] stated that videos and animation become one unity with the proper link, and the users can navigate, interact, and communicate. Referring to some opinions of it, the Macromedia Flash Professional 8 program in

this research is a part of the development of interactive learning multimedia applied in History subject.

Some previous studies have shown that in some cases, computer-based multimedia can help teachers assimilate any information better than traditional classroom lectures [9; 5]. Therefore, media literacy will shift the tradition of expository learning to students learning [19]. It will make them have intrinsic motivation, and it is considered an enjoyable learning experience that satisfies students' basic needs to feel the competencies and autonomy [18].

Nugroho (2012) [26] examined "Developing Interactive Multimedia for History Subject for the Seventh Grade Students in SMP 5 Depok.  The results showed that the group's achievement using developed interactive multimedia products shows 76.67% refers to a good category. Furthermore, Cahya's research (2012) [11] entitled Developing Multimedia Learning for Social Subject for the Seventh Grade of SMPN 1 Kalikotes Klaten" showed that most students are interested in following the process of learning by using multimedia and the effectivity was very good. It is concluded that the results of previous studies, interactive multimedia, are affected, and it can be seen from the students; achievement through using that media.

This research was done to develop interactive multimedia that is valid and practical with chosen History materials, such as The French Revolution, The American Revolution, and the Russian Revolution and its influence on the development of the Indonesian National Movement.  This research contains texts, pictures, animation, voice, and videos to ease students' learning process.

Therefore, the research problems were formulated as follows 1) how to develop valid interactive multimedia for History subject in SMA Negeri 7 Palembang; 2) how to develop practical, interactive multimedia for History subject in SMA Negeri 7 Palembang; 3) How is the potential effect of the use of interactive multimedia for History subject towards the students' activeness dan their learning outcomes at the eleventh-grade students of SMA Negeri 7 Palembang.

The objectives of this study are 1) to know how to develop valid interactive multimedia for History subject in SMA Negeri 7 Palembang; 2) to understand how to develop practical, interactive multimedia for History subject in SMA Negeri 7 Palembang; 3) to know-how is the potential effect of the use of interactive multimedia for History subject towards the students' activeness dan their learning outcomes at the eleventh-grade students of SMA Negeri 7 Palembang.

## II. Research Method

This study is developmental research that aims to produce specific products and test the effectiveness of these products [31]. This interactive multimedia development research used the Ells and Levy models with Suparman's formative evaluation stages to obtain and produce valid and practical interactive multimedia products. The development model then describes a process made in graphic or narrative form, showing the principal elements and their structure and stages [22].

In the development of interactive multimedia, it was carried out several stages such as 1) problem identification; 2) objectives identification; 3) design and developing media; 4) products trials; 5) evaluation (formative evaluation on expert review, one-to-one assessment, and small group evaluation as well as conducting revisions and field tests), which are illustrated in Figure 1 below:
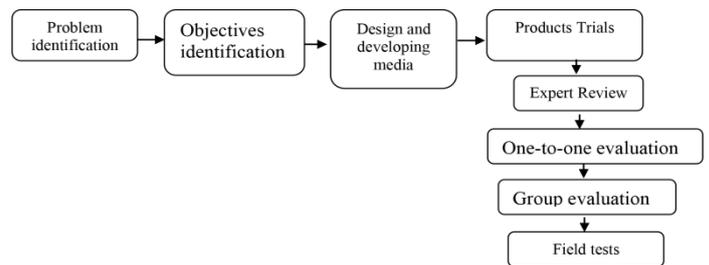


**Picture 1.** Diagram of Procedures Development [16; 32]

The subject of this research was the eleventh grade of the social class of SMA Negeri 7 Palembang. Interviews, questionnaires, observations, and tests were used in the data collection technique.

