

Developing an Interactive Multimedia for Teaching Report Text at The Eleventh Grade Students of SMA Negeri 1 Kota Serang

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Abstract

The objectives of this research were: (1) to find out the students' needs in learning report text; (2) to find out how to develop an interactive multimedia of report text; (3) to find out appropriateness of interactive multimedia for teaching report text at the eleventh grade students of SMA Negeri 1 Kota Serang. This research adapted Research and Development (R&D) design from Borg and Gall (1983). It consists of (1) research and information collecting, (2) planning, (3) develop preliminary form of product, (4) preliminary field testing, (5) main product revision, (6) main field testing, (7) operational product revision. The research instruments used students' open-ended questionnaires, semi-structured interview, students' assessment sheets, material, and media experts' validation forms. The data were analyzed qualitatively and quantitatively. Data analysis showed that the students and the English teacher needed an interactive multimedia of report text (IMPORT). Moreover, IMPORT obtained the percentage scores of 96% in preliminary field testing and 100% in main field testing from material and media experts. Furthermore, IMPORT obtained percentage scores of 82.56% in preliminary field testing and 89.2% in main field testing from the students. Those results showed that IMPORT was appropriate to be used for teaching-learnig report text.

Keywords : Interactive Multimedia; Report Text; Research and Development.

INTRODUCTION

Nowadays, the role of media in the teaching and learning process is required. It becomes one of the important factors which influence the student's motivation in their learning activity. Based on the National Education Ministerial Regulation No. 65 of 2013 regarding to Standard of Process, one of the educational principles is employing the Information and Communication Technology (ICT) to increase the efficiency and effectiveness of learning.

There are various kinds of the learning media based ICT which can be used in the teaching and learning process. One of appropriate media

which is needed by the teachers and the students are through the use of interactive multimedia. Interactive multimedia is the integration of digital media including combinations of electronic text, graphic, moving images, and sound, into a structured digital computerized environment that allows people to interact with the data for appropriate purposes (England and Finney, 2011: 2). It proves that the use of multimedia enables the students to be interactive in their learning process.

Furthermore, one of the appropriate learning materials which is learnt by the eleventh grade students in 2013 curriculum is report text. It was considered by most of the students as one of the difficult materials regarded that report text has many technical or scientific terms inside the text. Thus, it made them difficult to understand the text, find out the meaning of new vocabulary, identify the generic structures, grammatical structures and language features of text, and how to pronounce the vocabulary fluently from a report text.

Therefore, to solve the English teacher's and the students' problems in the teaching and learning report text, the use of interactive multimedia was needed. According to Reddi & Mishra (2003: 04), "through interactive multimedia, the process of learning will be more goal oriented, more participatory, flexible in time and space, unaffected by distances and tailored to individual learning styles, and increase collaboration between teachers and students." It meant that the use of interactive multimedia created the fun learning and created the interaction between the students and teachers.

THEORETICAL FRAMEWORKS

General Concept of Report Text

One of text types in writing which should be learnt by the students is report text. Report text is a kind of text which is used to describe the way things are, with a reference to a range of natural, manmade, social phenomenon in our environment (Gerot and Wignell, 1994). There are some generic structures of report text includes: first, general classification which tells what the phenomenon under discussion is;

Second, description tells what the phenomenon under discussion is like in terms of parts (and their function), qualities, habits or behaviors for living and non-living things. In conclusion, report text is a kind of text which is used to inform about natural or social phenomena. It has two generic structures, they are general classification and description.

The Concept of Interactive Multimedia based Web

The multimedia component is characterized by the presence of texts, pictures, sounds, animations and videos; some or all of which are arranged into some coherent programs. Interactive multimedia is the integration of digital media including combinations of electronic text, graphic, moving images, and sound, into a structured digital computerized environment that allows people to interact with the data for appropriate purposes (England and Finney, 2011: 2). The interactive

component refers to the process of giving the user to control the environment by a computer (Phillips, 1997 cited in Mishra & Sharma, 2005). Thus, it enables the user to operate it interactively.

In addition, a web can be interactive if it uses other built-in software, modules or features aimed at creating an environment for a website or web application user to be actively engaged during visit or use (Odugbesan, Temitayo: 2003). Thus, the researcher focused to create an interactive multimedia based web by combining a free website builder and two softwares. Some of them are Wix as a free interactive website builder, iSpring Suite 8 to create an interactive quiz and Adobe Flash CS6 to create an interactive games.

