

Development of Biographical Text Teaching Materials Based on Higher Order Thinking Skills for Class X SMA

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Abstract. The development of teaching materials based on higher order thinking skills or often called HOTS in the form of modules organized according to the needs of students in the 2013 curriculum. The objective of this research is to produce teaching materials based on advanced thinking skills that are valid, practical and effective for learning. The research uses development (R&D) with the Brog and Gall development model that has been adapted to the demands of research. The data collection instrument used a questionnaire validation sheet, tests, and student response questionnaires. For data analysis techniques, we used validation analysis from experts, practicality analysis through practitioner questionnaires (teachers), effectiveness analysis through tests, and adopted student responses.

Keywords: Teaching Materials, HOTS, Biographical Text

1 Introduction

National education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. In accordance with Law No. 20 of 2003 concerning the National Education System, it explains that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious and spiritual strength, self-control, personality, intelligence, and noble character, as well as the skills needed by themselves, society, nation, and state.

Silfi (2016) defines teaching materials as "teaching materials or materials developed to resemble books by paying attention to the components in them." Teaching materials are one part of learning resources, which can be interpreted as something that contains learning messages, compiled based on the basic competencies that exist in a certain curriculum and used by students, both special and general in nature, that can be used for learning purposes (Suci, 2018:

278). Teaching materials consist of material about knowledge, skills, and theories. Therefore, teachers can be better prepared to develop and complete the demands of each basic competency (KD) with the help of relevant and more complex teaching materials. The existence of teaching materials provides many benefits to teachers and students, including: 1. Teaching materials can make the learning atmosphere more real to students during learning activities by presenting pictures, graphs, charts, and so on without the need for direct observation of the object that is the material. 2. Teaching materials broaden the horizons of thinking in the classroom because they contain a variety of knowledge and activities, especially those relating to language and literary skills. so that it is possible to present quotes from various sources while enriching knowledge outside of language, according to the theme raised from the topic of discussion. 3. Teaching materials can provide solutions to problems in the teaching process, especially in linguistic, literary, and literacy materials. Thus, the benefits of teaching materials greatly benefit the teacher at the time of giving the material. The teacher can adapt it to the discussion material. because there are types of teaching materials, namely: non-print, which is all forms of material with the presentation not being printed or visual. While printed teaching materials are sheets of teaching material whose written form is one of the types, namely modules, The module consists of methods, materials, and evaluations and is created as teaching materials whose contents are easy for students to understand systematically.

The nature of teaching materials can increase students' creativity and critical-thinking abilities. This is where the teacher's role is needed in creating quality teaching materials as a stimulus to students so that there is a positive response. However, the learning atmosphere will feel monotonous if educators rely too much on textbooks without creating other types of teaching materials. resulting in a decrease in student interest in learning to understand the material. This is very contrary to the 2013 curriculum (K13), which requires creative and critical thinking skills, especially for the main facilitator, namely the teacher, in the learning process so that the desired learning objectives are achieved. The K13 learning material focuses on text in written or oral form. The text is an outpouring of thoughts that have contexts. So that students are able to use language not only as a communication tool but as a means to develop higher thinking skills, often called "High Order Thinking Skills" (HOTS), a way of learning for students to reach the stage of critical thinking.