**Table 1.** Data Collection Table

| Steps | Data | Source of Data | Data Collection Technique | Instrument | Data Analysis Technique |
|---|---|---|---|---|---|
| **Problems identification** | - Interview result from the teacher<br>- Students' response | - Teacher<br>- Students | Interview<br><br>Questionnaire | Interview Guidelines | Descriptive Qualitative<br><br>- Descriptive Quantitative |
| **Objective Identification** | - | - | - | - | - |

| **Developing Design** | Notes, pictures, and video | - | - | - | - |
|---|---|---|---|---|---|
| **Evaluation** **1. Expert Review** | *Expert Suggestions* | - Media expert<br><br>- Learning design expert<br><br>- History material expert | Questionnaire | Questionnaire sheet | Descriptive Quantitative |
| **2.*One-to-one evaluation*** | Students' responses | Students | Questionnaire | Questionnaire sheet | Descriptive Qualitative |
| **3.  Small group evaluation** | Students' responses | Students | Questionnaire<br><br>Observation | Questionnaire sheet<br>Observation sheet | Descriptive Quantitative |
| **4.  Field test** | Students' outcomes | Students | Test | Test items | Descriptive Quantitative |

Table 1 show that interviews were conducted at the problem identification stage, the expert review stage, and the one-to-one evaluation stage. The questionnaire and observation were used in the small group evaluation stage, and test and observation were also used at the field test stage.

## III. FINDING AND DISCUSSION

a.  Finding
Problem identification

Based on the result of the interview from the History teacher, namely M (Senior High School 4 Palembang), HM (Senior High School 7 Palembang), H (Senior High School 9 Palembang), problems or obstacles faced by teachers are a) lack of availability of media and methods that can be used in learning in the classroom, b) limited learning time in school, c) teachers have difficulty in preparing the history of learning media that suits the needs of the students, and d) the proper method in delivering material of the influence of the French revolution, the American Revolution, and the Russian revolution towards the development of Indonesia's national movement in the class. In addition to interviews with teachers, a questionnaire was distributed to find out students' responses, as shown in Table 2 below:

**Table 2.** The result of the questionnaire in the identification problem step

| No | Information | Common responses (%) |
|---|---|---|
| 1 | Students agree that History subject is interesting | 60, 46 |
| 2 | Students got difficulties in learning History subject | 75,14 |
| 3 | If students get difficulties, they discuss it with the teacher | 51,67 |
| 4 | Distinguish the influence of the French revolution, the American Revolution, and the Russian revolution towards the development of Indonesia's national movement as core material that is considered the most challenging material | 42,03 |
| 5 | Teachers used the discussion method without involving students | 36,66 |
| 6 | History subject teachers never taught by using computer | 65,56 |
| 7 | Students are excited to learn History subject if the teachers use computer | 76,54 |
| 8 | Teachers use engaging media to make the teaching and learning process effective | 57,22 |
| 9 | Students agree with the use of computer media-based and interactive video (such as interactive multimedia, learning media) | 66,59 |
| 10 | Students very agree if the use of exciting learning media affect the spirit and students' outcome | 58,49 |

## III.I. The Identification of Aims

Following the problems described previously the answer to these problems is the need for research contribution in dealing with learning problems. The purpose of this product's research and development is to produce interactive multimedia that is valid, practical, and effective so that it can help students in the learning process and improve motivation and students' learning outcomes.

## III.II. Result Design and Media Development

There were subjects, such as the French Revolution, the American Revolution, the Russian Revolution, and the Indonesian National Movement in the syllabus of History lesson in IX Social class suit standard competence. Analyzing world history that affects Indonesian people's history from the $18^{th}$ century to the $20^{th}$ century has Basic Competence, which is specifically spelled out into indicators that reflect learning objectives. In this study, the researchers developed interactive multimedia learning for those subjects. From the Standard Competence and Basic Competencies, the Outline of Multimedia Content and making flowcharts, storyboards, it was then producing interactive multimedia products. The product design dan development can be seen in picture 2 below.