The Concept of Wix

Wix is one of free website builder in the world. Wix.com is a leading cloud-based development platform with millions of users worldwide. We make it easy for everyone to create a beautiful, professional web presence (Wix, 2006). In the other word, Wix allows anyone to create a very modern, interactive website using drag and drop features. Thus, it also allows the teachers or the students to be as creative as you wish, and gives unlimited possibilities for use as a teaching and learning tool.

The Concept of iSpring Suite 8

iSpring Suite is a tool that transform presentation file into flash based e-learning. Based on Digital, OnPoint. (2014), "iSpring is a simple one -click publishing authoring tool and offers an array of features that instructional designers can leverage to create rapid e-Learning digital courseware, performance support tools and interactive materials". iSpring helps make an outstanding and close to real life e-learning through interactions and testing learners such as: interactive quiz. Moreover, it allows us to develop quality courses, video lectures, and assessments that will work on any desktop, laptop and mobile platform.

General Concept of Adobe Flash CS6

Adobe Flash is a graphics animation program that many designers use to produce professional works, especially in the field of animation (Ampera, 2017: 315). It is the authoring environment for creating rich, interactive content and advertisements for digital and web delivery (Gerantabee, et.al, 2012: 1). Therefore, adobe flash CS6 can be one of softwares to create an interactive learning media.

RESEARCH METHODOLOGY

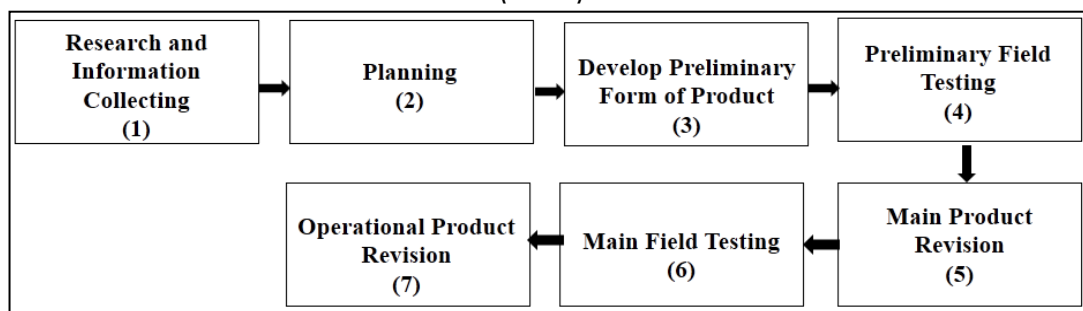
This research employed Research and Development (R&D) from Gall & Borg (1983) design. R & D is an industry-based development model in which the findings of research are used to design new products and procedures, which then are systematically field-tested, evaluated, and refined until they meet specified criteria of effectiveness, the quality, or similar standard (Gall & Borg, 2003: 569). This research was conducted at the eleventh grade students of SMA Negeri 1 Kota Serang as the

participants. Semi-structured Interview, open-ended questionnaires, and close-ended questionnaires were used as the research instruments of this research.

Model Development Procedures

Based on the needs, only seven Borg & Gall's procedures (1983: 774) which were used as follow :

Illustration 1: The Cycles of Research and Development (R&D) Model



1. Research and Information Collecting

The data was conducted in several ways. The first, review some related literatures as a basic of research. From that literature, the researcher studied about some theories of educational research, interactive multimedia, the concept of reading material, the core and basic competency of report text in the senior high school based on 2013 curriculum. The second, the researcher distributed 50 open-ended questionnaires to eleven grade students to collect the information about their learning needs and conducted the semi-structured interview with an eleventh grade English teacher.

2. Planning

In planning step, the product was organized and the researcher started to select the content based on the core and basic competency of report text in 2013 curriculum, the students' open-ended questionnaires, and the semi-structured interview in the previous step. It was needed to arrange the product and material to be prepared and developed for the next procedure.

