

## DEVELOPING A MODEL OF HOTS QUESTIONS FOR NARRATIVE READING TEXT FOR GRADE IX STUDENTS OF SMP N 2 JORONG

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### Abstract

Teachers are required to have good reading material with various questions exercises to meet students' interest to improve their reading ability. This developmental research was undertaken to develop a model of instructional material of HOTS questions for narrative reading texts for IX grade students of SMPN 2 Jorong. The development of the model in R & D research involved the following steps: needs assessment, reference study, material development, expert validation, tryout, revision, and final product. The subject of the research was the students of grade IX of SMPN 2 Jorong. The instruments to take the data were observation sheet, questionnaire sheet, students' test result, and test sheet. After all of the steps were done, the final product was in form of instructional material consisting of: Cover; Introduction, and Content. The content of the product consisted of Unit 1 and Unit 2, which contained narrative reading texts entitled *Hansel and Grethel*, *Malin Kundang*, and *Rapunzel* taken and modified from the internet. Each story was inserted with HOTS questions to ask the students to generalise, analyse, compare, distinguish, and to correlate. Based on the result of the expert validation, the model of HOTS questions for narrative reading texts for IX grade students of SMPN 2 Jorong was very effective and advisable to be implemented.

**Key words:** HOTS questions, narrative text

## INTRODUCTION

In recent years, many stresses have been given to the teaching of thinking skills in reading classroom. The Indonesian Constitution no 20 year 2003 verse 3 about education purports creating faithful, healthy, knowledgeable, smart, creative, and self-supporting students. Based on the purposes, Higher Order Thinking Skills (HOTS) questions exercises are introduced in teaching activities to enable the students to apply their skills in their real life, to analyse, evaluate, and even to think creatively.

To support the Indonesian Constitution no 20 year 2003 verse 3, HOTS questions tests are applied in recent National Examinations. They were tested in the form of questions that make the learners think critically, analytically and smart. However, the result of the National Examination shows that South Kalimantan had decreasing scores compared with those of 2017. In 2017 the average score was 52.90 and they declined to 51.67 in 2018 with 1.23 percentage difference (<https://www.kanalkalimantan.com>, verified in March 25, 2019).

The declining scores may be caused by the teaching activities that do not support the daily activities of giving HOTS questions to the learners. This phenomena

also happens in the ninth grade classroom teaching activities in SMPN 2 Jorong based on the observations, the teachers seldom gave HOTS questions exercises to the students in reading class activities. Furthermore, this condition was worsened by the supporting student text books that did not add HOTS questions exercises in the reading texts.

The problem is multiplying in the ninth grade of SMPN 2 Jorong. The students analytical thinking skill was still low. It can be seen from the students' tryout results of final examination held by the school; only 35% of the students got the minimum scores targeted by the school.

For solving the serious problem, the researcher tries to make an instructional material contains questions exercise that may be able to raise students' high order thinking skills. Students' high order thinking skill (HOTS) is a kind of exercises that train learner to think critically and, to solve problems (Brookhart, 2010).

## METHOD

Dealing with the background above, the research objectives are to develop a model of HOTS questions for narrative reading text for IX grade students of SMPN 2 Jorong and to find out the effectiveness of

a model of HOTS questions for narrative reading text for IX grade students of SMPN 2 Jorong.

This research is a developmental research. This research was undertaken to design an instructional material of HOTS questions exercise for reading narrative text for the eighth grade students. The study in designing a supplementary material was for the eighth grade students of SMP N 2 Jorong which was based on the model proposed by Borg (2012). The model involved the following framework procedure: needs assessment, reference study, material development, expert validation, tryout, and final product, as follows:

#### **Needs assessment**

Need assessment is planned at the first stage of development in order to get information in terms of topic and kinds of exercises related to the proportion of the supplementary materials. The subjects of the need analysis are the English teacher and the ninth grade students. The English teacher is the one who had information of the situation in learning and teaching process and students were the ones who used the developed material. There are some activities carried out in this step; firstly, an informal observation was conducted in order to see the application of

HOTS questions in learning narrative text in SMP N 2 Jorong. These activities were done by observing the process of teaching English and the material in the classroom and having question and answer sessions with the students to get the information related to the application of HOTS questions. This activity was also intended to get information about the learning situation and relevant material for the students. The next activity in this stage was having an interview session with the English teacher to gather information about the current textbook and the expected product of the material. The interview was held to get information in terms of the aspects of the course description, course outline, current textbook, and the expected material. The same questions were also asked to the students in form of questionnaire to make sure that HOTS questions were needed by the students. However, the researcher guided and gave examples of HOTS questions in each number of questionnaire when the students answer the questionnaire.