**Picture 2.** The Result of Prototype 1

## III.III. Experts Review Results

In prototype one, the validation was carried out three experts as validators for one ICT material expert, one media expert, and one learning implementation plan expert to see the validity of interactive multimedia products for History Subject. The validators' comments and suggestions are summarized in table 3 as follows:

**Table 3.** The Summary of Comments and Suggestions from Validators towards Prototypes

| NO | NAMES | POSITION | SUGGESTIONS |
|---|---|---|---|
| 1 | RJ | Lecturer in Postgraduate Program at Sriwijaya University | 1. Fix the use of operational words in indicators<br>2. Differentiate clearly between lesson plan and learning method<br>3. Put the questions |
| 2 | SDJ | Head of Social Department of PGRI University | 1. Complete the materials<br>2. Make the texts clearer<br>3. Fix the spelling of the materials |
| 3 | NS | Lecturer in Bina Darma University | 1. Make the hyperlink accessible particularly for the test and questions<br>2. Make the letters clear, the size, and the color of the letters. |
| | | | |

Based on table 3 above, it can be concluded that interactive multimedia in prototype one still needs to be revised. Then the conclusion is that interactive multimedia is valid and worth testing.

### III.IV. One-to-one Evaluation Results

In the prototype 1 stage, the *one-to-one evaluation* was carried out simultaneously with the *expert review*. The assessment was carried out on 3 (three) XI grade students of Social class in SMA Negeri 7 Palembang. They were selected according to their level of ability, learning activities in the computer laboratory using computers or laptops. Students commented on the evaluation results and they can be seen through this table:

**Tabel 4.** Students' Comments to *One to One Evaluation* towards Prototype 1

| NO | NAMES | COMMENTS |
|---|---|---|
| 1 | MO<br><br>(XI Social 1 Class) | - The multimedia content is explicit and interesting<br>- The questions are easy to be done<br>- Videos, texts, and sound are clear<br>- The music does not interfere with concentration<br>- Interactive multimedia is practical to be used |
| 2 | MRS<br><br>(XI IPS Social Class 1) | - The multimedia content is explicit and interesting<br>- The questions are easy to be done but too many and wasting time<br>- Videos, texts, and sound are clear<br>- Interactive multimedia is practical to be used |
| 3 | TA<br><br>(XI IPS Social Class 1 | - The multimedia content is explicit and interesting<br>- The questions are easy to be done but too many and wasting time<br>- Videos, texts, and sound are clear<br>- Music makes good not bored<br>- Interactive multimedia is practical to be used |

Table 4 above is students' comments from one-to-one evaluation of interactive multimedia learning of History subject. Based on the validator's suggestions, and the results of one-to-one evaluations, the prototype one design product was revised to obtain better interactive multimedia called prototype 2.

**Table 5.** The Result of Prototype 1 Revision

| SUGGESTIONS | BEFORE REVISION | AFTER REVISION |
|---|---|---|
| - Fix the operational words within indicators | Only the operational word of 'describe' used | There are two operative words, ' analysis' and 'describe.' |
| - Differentiate clearly between lesson plan and learning method | Method and model of learning are united | The method and model of learning are separated |
| - Put the questions | Questions are not written in the lesson plan | Questions are written in the lesson plan |
| - Complete the materials | The materials are summarized; only points are taken | Materials are fixed to be whole ones |
| - Make the text clearer | Text colors are not in contrast to the *background* | Texts are clearer |
| - Fix the spelling of the materials | The written form of Europe | The written form of the continent become Europe |
| - Make the hyperlink accessible mainly for the test and questions | The materials and hyperlink of the questions do not work properly | *The hyperlink* is fixed and connected and functional |
| - Make the letters clear, the size, and the color of the letters. | The clarity of letters disturbed due to colors are not contrasting and also the font size | The letters, colors, and font are fixed |

Table 5 above contains comments and suggestions from the experts obtained from students' interviews and comments when the one-to-one evaluation was done and used to develop prototype two.