3. Develop Preliminary Form of Product

The researcher developed the flowchart and course design for interactive multimedia. The researcher used a wix website builder, iSpring Suite 8, and Adobe Flash CS6. Wix is one of free website buldrers which can be used to create an interactive web or web based flash. Moreover, iSpring Suite 8 and Adobe Flash CS6 were the free software which could be used and installed to create an interactive learning content. In this study, the researcher used iSpring suite 8 to create an interactive quiz and Adobe Flash CS6 to create an interactive game. Then, it was published together with the content of material through Wix as free website builder. In this step, the product had done and it had been ready for the preliminary field testing.

4. Preliminary Field Testing

After preliminary product finished, then it was tested to obtain the qualified evaluation of product. In this trial, it was tested in the small group class which involved half of research subject to determine the feasibility and appropriateness of the developed media. In this research, the developed interactive multimedia was validated and assessed by the material expert, media expert, and half of the students. The results of students' assessments sheets and suggestions from the experts were revised by the researcher in the main product revision step.

5. Main Product Revision

In this step, the result from the preliminary field testing was used as feedback in revising and improving the product. It means that the product based on the students' assessment sheets and the result of experts' validation forms were revised to be prepared in the main field testing. Some revisions from the experts were considered to be revised and to be prepared by the researcher for the next step.

6. Main Field Testing

The developed product was tested again after revision to determine the value of product. This step determined whether the product under development meet its objective or not. The developed product was tested in large group class which consists of 50 participants. The students assessed the developed product. It was used to know how far the developed product meets its performance objective. In addition, the quality of materials and developed product was validated by the material expert and it was validated by media experts. The validations from the experts were used to collect the information that could be used to improve the media in the next step.

7. Operational Product Revision

It was the last step in this research procedures. This step determined whether the developed product was fully ready to be used or not. The researcher completed the developed product revision as a final product.

Data Collection Techniques

Based on the formulation of problems, there were two different data collection techniques which were used to answer the research questions. To find out the students' learning needs based on the first research question, it used students' open-ended questionnaires and semi-structured interview with an eleventh grade English teacher. The students' open-ended questionnaires was employed in the research to obtain the information about their needs in learning report text. Moreover, semi-structured interview was used in this research to obtain teacher's point of view about the teacher's difficulties and the students' needs in learning report text.

Based on the second and the third research questions about how to develop the media and the appropriateness of learning media, the students' assessment sheets, material, and media experts' validation forms

through close-ended questionnaires were used to collect the data. It was used to validate the appropriateness of developed product. The material expert evaluated the quality of content, language, and presentation of material. Meanwhile, the media expert evaluated the quality of developed product. It was aimed to obtain suggestions and validations for the final product.

Data Analysis Technique

Based on the data collection techniques, the data was analyzed with the following ways. First, in analyzing the data based on the formulation of problems number one, the semi-structured interview and the students' open-ended questionnaires were analyzed through descriptive qualitative. However, for the semi-structured interview, it was transcribed into the textual form firstly. Then, those data were analyzed qualitatively. According to Miles and Huberman (2014: 12-14), the steps of data analysis in the qualitative consist of data condensation, data display, and drawing or verifying conclusions.

Second, in analyzing the data based on the formulation of problems number two and three, the descriptive statistics was used to analyze the students' assessment sheets and the experts' validation forms. Those data will be analyzed by using descriptive statistics. According to Brown (2001), descriptive statistics is a set of procedures that are used to describe or characterize the answers of a group of respondents to code questions numerically. The calculation of product validity was categorized using the validation criteria which shown in the following table.

Table 1: Validation Criteria for Students and Expert

Percentage	Criteria
76 – 100	Valid
56 – 75	Valid Enough
40 – 55	Less Valid
0 – 39	Invalid

FINDINGS AND INTERPRETATION

Data analysis of this research revealed that there were three things that should be highlighted in this research. First, student's learning needs; second, the product development process; third, content quality of the product.

Students' Learning Needs

The data analysis of students' open-ended questionnaires showed that the students needed an interactive multimedia based web. It was supported by the findings of the students' open-ended questionnaires and the semi-structured interview. The analysis of student's learning needs revealed some results as follow :

First, most of the students wanted to have a learning activity which involved their interaction and participation. It was aimed to make the learning activity more fun and interactive. Cairncross & Mannion (2001: 156) stated that "the use of interactive multimedia is required to create high quality learning environments which actively engage the learner, thereby promoting deep learning". Therefore, it proved that the use of interactive multimedia could engage the students' participation so that it was needed by the students in learning report text. In addition, the students considered that the role of media was needed nowadays to visualize the learning material interactively. Therefore, it could increase the students' learning motivation and it could make the students easily to access the material through web.