#### **Material Development**

At this stage, the content was developed. As the supplementary material contained exercises, the activities in this stage dealt with them. After the general instructional objectives were formulated

from reference study stage done previously, the specific instructional objectives were formulated. The specific instructional objectives were elaborated into indicators that were used to develop the material. Relating to the task, the material had to lead the students to be able to answer HOTS questions. Therefore, the task covered the demand of course outline.

### **Expert Validation**

The experts who are involved in this stage were the expert in teaching English to Junior High School material, a national examination questions writer, and the second is the expert in education or lecturer. All of the experts validated the content of the material through the expert judgment, some consideration related to strengths and weaknesses of the instructional material were identified and the content was improved. The criteria of the expert's validation included the language of the text and the questions inserted below the narrative text.

### **Try-out**

At this stage, the supplementary material developed was tested to the students to know whether the supplementary material was acceptable and usable. The data from try-out would be analyzed and used to revise the product.

### **Revision**

The validation was done by the teachers and the expert of English educations. Based on the inputs and evaluation of the experts, after that the product was revised to further improve quality and got a decent product to be applied.

### **Final Product**

The final product was the supplementary instructional material of HOTS questions on narrative text for the ninth grade students in SMP N 2 Jorong. It is in the form of a workbook which consisted of practice and project based on the goal and objective required in the course outline.

To make the research well arranged the researcher applied 4 instruments: Observation sheet, scoring sheet of the test result, the test, the test advisability, and normalized Gain formula to determine the effectiveness of developing a model of HOTS questions for narrative reading text.

## **RESULT**

### **Result of Need Assesment**

To decide the needs assessment, the result of observation of the teaching activities is presented in the following table.

Table 1. Classroom Observation Result 1

No	HOTS Exercise	Observation		
		1	2	Mean score
1	Teacher does not ask to generalise based on the narrative text	3	4	3.5
2	Teacher does not ask to analyse based on the narrative text	4	4	4
3	Teacher does not ask to compare based on the narrative text	5	5	5
4	Teacher does not ask to distinguish based on the narrative text	4	5	4.5
5	Teacher does not ask to correlate based on the narrative text	5	3	4
Total score		21	21	4.2
Mean score		4.2	4.2	
Percentage		84	84	

The average score of the observation was 4.2 with 84%, it means that the application of HOTS questions in the English classroom activities was seldom applied in the classroom. In this situation, the research of developing the model of HOTS questions was continued.

The need assesment was then continued with the questionnaire given to the teacher and the expert to fill in. The following table shows the result of the questionnaire.

Table 2. Questionnaire for Teacher

I. The necessity to give questions to...

No	Statement	Teacher 1	Teacher 2	Total	Mean score
1	Generalise based on the narrative text	3	4	7	3,5
2	Analyse based on the narrative text	2	3	5	2,5
3	Compare based on the narrative text	3	3	6	3
4	Distinguish based on the narrative text	3	2	5	2,5
5	Correlate based on the narrative text	3	3	6	3

II. Not finding in students text book such questions to...

No	Statement	Teacher 1	Teacher 2	total	Mean score
6	Generalise based on the narrative text	3	4	7	3,5
7	Analyse based on the narrative text	4	4	8	4
8	Compare based on the narrative text	4	4	8	4
9	Distinguish based on the narrative text	4	3	7	3,5
10	Correlate based on	4	3	7	3,5

the narrative text				
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III. Expecting questions inserted in students text books ask them to...

No	Statement	Teacher 1	Teacher 2	total	Mean score
11	Generalise based on the narrative text	4	4	8	4
12	Analyse based on the narrative text	3	2	5	2,5
13	Compare based on the narrative text	3	2	5	2,5
14	Distinguish based on the narrative text	2	4	6	3
15	Correlate based on the narrative text	3	4	7	3,5

IV. The necessity to insert in narrative text such questions to

No	Statement	Teacher 1	Teacher 2	total	Mean score
16	Generalise based on the narrative text	4	4	8	4
17	Analyse based on the narrative text	3	2	5	2,5
18	Compare based on the narrative text	3	2	5	2,5
19	Distinguish based on the narrative text	2	4	6	3
20	Correlate based on the narrative text	3	4	7	3,5

