

Developing HOTS-Based Critical Reading Textbook for Junior High Schools in Ngabang

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Abstract

This research and development study develops an English textbook oriented to HOTS-Based Critical. The teachers' difficulty in finding HOTS-based English textbooks as one of the teaching tools is supported by the result of the textbook evaluation. Most of the English textbooks emphasize on remembering and understanding level. These preliminary data led the researchers to develop a HOTS-Based Critical Reading Textbook for seventh-grade students. The objectives of this study are to describe "Critical English" materials with HOTS and critical reading as the basis. This Research and Development study employed 7 stages namely need analysis, textbook evaluation, designing product specification, developing the product, expert validation, revision, try-out, and finalization (Borg and Gall, 1983). This study involved 2 English teachers from a reputable Junior High School in town. The data were obtained through a questionnaire, interview, classroom observation, expert judgment sheet, document analysis, and focus group discussion. The gathered data were analyzed using a descriptive qualitative method. The research findings reveal that the "Critical English" textbook facilitates the teachers to build the students' critical thinking. The materials provided in the textbook trigger them to develop creativity and critical thinking enhancing more active and interesting teaching.

Keywords: Critical Reading, HOTS, Material development

Introduction

The development of education goes with the development of the era. Facing the 4th Industrial Revolution, we have witnessed the fast-paced evolution of technology, advanced economy, and innovative industries. It needs skillful workers with better education involving the flexibility to deal with team and problem, communication skills, and creativity (Kuger, Susanne, Klse meieme, Eckhard, Jude, 2016). In line

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with this demand, the Educational sector has been trying to integrate the needs of the modern era in the new curriculum. The new Curriculum, Curriculum 2013, accommodates students to learn actively using their critical thinking. The outcomes of Curriculum 2013 are producing graduates who are equipped with 21st Century skills which enable them to succeed and thrive in this modern world. Creativity, precise analysis, and adaptation ability are the major elements for critical thinking (Changwong et al., 2018). Thus, the higher-order thinking skill (HOTS) was introduced in education, both in schools and higher education.

The Regulation of Education and Culture Ministry number 22 the year 2016 is talking about the implementation of HOTS. The Core Competence stating that teaching and learning in Indonesia should be based on higher-order thinking skill principles within the scientific approach (Norjannah, 2015). HOTS-based learning provides students to gain knowledge from various learning resources and implement research-based learning to produce contextual outcomes learning and solve the problem (Brookhart, 2010). Moreover, Brookhart (2010) defined critical thinking skills in 3 (three) categories, namely transfer, critical thinking, and problem-solving. Anderson, et al (2001) elaborates transfer as the ability to apply the acquired knowledge to new situations. This kind of thinking was affirmed by Brookhart (2010) by saying that life outside school characterizes more transfer opportunities rather than a series of recall assignments to be done. Referring to Noris, S., Enis, (1989) critical thinking focuses on reasoning and thinking reflectively. In line with it (Barahal, 2008), claims that ‘artful thinking’ includes reasoning, questioning and investigating, observing and describing, comparing and connecting, finding complexity, and exploring viewpoints. A clearer suggestion on HOTS by Brookhart (2010) suggests the teacher set problem solving-thinking in setting lesson goals at school and in life. Moreover, the advancement of information on digital media is another trivial problem especially for a future generation if all the received information is auto believed. According to Salam (2018), in Indonesia, hoax issues questioning the memories of the nation, religions, ethnic groups, or history are very problematic because this misinformation spread rapidly in public spaces.

Reading is one of the essential teaching components to enhance students' critical thinking. In the sense of achieving the goal, the American Reading Association formulates a subject called Critical Reading to build the students' critical thinking. Critical Reading does not demand the students to think critically, yet it emphasizes more on the student's critical argument or opinion as to the evaluation and analysis of their reading materials (Thuy, 2015). Thus, objective judgments in critical thinking need well-supported reasons and evidence rather than emotion or anecdote (Guo, 2013). The reader's evaluation is more on the writer's justification. In short, Tran (2015) added critical reading has the readers to:

1. Create passage comprehension
2. Raise questions and evaluation from the arguments provided by the writer
3. Synthesize passage and also create opinion toward the passage (Thuy, 2015).