In addition, the data analysis of English teacher's interview showed that the English teacher needed to use an interactive multimedia based web for teaching report text at the eleventh grade students. It occurred because an English teacher considered that the use of learning media was very important to deliver the material easily and motivate the students' learning motivation. As an English teacher stated that :

"I agree if interactive multimedia based web is used for teaching report text because it can make the teacher easily to deliver the material interactively and increase the teacher's competency and creativity to develop the learning material through that media. It can also make the students access the material freely from the web. So, it must be tried, I think".

That statement was in line with Ambarita, et al, 2017: 30 who argued that "interactive multimedia can also help teachers to present the material effectively, efficiently, and more attractively, easily understood and clear; able to help teachers to provide students with practice questions of interest, and help students to better understanding the learning materials". Therefore, an interactive multimedia could be used by the students and teachers.

In conclusion, either the eleventh grade english teacher and the students needed an interactive multimedia based web. It was aimed to make the learning activity more fun and interactive. Thus, it could make the students understand the learning report text easily and it could make the English teacher easily to deliver the report text material.

Product Development Process

Based on the results of the research findings and discussions of the second research questions, IMPORT was created through seven steps of R&D cycles proposed by Borg & Gall (1983). IMPORT was developed based on the results from the students' open-ended questionnaires, the semi-structured interview, and 2013 curriculum. To develop the preliminary form of this product, the researcher designed the flowchart and created the course design. A developed product (IMPORT) was validated by the material, media experts, and tested by half of the students (small group class) in the preliminary field testing.

After getting the results in the step of preliminary field testing, a developed product was revised based on the suggestions from the experts and the students. The results of the students' assessment sheets and the experts' validation forms in the previous step were used as the feedbacks in revising and improving a developed product.

Based on a material expert validation form, there were 2 criteria of form items which should be revised. The clarity of language to explain the material in the interactive multimedia and the use of language instructions in the explanation, exercises, and quiz section became the aspects that should be revised. It was also supported by a material expert's statement who suggested that *"it is an interactive way to teach students to master certain skills especially report text. Keep on improving the materials or contents and make sure about clarity instruction so that students can understand it very well"*. He also added that the presented materials in IMPORT was recommended but with some revisions. Several revisions of materials in IMPORT were explained as follow:

The form of 5W + 1H questions which were used as the instructions in the menu page of "Let's Study" should be revised. The words of "My dear students, do you know what do you want to observe in my class today?" should be revised to be "My dear students, what do you want to observe in my class today?" In addition, the words of "that you mean" should be revised into an appropriate question tag to be "do you mean". The result of material revisions in the first part were presented by the following figures.

Figure 1: Menu Page of "Let's Study!" Layout Part I (Before & After Revision)



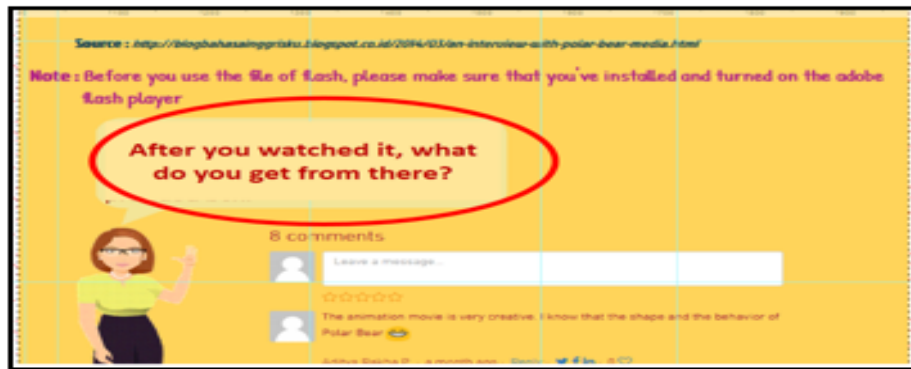
Menu Page of "Let's Study!" Layout Part I (Before Revision)