V. The necessity to insert in reading class activity the questions to

No	Statement	Teacher 1	Teacher 2	total	Mean score
21	Generalise based on the narrative text	4	4	0	0
22	Analyse based on the narrative text	3	2	8	4
23	Compare based on the narrative text	3	2	5	2,5

24	Distinguish based on the narrative text	2	4	5	2,5
25	Correlate based on the narrative text	3	4	6	3
Total Score		79.5			
Mean Score		3.18			
Maximum scores		125			
Percentage of the scores		63.6 %			

The mean score of the teachers' answers in the questionnaire is 3.18 and the percentage reaches to 63.6 % based on the table of the questionnaire scoring. It fulfils the condition to continue the research of developing the model of HOTS questions.

The result of the student's questionnaire also shows that the research needs to continue because the students urgently expect the models of HOTS questions introduced in English text book. It shows that the percentage of the questionnaire is 84.71 as shown in the following table:

Table 3. Questionnaire for Students

I. Not finding in the text book such questions to...

No	Statement	Std 1	Std 2	Std 3	Std 4	Std 5	Mean score
1	Generalise based on the narrative text	5	5	5	4	4	4.6
2	Analyse based on the narrative text	3	4	3	4	4	3.6
3	Compare based	5	5	3	2	4	3.8

	on the narrative text						
4	Distinguish based on the narrative text	4	4	2	5	3	3.4
5	Correlate based on the narrative text	5	4	2	2	5	3.6

## II. Needing the questions in the text book to

No	Statement	Std 1	Std 2	Std 3	Std 4	Std 5	Mean score
1	Generalise based on the narrative text	2	5	5	5	5	4.4
2	Analyse based on the narrative text	5	5	5	4	3	4.4
3	Compare based on the narrative text	5	5	5	5	3	4.6
4	Distinguish based on the narrative text	5	5	5	3	2	4.00
5	Correlate based on the narrative text	5	5	5	4	3	4.4

## III. Expecting questions inserted in the students text books that ask to..

No	Statement	Std 1	Std 2	Std 3	Std 4	Std 5	Mean score
1	Generalise based on the narrative text	5	3	5	4	5	4.4
2	Analyse based on the narrative text	4	3	1	2	3	2.6
3	Compare based on the narrative text	4	2	5	2	3	3.2
4	Distinguish based on the narrative text	5	4	1	2	4	3.2

5	Correlate based on the narrative text	5	3	5	3	4	4.00
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## IV. The necessity to insert in narrative text the questions to...

No	Statement	Std 1	Std 2	Std 3	Std 4	Std 5	Mean score
16	Generalise based on the narrative text	5	4	5	4	4	4.4
17	Analyse based on the narrative text	5	3	4	3	3	3.6
18	Compare based on the narrative text	4	3	5	5	5	4.4
19	Distinguish based on the narrative text	5	2	4	3	3	3.4
20	Correlate based on the narrative text	4	5	5	4	4	4.4

## V. The necessity to insert in reading class activity the questions to....

No	Statement	Std 1	Std 2	Std 3	Std 4	Std 5	Mean score
21	Generalise based on the narrative text	5	4	5	4	4	4.4
22	Analyse based on the narrative text	5	3	5	3	3	3.4
23	Compare based on the narrative text	5	4	4	3	3	3.8
24	Distinguish based on the narrative text	5	4	4	5	5	4.6
25	Correlate based on the narrative text	5	4	4	4	4	4.2
	Mean score	4,6	3,92	4,08	3,56	3,72	3.98

The mean score of the questionnaire is 3.98 (4.00). Based on the table, it fulfilled the condition to continue the research to develop a model of HOTS questions. All means that the model of HOTS questions needs to be developed for the ninth grade students for narrative reading text.

### Result of Reference Study

The result of the reference study consists of material of the narrative reading text, the instructional goal based on syllabus, and the course outline. The material is presented in form of text book.

### Narrative Reading Text

The narrative reading text consist of three fairytales, they are: Hansel and Grethel, Malin Kundang, and Rapunzel's story.

### The Instructional Goal

The result of instructional goal is shown in the following table :

Table 4. The Basic Competence

No	Basic competence	Description
1	Basic Competence 3.7	The students are supposed to be able to compare the social function, text structure, language feature of some narrative text both written and orally by giving and asking the information related to fairy tales, shortly and simple according to the context.
2	Basic	The students are supposed to be

Competence 4.7	able To get the meaning contextually related to the social function, text structure, and language feature on the narrative text both written and orally, very short and simple related to fairy tales.
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The material according to the course outline is the text about the fairy tales that have the function to entertain and have several moral values to ponder, text structures, and language features.