In other words, critical reading builds an active ability to get and understand information. This is where the problem on the implementation feels so tricky for the teachers because the students do not belong to that level yet. They have low motivation in learning and inadequate initial learning. The previous study in this



region shows that the sanctity of learning English did not belong to the culture of the society (Agung, 2019). Moreover, integrating HOTS in teaching reading in the classrooms is very challenging. Based on the observation carried out by the researchers in Grade VII of SMP Negeri 2 Ngabang, the teaching and learning process is still in LOTS-based. The students are still driven to answer questions based on their unverified prior knowledge (neglecting the truth) or mood (motivated by self-esteem).

Concerning the above issue, this research is aimed at describing the materials needed by both the students of the seventh grade and English teachers with critical reading and HOTS as the basis and developing HOTS-based critical reading textbook for junior high school in Ngabang, West Kalimantan. The textbook is developed base on the need analysis both from the English teachers and students of grade seventh.

In the teaching and learning process, a textbook is an essential part that must exist to guide both students and teachers. A good textbook can be one of the factors determining the success of the teaching and learning process (Surtikanti, 2020). It is supported by Iqbal (2013 in Margana & Widyantoro, 2017) stating that the existence of the textbook could maximally facilitate the students to achieve the learning objectives. In another word, a textbook is the core of education for it plays an important role in the success of teaching and learning practices.

Concerning the above issue, the English textbooks which are designed for students of Junior high school should be oriented to the development of students' critical thinking skills that enable the students to handle challenging tasks. The task should be able to trigger the students to be completely engaged in the process of teaching and learning. In line with Putcha (2012) who states that the second language learner would get positive experiences of learning practices when they are accustomed to applying their critical thinking skills, then they would encounter any demanding tasks which can build their self-esteem in learning English (Putcha, 2012). Many experts in textbook development support educators in embedded HOTS in English textbooks to build HOTS-based teaching and learning practices (Huberty & Davis, 1998).

Method

This study is considered as a research and development study. It focuses on the development of HOTS-Based Critical Reading for the seventh-grade students of JHS in Ngabang. Borg and Gall (1983) state research and development study involves a process of developing and validating educational instruction. It is aimed to produce a beneficial educational product. Need analysis combined with document study is included in the initial process of developing the product. Validation and evaluation are the next steps to achieve the feasibility of the developed product.

Borg and Gall (1983) listed some main stages in developing a product in RnD study namely: a preliminary study, research design, product development, preliminary field testing, product revision, main field testing, product revision, try-out, final product revision, dissemination and implementation (Borg & Gall, 1983).

However, due to limitation and consideration, in this study, the procedures will be simplified into two main stages, namely exploration and model development. The subjects of this study were 2 teachers and 20 students of the seventh-grader in SMPN



2 and SMP Maniamas Ngabang. The data were obtained by using a questionnaire, interview, classroom observation, expert judgment sheet, document analysis, and focus group discussion. The gathered data were analyzed using descriptive qualitative method.

Findings and discussion

In developing critical reading HOTS-Based English textbook, the researchers employed some stages namely need analysis, textbook evaluation, designing prototype, development of the textbook, expert validation, try-out, and revision. The detailed stages are described as follows.

1. Need Analysis

The first stage in developing a HOTS-based textbook was need analysis. In this stage, the data were obtained by interviewing the English teachers and the students. The researchers gained information regarding the implementation of HOTS in the classroom, the availability of the English textbooks, the sources of HOTS materials, and the students' perception of the existing textbook in terms of materials and tasks.

Based on the need analysis, the English teachers and students needed to have a supplementary English textbook with embedded HOTS as the basis of teaching and learning practices. Both teachers A and B stated that the implementation of HOTS-based teaching and learning practice faced some obstacles. One of the factors is the existence of a critical reading HOTS-based textbook. The teachers argued that a textbook can guide them to establish the approach of the teaching and learning process. This was in line with the students who stated that they needed an English textbook containing interactive tasks that trigger them to develop their critical thinking.