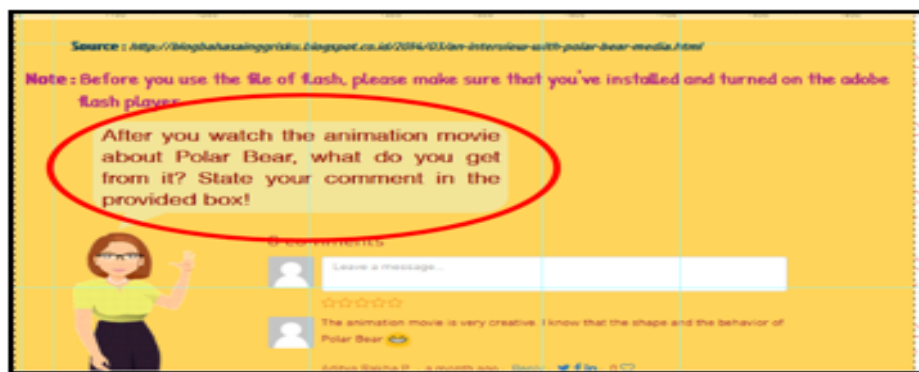
Menu Page of "Let's Study!" Layout Part I (After Revision)

Moreover, the use of diction which was used as an instruction should be explained clearly and completely. Therefore, it has to be revised. The word of "After you watched it, what do you get from there?" should be revised to be "After you watch the animation movie about Polar Bear, what do you get from it? State your comment in the provided box!" The result of revisions in the second part were presented below :

Figure 2: Menu Page of “Let’s Study!” Part II (Before & After Revision)



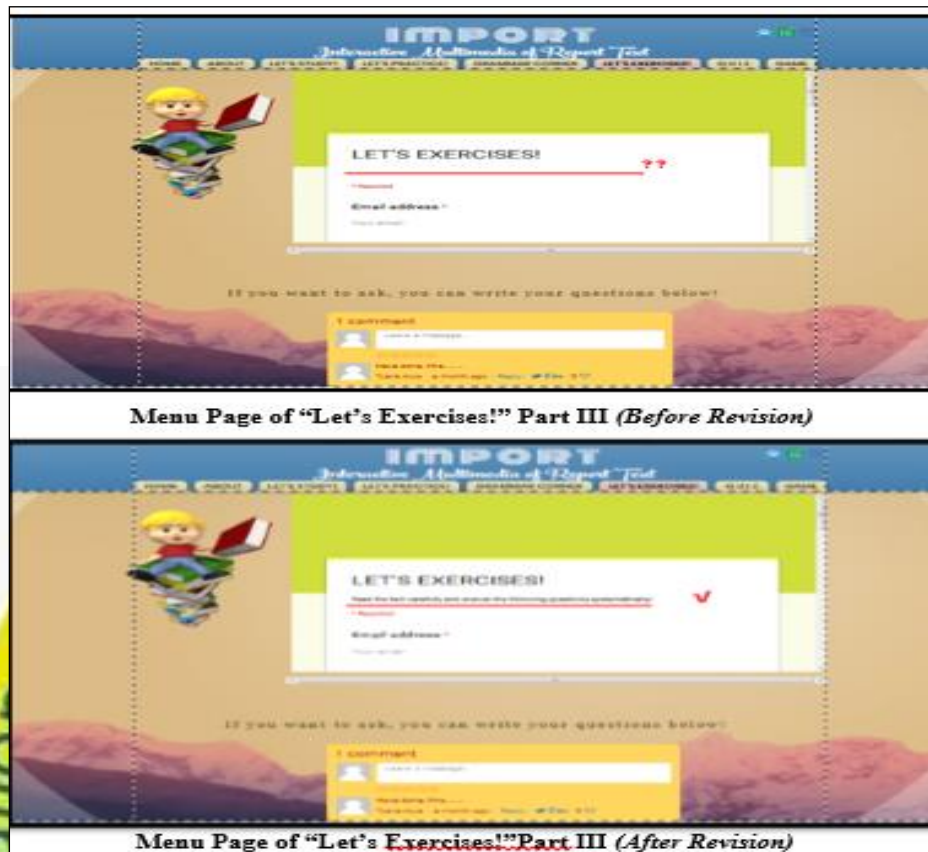
Menu Page of “Let’s Study!” Part II (Before Revision)



Main Menu Page of “Let’s Study!” Part II (After Revision)