### Course Outline

The material outline is the main material which is determined by the goverment. The following table shows the course outline related to the narrative text for the ninth grade students.

Table 5. Course Outline

Leraning Material	Activities
Fairy tales that has several moral values to think about, good examples, and various characters, simple past tense sentences, adverbial phrases: a long time ago, once upon a time, in the end, happily ever after , and the topic gives good model and create good characters.	Theacher tells some fairy tales and the students listen to the story, asksome information related to the story and discuss the massages from the story .Doing reflexion based on the process and the learning results.

### Result of Material Development

The result of material development can be observed in the following presentation:

Table 6. The Result of the Systematic of the Material Development

Parts of	Explanation
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the book			
The initial part			
The cover and the book's title	It contains the identity of the instruction material that is, the title, the writer, illustration, grade of the education, and year of publishing.		
Foreword	It contains the general description of the instructional material		
Content list	It contains the the order of the material together with the subtitle and the page of each of the title and the sub title.		
The content part			
Basic Competence	Unit	Narrative Text Title	Key Words of HOTS Questions
3.7 To compare the social function, text structure, language feature and some narrative text both written and orally by giving and asking the information related to fairy tales, shortly and simple accordiong to the context.  4.7 To get the meaning con textually related to the social function, text structure, and language feature on the narrative text both written and orally, very short and simple related to fairy tales.	Unit 1	Hansel and Grethel	o generalise, o analyse, o compare, o distinguish, o correlate
	Unit 2	Malin Kundang	
	Unit 3	Rapunzel's Story	
The closing part			
Summary	It contains the important information about the material.		
References	It contain the sources of the references of the book.		
Writer's biography	It contains the writer's profile		
Back cover	It contains the short description of the material.		

The following is the list of the HOTS questions:

Table 8. List of HOTS Questions

<b>Keywords of HOTS Question</b>	<b>The questions exercise</b>
To generalise	<ol style="list-style-type: none"> <li>1. What can you learn from the story?</li> <li>2. From the story we can infer that</li> <li>3. What is the writer's intention of writing the story above?</li> </ol>
To analyse	<ol style="list-style-type: none"> <li>1. What probably had made hansel feel to his Grethel ?</li> <li>2. Why do you think Malin Kundang ordered his mother to go away?</li> <li>3. What probably had made the witch hate Rapunzel ?</li> </ol>
To compare	<ol style="list-style-type: none"> <li>1. Who do you think had the worst character based on the story?</li> <li>2. What would likely had happened to Rapunzel if she had lived with her parents?</li> <li>3. What would Malin Kundang likely do if his mother was rich?</li> </ol>
To distinguish	<ol style="list-style-type: none"> <li>1. Can you give an alternative to make Malin Kundang save from the curse?</li> <li>2. Can you give an alternative to make Malin Kundang save from the curse?</li> <li>3. Who do you think the most patient character</li> </ol>

	based on the story?
To correlate	<p>1. What would likely happen if the step mother had loved the children?</p> <p>2. What would likely happen if Malin Kundang had welcome his Mother in front of his wife?</p> <p>3. How did likely Rapunzel think before she had known her mother?</p>

### Result of Expert Validation

The result of the expert validation is obtained by 2 (two) English teachers, it can be seen in the following table:

Table 9. Result of Expert Validation

No	Component: the content of the material						
	Sub Component	Indicator	Validator				
			1	2	3	total	Mean
1	Material reading text	a. cover	4	4	3	11	3.67
		b. introduction		3	4	12	4.00
		c. content	5	4	4	12	4.00
2	The suitability of HOTS questions to:	d. ask to generalize	4	4	4	12	4.00
		e. ask to analyse	4	4	4	12	4.00
		f. ask to compare	5	5	5	13	4.33
		g. ask to distinguish	4	5	4	14	4.67
		h. ask to correlate	5	4	4	14	4.67
		Total score	4.17				
		Percentage	83 %				

Notes	Need to provide interesting picture.
	Make the story shorter.
	Simplify the questions.
	Need to correct some mis typing

Based on the notes of the experts there are some questions revision. The following table shows the list of the revised one:

Table 10. The Result of Question

### Revisions

No	The previous question	The revised one
1	What are the moral value can we get by reading the story?	What are the moral values can we get by reading the story?
2	What made the witch treated Rapunzel bad?	What probably <u>had</u> made the witch treated Rapunzel bad?
3	What was Hansel's character compared with Grethel?	What was <u>probably</u> Hansel's character compared with Grethel?
4	What made Hansel and Grethel love each other?	What <u>probably had</u> made Hansel and Grethel love each other?