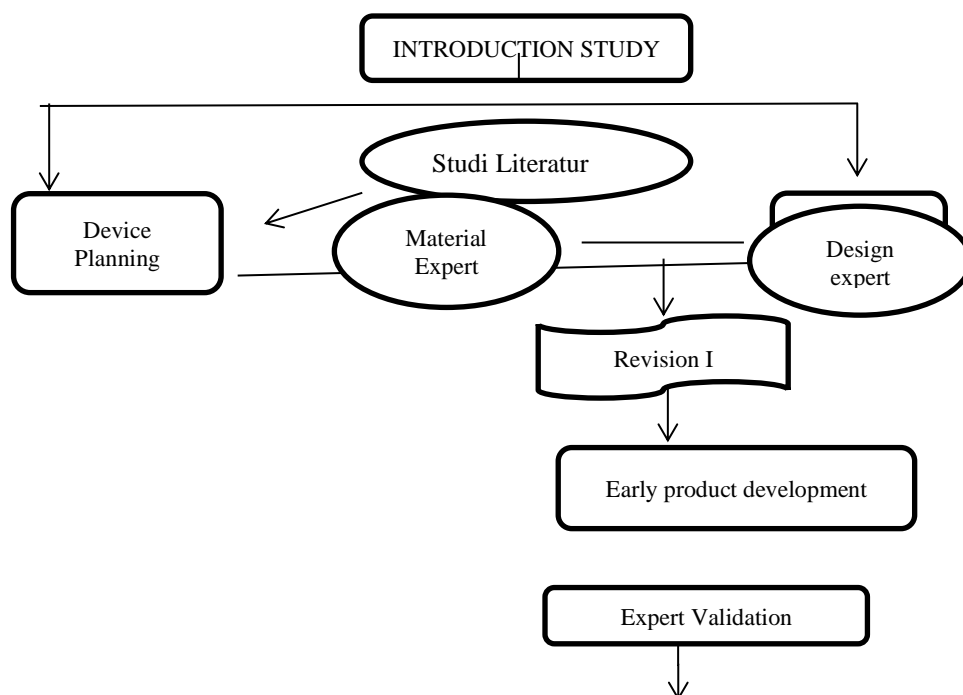
As it is known, learning materials are included in the HOTS criteria if the questions presented can stimulate students' reasoning, not just recall the information that has been obtained. It has not supported the students' ability to do HOTS. Therefore, researchers will develop a module on biographical text material. The module is supported by expert theories and can be scientifically tested for validation and sentences that are easily understood by students. As a provision of knowledge.

Regarding the discussion above, the researcher took the initiative to conduct a pre-research precisely on April 17, 2021. Conducting interviews with 2 Indonesian language teachers at SMA Islam Miftahussalam Medan, explaining that there are still many teachers who are less creative in creating innovative teaching materials. So that the teaching materials at the school only use books published by the Ministry of Education and Culture in the 2017 revised edition that are not yet based on HOTS. The results of interviews show that of all the Indonesian language materials for class X, biographical texts are a theme that is less attractive because the teacher uses a lecture model and teaching materials that are less attractive, causing students to be less interested even though the contents are the results of someone's writing about an inspirational figure who can generate student motivation. Therefore, the authors distributed questionnaires to class X students majoring in automotives. Of the 200 students, only 140 filled out the Google

form. The results concluded from the questionnaire are: 1. Biographical text material is less desirable because the presentation is considered monotonous using only teaching materials in the form of textbooks without any additional teaching materials. 2. The characters presented have been discussed too often, one of which is in the student textbook pages 210–213, regarding the biography of B.J. Habibie, even though there are many other inspirational figures that can increase students' interest in reading them. So, based on the problems that the author examines in the background, accompanied by the pre-research above, the writer feels captivated by the research entitled "Development of Biographical Text Teaching Materials Based on Higher Level Thinking Ability for Class X SMA".

2 Research Methods

The research method used is research and development (R&D), described by Sugiyono (2015:1-712) in the book *Research & Development Methods: Research and Development*. The research model leads to the Brog and Gall model with a combination of Dick and Carey's learning development model (Triatno, 2007: 62). The stages are: (a) conducting pre-research, namely: (1) understanding the needs of the learning objectives and setting competency standards in the field of study; (2) reviewing learning by determining what skills are devoted to learning; (3) understanding the character of each student; (4) recording basic competencies and their indicators; (b) Compiling a summary in the form of a test as a reference in measuring students' understanding (c) collect teaching materials in the form of: (1) completeness of the material, (2) create illustrations; (d) development of teaching materials; (e) product validation; (f) revision; and (g) piloted. The development procedure was carried out to create teaching materials in the form of HOTS-based modules with the following biographical text materials: These development steps can be shown in the following figure: Research and Development (R&D) flow design (Dick and Carey Learning Development Model (Triatno, 2007:62)).