In addition, the instruction in the exercise items should be stated in order the students knew what they have to do. After revision, the instruction use had been stated in the menu page of “Quiz”. It stated that “Read the text carefully and answer the questions systematically!” The result of revisions in the third part were presented as follow :

Figure 3: Menu Page of “Let’s Exercises!” Part III (Before & After Revision)



After getting some revisions from a material expert, the second revision was obtained from a media expert. Based on a media expert's validation form, there were two criteria of form items which obtained score 4 and those criteria should be revised. Some revisions were time duration should be considered, simplify the menus' titles and change the fonts' styles, and interactive components should be applied in each section. It was also supported by a media expert's statement who suggested that *“time duration, menus' title, menu short and fonts, and interactive concept applied in each section”*. He also added that IMPORT had been appropriate to be implemented in small class but it should be revised firstly. Several revisions of material in IMPORT were showed in the further explanations.

The simplification of main menu was the first revision. In this study, the sub menu of “Let's Study” was revised to make the web layout could be more simple. The result of media revision in the first part was presented as follow :

Figure 4: Sub Menu of “Let’s Study!” Layout Part I
(Before & After Revision)



Sub Menu of “Let’s Study!” Layout Part I (Before Revision)



Sub Menu of “Let’s Study!” Layout Part I (After Revision)

After that, the use of sub menu in the main menu of “Grammar Corner” was simplified. In addition, time duration should be considered if there were so many sub menus inside. Therefore, some sub menus in the main menu of “Grammar Corner” were removed as the additional links in another main sub menu. The further revision results in this page were presented as follow :

Figure 5: Sub Menu of “Let's Study!” Layout Part I (Before & After Revision)



Sub Menu of “Grammar Corner!” Layout Part II (Before Revision)



Sub Menu of “Grammar Corner!” Layout Part II (After Revision)

The change after removing the sub menus of present tense, linking verb, and technical term into the sub menu page of “Language Features” as the additional links was shown in the following figure.

Figure 6: Sub Menu of “Language Features!” Layout Part II (After Revision)



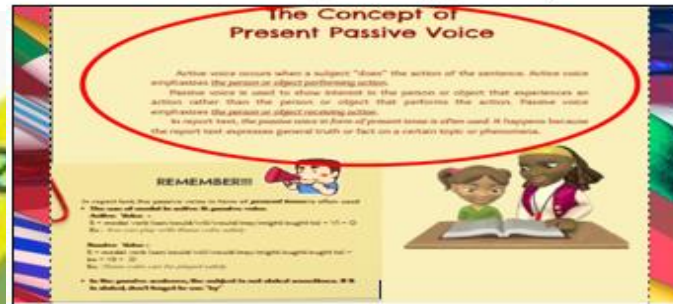
Sub Menu of “Language Features!” Layout Part II (After Revision)

The next revision from a media expert was about the font size and font style that were used. The font size was too small and the font style should be replaced to make the user easily to read the presented materials.

Figure 7: The Use & The Change of Fonts' Style and Size (Before & After Revision)



The Use of Fonts Style and Size (Before Revision)



The Change of Fonts Style and Size (After Revision)

In addition, the next revision of IMPORT was about the component of interactivity. A media expert suggested to make each menu and sub menu pages could be used by user interactively. It means that a developed media was not only displayed, but also it can the feedback for the user. Therefore, the component of interactivity in each menu and sub menu pages were needed to make the user can complete the tasks related to the materials that they have learnt.

Figure 8: The Layout of Interactivity (Before & After Revision)



The Layout without Interactivity (Before Revision)



The Layout with the Interactivity (After Revision)

Then, in the main field testing, it was validated and tested again by the large group class which involved 50 students. In this research, there has no revisions from the material and media experts' validation forms in the previous step. Thus, it meant that the developed media (IMPORT) was prepared for the next procedure. Finally, in the last step of operational product revision, IMPORT was completed based on the final experts' suggestions in the previous step as a final product.

Based on a material expert's validation, a developed media was better than before revision. It was supported by material expert's statement who suggested that *"after the materials have been revised, they look much better and they can be applied either in a large classroom or used for individual / self-learning"*. From that statement, it can be inferred that the report text material for the eleventh grade students in developed IMPORT did not need the revision and it was appropriate to be used for teaching report text at the eleventh grade.