Interactive multimedia learning for History subject was revised in prototype one can be seen in the display. There was a refinement in prototype one that the texts' clarity did not follow the audio and the materials' hyperlink. The questions that did not work properly and in prototype 2 were vice versa. It can be seen in table 6:

**Table 6.** The Alteration of Prototype 1 to Prototype 2

| No | The Display Screen before Revision | The Display Screen after Revision |
|---|---|---|
| 1 |  |  |
| | In prototype 1 in the main menu, there are options for exercise, but the hyperlink does not work properly and can only be opened separately. It is revised in prototype 2 in the option of towards exercise in the main menu can be opened not separately because the hyperlink works properly | |
| 2 |  |  |
| | There are only a few texts in prototype 1 and still unclear. After being revised in prototype 2, the texts are more explicit; texts follow the video's audio. | |

Revised prototype one becomes a reference for prototype two in the next stage of activity.

### III.V. The Result of Small Group Evaluation

At this stage, prototype two was conducted by *small group evaluation* in the form of small-group learning totaling eight students; in learning activities carried out in a computer laboratory using a computer or a laptop, questionnaires were conducted to see the practicality of interactive multimedia. In this *small group evaluation* activity, an observation towards students' activities was done, and the result can be seen in table 7.

**Table 7.** The Recapitulation of Observation Activeness in Small Group Evaluation

| No | Activities Indicators | % | Category |
|---|---|---|---|
| 1 | Paying attention to the learning instructions in interactive multimedia | 87,50 % | Very active |

| 2 | Focus on the learning process | 90,00 % | Very active |
|---|---|---|---|
| 3 | Discussing and asking peers about materials stated in interactive multimedia | 82,50% | Very active |
| 4 | Taking notes of necessary materials | 67,50 % | Active |
| 5 | Delivering opinions in the learning process | 72,50 % | Active |
| 6 | Working together with peers | 87,50 % | Very active |
| 7 | Being punctual in finishing exercise | 82,50 % | Very active |
| 8 | Showing sincerity in doing exercise which is given through | 92,50 % | Very active |
| 9 | Concluding the learning materials properly | 75,00 % | Active |
| 10 | Sum | 81,95% | Very active |

Table 7 above shows that the percentage of activeness in prototype 2 is practical. It can be seen from students' activities with an average percentage of 81.95% in the very active category. In addition to observing the activity of distributing questionnaires also conducted to determine the practicality of interactive multimedia. The recapitulation of the results of the questionnaire can be seen in Table 8 as follows:

**Tabel 8.** The Recapitulation of Questionnaire Result *Small Group Evaluation*

| Indicators/Scored Aspects | Average(%) | Category |
|---|---|---|
| The clarity of the content of interactive multimedia | 87,5 | Very good |
| The suitability between exercises in interactive multimedia | 83,3 | Very good |
| Level of difficulty of the test | 73,7 | Good |
| The understandable language used, easy and simple | 86,8 | Very good |
| The clarity of instructional use in interactive multimedia | 83,3 | Very good |
| The easiness of using the navigation in interactive multimedia | 82,5 | Very good |
| The suitability of video display, pictures, and animations in interactive multimedia | 85 | Very good |
| The suitability of colors composition in interactive multimedia | 81,2 | Very good |
| Practicality in using interactive multimedia | 87,5 | Very good |
| The clarity of texts, pictures, and sound in the display of the multimedia | 85 | Very good |
| The effectiveness of playing music in interactive multimedia | 80 | Very good |
| **Mean** | **83,2** | Very good |

Table 8 shows that the average of the responses of 8 students in the small group evaluation was 83.2%, with an outstanding category. Prototype two is practically seen from the results of observations and recapitulation of the questionnaire. Based on students' comments in the small group evaluation, the product of prototype two design did not undergo revisions. Revisions were made to obtain interactive multimedia, better-called prototype three. The following are changes before and after the modification based on the comments.