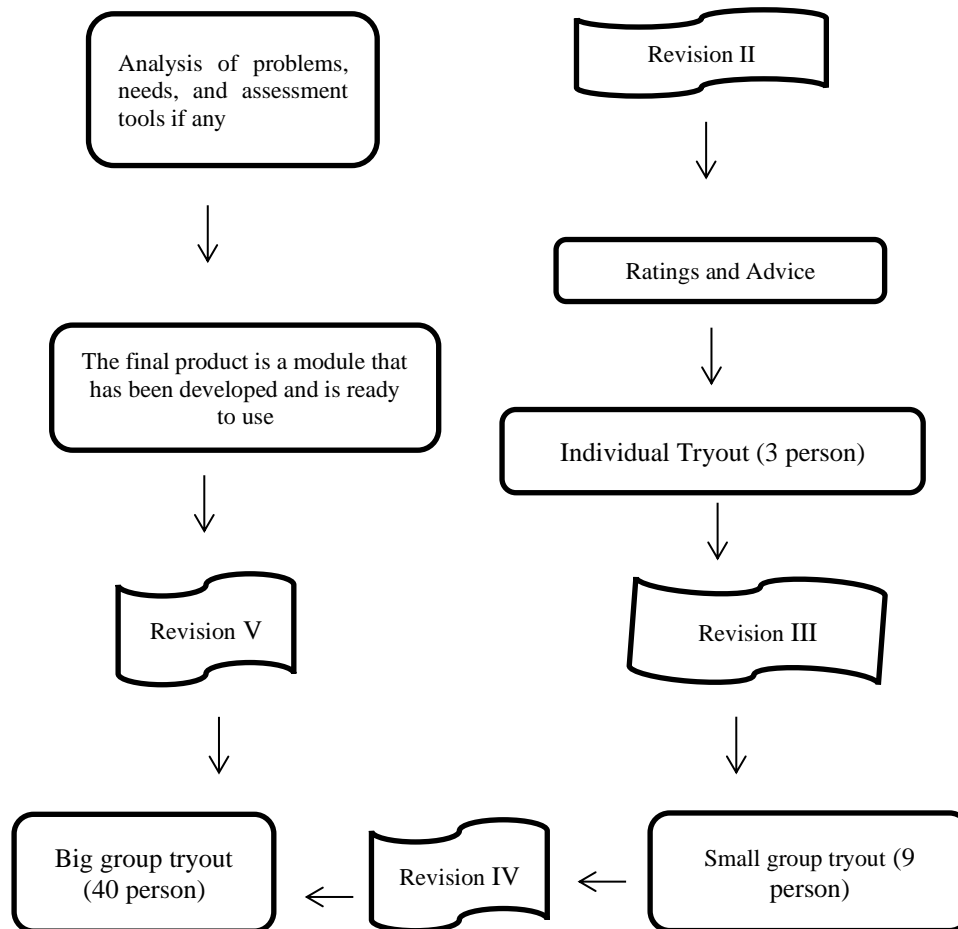


Fig. 1. Research and Development (R&D) flow design (Dick and Carey Learning Development Model)

3 Result and Discussion

3.1 Result

The product of this research is teaching materials in the form of a Biography text module based on high-level thinking skills in class X SMA students. The module is designed based on learning based on higher-order thinking skills, where the text-based 2013 curriculum requires students to be able to have high-level understanding, critical thinking, collaboration and creative thinking.

Can describe the results of the analysis of understanding and the need for teaching materials to write a biography text as much as 93.3% of respondents stated that they knew what a biography text was. Then 62.6% stated that learning Biography texts still seemed ordinary. Then as many as 100% of respondents answered school books which are still a source of learning. As well as

responses regarding the learning resources used are still ordinary with a percentage of 66.6%.

it can be described that as many as 86.6% of respondents want to write a biographical text explained in detail and clearly. and 96% of respondents wanted a clear and complete way of explaining Biography text in teaching materials and 60% of them wanted examples of questions in learning to write containing coherent work steps and accompanied by examples so that they were easy to understand.

Then, the needs analysis includes the third indicator with an analysis of student needs for the physical teaching materials that will be made. Students' physical needs for teaching materials for writing Biographical texts based on high-level thinking skills include 1) cover / front cover of teaching materials 2) layout / layout of color images and number of images 3) contents of back cover 4) paper size used.

Then as many as 93.3% of respondents agreed on learning resources that can be used as guides and 73% of them wanted more complex teaching materials and were equipped with interesting and up-to-date exercises and examples. Furthermore, the second indicator of monitoring and student needs for Biography text writing teaching materials is that there is one aspect of the content of the exposure in Biography text teaching materials based on high-level thinking skills with three questions.