Moreover, the second validation was obtained from a media expert. Based on a media expert's validation, it showed that there has no revision for a developed product (IMPORT). It was supported by media expert's statement who suggested that *"No need revision and can be applied in the macro class"*. Thus, it can be inferred that IMPORT was appropriate to be applied for teaching report text at the eleventh grade students of SMA Negeri 1 Kota Serang.

In conclusion, IMPORT was created through seven steps of R&D cycles proposed by Borg & Gall (1983). IMPORT was developed based on the results from the students' open-ended questionnaires, the semi-structured interview, and 2013 curriculum. A final product (IMPORT) which had been revised and completed consists of 8 main menu pages and 6 sub menu pages. From the result of final product, the researcher completed the developed media to be used for teaching report text.

The Appropriateness of Product

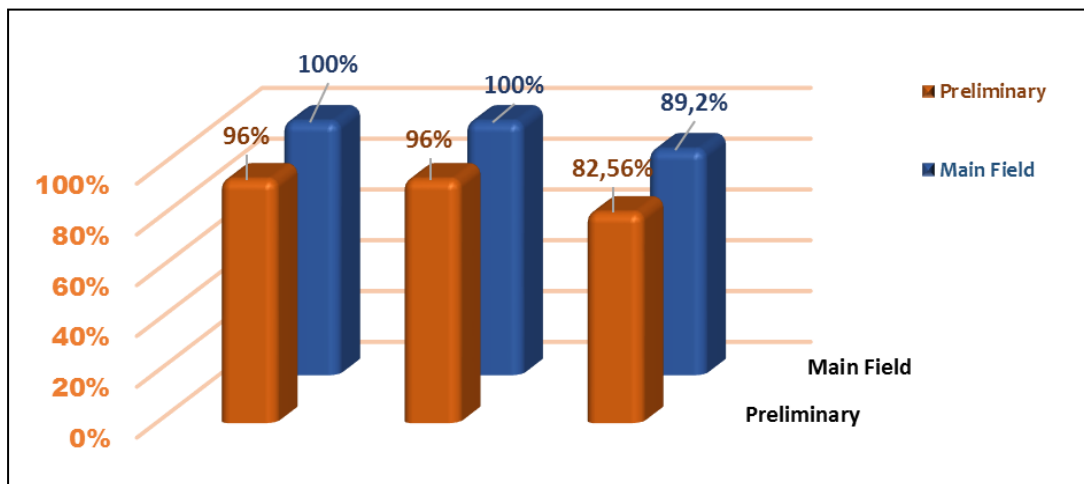
Data analysis of research question number three showed that an interactive multimedia was appropriate for teaching report text at the eleventh grade students of SMA Negeri 1 Kota Serang. The percentage score of material expert's validation form was presented in the following formula.

$$\text{Percentage Score} = \frac{\text{sum of validation score } (\Sigma x)}{\text{sum of the highest score } (\Sigma xi)} \times 100\%$$

Based on the data analysis of percentage, the result of material, media expert's validation, and the student assessment sheets in the preliminary field and main field testing on a developed product (IMPORT) was "Valid". It was proved by the quality of presented materials and the quality of developed media (IMPORT) from the material and media

expert obtained percentage scores of 96% in the preliminary field testing and 100% in the main field testing. Furthermore, the quality of IMPORT based on the students' assessments obtained the percentage scores of 82.56% in the preliminary field testing and 89.2% in the main field testing. Those results were shown as follow :

Graphic 1: The Results of The Appropriateness of Product



CONCLUSION & SUGGESTION

Having known the result of English teacher's and the students' responses, it can be concluded that the use of interactive multimedia (IMPORT) based web was responded positively and it can be applied to create the enjoyable teaching and learning through IMPORT based web. The interactive components in IMPORT gave a chance for the students to be active and it enabled them to obtain the feedback because IMPORT was not only displayed, but also it can be controlled directly by the students and the English teacher. Furthermore, IMPORT was useful for the English teacher to deliver the report text material interactively and to create the enjoyable teaching and learning.

It is suggested for a English teacher to pay attention the their ability to operate the media based on the instruction. For the students, it is suggested to read the guidance about how to operate the media that will be used and understand the instructions inside the developed media they will use. In addition, it is also suggested for the further researcher who is interested in similar research is suggested to consider the time and what the students' needs are with different topic or skills they need.

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