**Table 9.** Revision to Prototype 2

| KOMENTAR | SEBELUM REVISI | SESUDAH REVISI |
|---|---|---|
| The use of music and audio is not precise; the music sound disturbing concentration | The music sound is louder than material audio; it makes the audio unclear | The music sound is fixed, and the audio material is clear |

Table 9 above is the students' comments when they have small group evaluations in terms of writing to develop prototype three.

### III.V.I. Field Test Results

The actual research trial was done in this stage, derived from developing prototype three to eleventh-grade students of Social class 1 of SMAN 7 Palembang.

The field test activity was carried out to see the potential effects on learning outcomes and students' activities on interactive multimedia in History subject. It was done four times. The first meeting discussed the French Revolution, but before that, the pretest was given. The second meeting discussed the American Revolution; the third meeting discussed the Russian Revolution, and the last panel discussed the effect of those revolutions on the Indonesian National Movement.

The form of learning activities was an independent study with an individual learning process, and the researcher was an observer.

### III.V.II. The Result of Field Test towards Students' Activities

When the learning process was running, the observation was done to see the students' activeness during the learning process, and it was done four times. It is obtained such a recapitulation during the observation as follows:

**Table 10.** Recapitulation during the Observation of *Field Test*

| % MEAN /MEETING | | | | MEAN (%) | CATEGORY |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | | |
| 71,85 | 73,33 | 73,49 | 73,65 | 73,08 | Active |

Table 10 shows that the recapitulation results of observation at the first meeting with the active category were 71.85%, while the second meeting increased to 73.33%. This happened because students are accustomed to using interactive multimedia and overcoming learning difficulties. At the third meeting, the percentage of the students' activeness also increased to 73.49%. The fourth meeting rose to 73.65, with a total number of 28 participants in each session. It can be said that interactive multimedia is practical for them as users and potentially affected their activities.

### III.V.III. The Result of Field test towards the Students' Learning Outcomes

Pretest and post-test were conducted in first and fourth meeting for the students of eleventh graders of Social Class 2 of SMAN 7 Palembang with students grades as shown in table 11 as follows:

**Table 11.** The Recapitulation of Students' Learning Outcomes in *Field Test*

| MEAN OF *PRETEST* | MEAN OF *POSTEST* | N-GAIN | CATEGORY |
|---|---|---|---|
| 51,07 | 83,03 | 1,88 | High |

Table 11 shows that the mean score obtained from students in the pretest was 51.07 with poor category, while for post-test results, the mean score was 83.03 with an excellent category. If the post-test passing grade was 80, all the students succeeded with a very good predicate. The students' mean score in the pretest was 51.0, and the post-test was 83.03, showing an increase of 31.96, and the gain score of 1.88 is included in the high category. Based on that description, it can be concluded that the interactive multimedia learning for History subject that the researcher has developed has a potential effect on students' learning outcomes.

## IV. DISCUSSION

### IV.I. Developing Valid and Practical Interactive Multimedia

The development of interactive multimedia that suits to research procedure consists of three prototypes. Prototype one, which experts for validation carried out in one-to-one evaluation, prototype two was carried out in small group evaluation, and prototype three was carried out during the field test implementation. According to Akker (1999) [6], the evaluation cycle in research development is challenging to be summarized because all the evaluation cycles are integrated and contribute to increasing the development of interactive multimedia.

It can be seen in the study results with the evaluation phase, which refers to the evaluation of Suparman (2012) [32]. Based on the validation of prototype one validated by the validator, interactive multimedia meets the valid criteria seen from the results of interviews from the validator based on content, construct, layout, and language. The conclusion is that interactive multimedia is valid and worth testing. Besides, prototype one was also carried out on a one-to-one evaluation on 3 (three) students to see interactive multimedia's practicality. It can be said that interactive multimedia for History subject for Senior High School that has been developed by the researchers was valid and practical and can be used at a later stage of research.