Based on the result, it is categorised into advisable because the result belongs to the highest category. It means that the product is considered valid because the

percentage reaches 81-100% (very advisable) to be implemented.

### Result of Try Out

The criteria whether the test is continued or not is based on Table 10 as follows:

Table 10. Criteria of Scoring

Scale	Mean Score	Qualification	Follow up
4	81-100	Very good	Implemented
3	71-80	Good	Implemented
2	51-70	fairly good	Revised
1	<50	Poor	Revised

The students mean score in the try out test (exercise 1) was 68.8. Based on the above table, it was categorized into fairly good, which means that the HOTS questions exercises need to be revised and continued to the second exercise.

### Result of Revision

Revision is very essential for developing every model of learning questions. For making the model better, the researcher revised part of questions to make the students easier to answer the questions. The students' score after revision (exercise 2) was 84.8.

To know the effectiveness of the product, the score is then inserted into the formula of the deviation scores of the exercise 1 and the exercise 2 as follows:

$$G = \frac{\text{Mean score of exercise 2} - \text{mean score of exercise 1}}{100 - \text{score of exercise 1}}$$

$$G = \frac{84.80 - 68.80}{100 - 68.80}$$

$$G = \frac{16.00}{31.20}$$

$$G = 0.51$$

The result is compared to the table of the G score to know the effectiveness of the product as follows :

Table

G score	Interpretation of effectiveness
$0.7 < G < 1$	High
$0.3 \leq G \leq 0.7$	Middle
$0 < G < 0.3$	Low

Based on the table of the Interpretation of effectiveness, the result belongs to  $0.3 < 0.51 < 1$  which means the effectiveness of the product is Middle. All means that the product of HOTS questions is interpreted as in the middle of effectiveness.

The mean score of the teachers questionnaire is 3.18 and the percentage reaches to 63.6 %. Based on the table of the questionnaire scoring, it fulfils the

condition to continue the research of developing the model of HOTS questions.

### **The Final Product**

Based on the revision result, the researcher developed the final product of the HOTS questions. The result of the student's questionnaire also shows that the research needs to continue because the students urgently expect the models of HOTS questions introduced in English text book. As can be seen by the results of the students' score of HOTS questions, it is decided that the HOTS questions can be effectively applied for narrative reading text for IX grade students. And the model of HOTS questions plays significant role in teaching narrative reading text for IX grade students of SMPN 2 Jorong. Furthermore, the model of HOTS questions influences the narrative reading text ability for IX grade students of SMPN 2 Jorong. However, the questions should be easy to understand and should be suitable to the students' vocabulary and the language of the narrative text should be short with about 400-600 words to help the students easily understand the content.

### **DISCUSSION**

. The content of the product consists of three fairy tales, they are Hansel and Grethel, Malin Kundang, and Rapunzel.

Each story completed with HOTS questions exercise with the questions to ask the students to generalise, to analyse, to compare, to distinguish, and to correlate.

The result of the student's questionnaire also shows that the research needs to continue because the students urgently expect the models of HOTS questions introduced in English text book. As can be seen by the results of the students' score of HOTS questions, it is decided that the HOTS questions can be effectively applied for narrative reading text for IX grade students. And the model of HOTS questions plays significant role in teaching narrative reading text for IX grade students of SMPN 2 Jorong. Furthermore, the model of HOTS questions influences the narrative reading text ability for IX grade students of SMPN 2 Jorong. However, the questions should be easy to understand and should be suitable to the students' vocabulary and the language of the narrative text should be short with about 400-600 words to help the students easily understand the content.

### **CONCLUSION**

The designing of HOTS question is done by the following procedures: need assesment, material development, expert validation, try-out, revision, and final

product. The content of the product consists of three fairy tales, they are Hansel and Grethel, Malin Kundang, and Rapunzel. Each story is completed with HOTS questions exercise with the questions to ask the students to generalise, to analyse, to compare, to distinguish, and to correlate. The design of HOTS questions plays significant role in teaching narrative reading text for the ninth grade students of SMPN 2 Jorong.

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