The results of students' physical needs for teaching materials to write Biographical texts based on high-level thinking skills on the cover / front cover of teaching materials regarding the design of the front cover of teaching materials are 86.6% and the percentage of suitability of drawings on the front cover is 46.6%. Furthermore, for indicators of image layout, color and number of images in the aspect of image placement, 56.6% of respondents want images to be placed under the title, the size is adjusted. 66.6% of respondents want a striking color for color suitability in teaching materials. For the contents of the cover / back cover, as many as 93.3% of respondents wanted a striking color combined with poetry on the back cover. And for the size of the paper used as teaching material, the respondent wants to use A4 size paper as the size of the teaching material that will be made with a percentage requirement of 60%. Furthermore, students' needs for the content of teaching materials to write Biography texts based on high-level thinking skills are described with the following indicators. 1) in terms of the content of the material for writing biography text 2) table of contents 3) glossary 4) bibliography 5) use of language.

The percentage of data on student needs for the content of Biographical text writing teaching materials based on high-level thinking skills shows that respondents need material exposure, examples of writing Biography texts, and Biography text writing practice questions as seen from the percentage results that are 69.3%, with a good presentation. the same, namely 100% of respondents need the contents of teaching materials there is a table of contents, glossary and bibliography in teaching materials. Furthermore, the use of language in teaching materials for writing Biography texts based on high-level thinking skills shows 46.6% results. Furthermore, the questionnaire on the needs of Miftahussalam high school teachers for teaching materials for writing Biographical texts based on high-level thinking skills can be seen in the results of the teacher needs analysis.

Based on the results of the analysis of teacher needs for teaching materials to write Biography texts based on higher-order thinking skills, it is described as follows:

- a. All teachers know what teaching materials are with a percentage of 100%. And in teaching 100% of teachers do not use teaching materials.

- a. 100% of teachers think that learning Biography text is very important. And regarding the concept of literacy in Indonesian language teaching, only 25% know while the other 75% do not know the concept of literacy in Indonesian language teaching.
- b. At SMA Miftahussalam 100% of the teachers stated that there had never been any development of writing teaching materials, especially writing biography texts. And there are no teaching materials that specifically write for students, especially in writing exposition texts.
- c. 75% of the languages in the teacher's textbooks still find it difficult when teaching Biography text writing material using textbooks.
- d. The examples in the textbooks have not yet touched on in everyday life and are related to today's technology with the percentage of data showing the results as much as 75%.
- e. As many as 100% of teachers need development and strongly agree with the development of teaching materials for writing Biography texts, especially for writing Biography texts.

3.2 Result Learning Module Planning Stage

At this stage, the module is designed in easy-to-understand language, by selecting examples that are closely relevant to students' lives and highlight local life and historical sites. and in line with current technological developments. In this stage the design is conceptualized to the aspects of literacy components, namely high understanding, critical thinking competence, collaborating and communicating components and creative thinking. In the Biography writing module based on high-level thinking skills, loading the text, which includes scientific literacy in the information literacy design, is found in the corner of the dialog box in the module as information literacy in the module.

Then the aspects of high comprehension literacy, critical thinking competence, components of collaborating and communicating and creative thinking are found at the end of each discussion, namely through questions and in the form of questions that provoke students' reactions to ask questions.

3.3 Presentation of Product Development Test Results Data Material Expert Validation

The purpose of validating the module to experts is to determine the quality of the content, presentation and language in it. The assessment carried out by the experts is determined by the average score of the respective assessment criteria. These results were analyzed to see whether or not the module for writing biographical texts was based on high level. From the results of the average percentage obtained an average result of 88.23%, for the feasibility of the presentation an average percentage of 96.15% was obtained and for the feasibility of the language the average percentage was obtained as much as 90.38%. See table 1.1 below.

Table 1.1 Average Earnings of Material Experts

No	Indicator	Average percentage	Criteria
1	Content Eligibility	88,23%	Very good
2	Serving Eligibility	96,15%	Very good
3	Language Assessment	90,38%	Very good

Furthermore, the data from the material expert validation on the feasibility of content, presentation feasibility and language assessment according to the material expert was considered "very good".

Table 1.2. Validation Results by Material Experts

I. Content Eligibility			
No	Indicator	Average percentage	Criteria
1	Material equipment	100%	Very good
2	Material breadth	87,5%	Very good
3	Material depth	87,5%	Very good
4	Concept and definition accuracy	100%	Very good

Design Expert Validation

Assessment of the design of learning modules is carried out as an effort to improve the design of teaching materials developed in the form of modules. The results of the validation of the two design experts obtained an average result for the size of teaching materials as much as 93.75%, for the cover design of teaching materials the results were 91.66% and the design in teaching materials showed an average percentage of 80.92%. With the overall design of teaching materials in the very good category. Thus, the teaching materials in the form of learning modules for writing biographical texts based on high-level thinking skills have been developed to meet the demands of learning needs.