The prototype two trial was conducted on a small group evaluation with eight students to see interactive multimedia's practicality. From that trial, the average response of 8 students in the small group evaluation was 83.2%, with an outstanding category. The observation of students' effectiveness was also obtained with 81.95% with a very active category.

Based on the research validation test by interactive multimedia experts, it is rated valid. The evaluation with one-to-one evaluation and small group evaluation to see activities and

students' outcomes to know whether interactive multimedia in history is practical.

The result of this study meets the criteria as stated by Sudjana and Rivai (2011) [30] that choosing media for teaching purposes is a better way to pay attention to the requirements, namely accuracy with learning objectives; support for the content of the lesson materials; practicality and ease of obtaining media; teacher skills in using it; availability to use it based on the level of thinking of the students.

## IV.II. Potential effects on Students' Learning Outcomes

The field test phase aimed to see the potential effect of interactive multimedia on learning history subject to students' learning outcomes. Filed tests were carried out in four meetings on 17, 23, 24, and 30 May 2018 in the computer laboratory at SMA Negeri 7 Palembang.
The pretest was given to see how far the prior knowledge of the students was. The average pretest score was 51.07, and then the learning process was carried out using interactive multimedia in learning History subject on the second, third, and fourth meeting.
Post-test was done at the end of the fourth meeting, which was intended to see the potential effect of interactive multimedia in History subject with an average score of post-test 83.03. it can be categorized as an outstanding category with the gain score in a high category (1.88). The data showed an increase in students' learning outcomes after using interactive multimedia in learning History subjects.

Besides the test, the observation was also conducted in the first meeting and achieved an active category (71.85%). The students are accustomed to using interactive multimedia and can overcome their difficulties in learning. At the third and fourth meetings, the students' activeness also increased to 73.49% and 73.65% with a total number of 28 students, so it can be said that the interactive multimedia is practical for students as users and have had potential effects on students' activities.

Based on the final scores, the development of interactive multimedia that has been carried out, according to formative evaluation by Suparman, already met three quality criteria (Suparman, 2012) they are

a.        Validity (experts) based on the consideration of experts' judgments about learning content and assessment tools was stated to be following the instructional objectives that were intended to be measured.
b.        Practicality means the products produced are practical and economical in terms of time and cost; easy to implement and scored; the result can be interpreted and utilized accurately by the test organizer.

c. The effectiveness means using the developed products and learning objectives, which is seen from learning outcomes.

After going through the development process on prototype one, prototype two, and prototype three, interactive multimedia was valid, practical, and effective. The validity was described from the experts' review, practical is from the students' activities and

their responses to *one-to-one evaluation* and *small group evaluation*. Meanwhile, effectiveness can be seen from the activities and students' learning outcomes in field tests. The results showed that interactive multimedia had met the criteria like what Rieser and Dick (1989) [15] have stated that media should appropriate with students' characteristics, practical when used to support learning objectives. It is concluded that interactive multimedia learning for history subjects, namely the French Revolution, American Revolution, and Russian Revolution, and the Indonesian National Movement, can be used as an alternative in the classroom learning process and students' independent learning.

## V. CONCLUSION AND RECOMMENDATION

Based on this study's results, it can be concluded that interactive multimedia of History subject is declared valid and worthy of testing because it has been carried out on various stages and tested by the experts in terms of its materials, media, and learning design. Besides, one-to-one evaluations were also conducted to find out the practicality. The developed interactive multimedia is practical to be used and implemented because it attracts students' attention and participates in the learning process. It can be seen from the observations which obtained the average score of 81.95% and to be classified as a very active category. While for the students' responses, the average score was 83.2%, which was assumed as practical criteria. The use of interactive multimedia in the learning process can also improve students' learning outcomes and effective to be used as guidance for teachers and students for History subject. The pretest results showed that the average score was 51.07, and the post-test with an average score of 83.03. The data means there is an increase between pretest and post-test.

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