Results of Assessment of Biographical Text Module Based on Higher Level Thinking Skills by Indonesian Language Teachers

In the assessment of this module in the form of a score on Biographical text learning based on high-level thinking skills, especially in the material of writing biographical texts. The results of the responses of Indonesian language teachers concluded that biographical text teaching materials based on high-level thinking skills were included in the "very good" criteria with an average percentage of 97.91%.

Presentation of Data on the Effectiveness of Product Development Test Results

The results of the student trial assessment were carried out in 3 stages, namely individual trials (3 students), small group trials (9 students) and limited field trials (35 students). The individual trial results were declared "good" with an average percentage of 77.08%. With the initial response to the individual test as follows, interest is 80.56%, material is 82.40% and language is 79.63%, all of which are included in the "very good" criteria. Then the small group test was declared "very good" with a total average percentage of 83.79%. With the initial response of students in the small group test, namely interest 83.33%, material 83.79% and language 86.11% with the overall category "very good". The results of the Limited Field Trial were declared "very good" with a total average percentage of 84.22%. With the initial response of students on interest 78,80%, material 86,19% and language 91,66% with the overall category "very good".

Based on the discussion above, it can be concluded that the learning module for writing biographical texts based on high level is declared very feasible because the validation of material experts and media design experts is in the "very good" category. Likewise, the test results and student responses were in the "very good" category. the concepts presented in the module are easy to learn, understand and understand systematically. This module can be used as alternative teaching materials both classically, individually and independently.

3.4 Discussion on the Effectiveness of Using Teaching Materials for Writing Biographical Texts Based on Higher Order Thinking Skills

The effectiveness of using the learning module to write Biographical texts based on Higher Level Thinking Ability can be seen from the average score obtained by students after using the developed module. However, there are differences in the average scores of students before and after using the developed product. The average score for writing exposition text in the pretest was 66.62 in the good criteria for KKM completeness as much as 75. While the posttest score was 80.25 in the "very good" category. This proves that the effectiveness of the exposition text writing module based on book literacy increased by 13.63% as seen from the difference in scores between the pretest and posttest conducted in class X SMA Miftahussalam.

4 Conclusion

Based on the results of research and discussion of research on the development of teaching materials for writing biographical texts based on high-level thinking skills in class X SMA students, the conclusions are as follows.1. Biography text-based teaching materials products for high-level thinking skills are teaching materials that improve thinking skills in text-based teaching. Where this understanding of thinking is integrated in language skills. The HOTS competencies in this case are: Understanding this is related to the students' ability to understand what concepts they will write. Critical thinking is the ability to utilize the power of thought and reasoning in criticizing and capturing the phenomena that occur around it, in this case the text contained in the teaching materials and which will be reviewed. Elaboration and communication are abilities related to the ability of students to work together to build a spirit of togetherness and be able to work in teams by interacting with the social environment. Creative thinking competence, in this competence the ability to produce ideas, processes and products that have more value.

The feasibility of teaching materials from material and design experts obtained very good criteria. the average acquisition of material experts for the feasibility of content in teaching materials obtained an average of 88.23%, the feasibility of presentation on teaching materials was 96.15% and for the feasibility of language assessment obtained an average of 90.38%. Then the results

from the design experts obtained an average of 93.75% for the size of teaching materials, the average acquisition for the cover design of teaching materials was 91.66% and for the content design of teaching materials the average acquisition was 80.92%. The results of the responses of Indonesian language teachers as many as two teachers obtained an average acquisition of 97.91% on the criteria of "very good". The effectiveness of the product of teaching materials for writing Biographical texts Based on Higher Level Thinking Skills that were tested on students obtained the following averages. for the individual test the average result was 77.08 in the "good" criteria. The small group test obtained an average of 83.79 on the "very good" criteria and the limited field group test obtained an average of 84.22 with the "very good" criteria. The test results (pretest) before using the developed product obtained an average of 66.62 on good criteria. after testing using the product (posttest) that has been developed, it is obtained an average of 80.11 on the "very good" criteria. with a difference of 13.49%.

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