2. Textbook Evaluation

After having the need analysis for both teachers and students, the researchers then had a document analysis. The documents being analyzed were the existing English textbooks used by the teachers. This stage aims to triangulate the data from the need analysis stage to find out the gap in the implementation of HOTS in the classroom. This stage is called textbook evaluation. The textbook evaluation was carried out to find out the strengths and weaknesses of the existing textbook used by the English teachers. Based on the interview held in need analysis stages, the teachers used two English textbooks namely "When English Rings A Bell", assigned by the government, and "Bahasa Inggris", written by Kurniawati & Wardhana (2019). Particularly in teaching reading, the teachers tended to use the textbook "Bahasa Inggris" by Kurniawati & Wardhana (2019) as it contains various dialogues, texts, and tasks. Since the focus of the study is on reading skill, therefore the researchers preferred to evaluate the "Bahasa Inggris" textbook. There are 4 chapters in the textbook. Each chapter consists of 30 activities. The subjects being analyzed were the questions available in chapter 1, especially in the reading task. To evaluate the textbook the researchers used



the Revised Bloom Taxonomy as the criteria of HOTS items. The following table is Criteria of HOTS arranged by Anderson (2001).

Table 1. Revised Bloom's TAXONOMY

Lower Order Thinking Skills	
Level	Description
1. Remembering (C1)	Recalling relevant knowledge from long-term memory.
2. Understanding (C2)	Composing meaning from oral, written, and graphic messages.
3. Applying (C3)	Performing the procedure or knowledge being taught
Higher Order Thinking Skills	
Level	Description
4. Analyzing (C4)	Examining the concept in detail to determine the relationship
5. Evaluating (C5)	Making judgments based on criteria and standards.
6. Creating (C6)	Putting elements together to form and produce a functional whole.

Table 1 shows in developing HOTS in the teaching and learning practices, the materials should cover the three stages in HOTS namely analyzing, evaluating, and creating. However, some questions in the "Bahasa Inggris" textbook are on both the LOTS and HOTS basis. It can be identified in the activity which asking the students to read the dialogue and answer some questions related to the dialogue. The following is the picture of a task in the "Bahasa Inggris" textbook (Kurniawati, C., Wardhana, 2019).

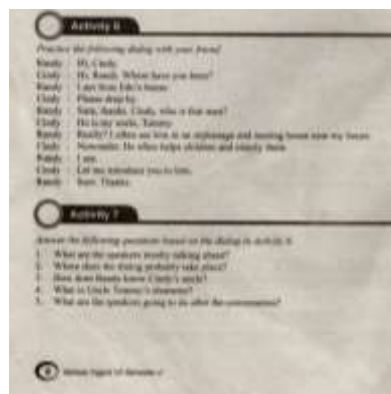


Figure 1. Activity 6 "Bahasa Inggris" Textbook

From the above picture, we know that there are 5 questions related to the above dialogue. The questions, then, are analyzed using the criteria of LOTS and HOTS (C1, C2, C3, C4, C5, and C6) as follows.



Table 2. HOTS-Based Evaluation Result of Question Items in “Bahasa Inggris”
Textbook

No	Question	Criteria LOTS and HOTS					
		C1	C2	C3	C4	C5	C6
1	What are the speakers mostly talking about?				√		
2	Where does the dialogue take place?	√					
3	How does Randy know Cindy’s Uncle?		√				
4	What is Uncle Tommy’s Character?					√	
5	What are the speakers going to do after the conversation?					√	

The above table reveals that there are 2 questions in LOTS and 3 questions in HOTS. The level of LOTS is in remembering and understanding, while the level of HOTS questions is in analyzing and evaluating. It means that the teachers have to develop more questions to trigger the students' critical thinking.

3. Designing prototype (product specification)

Deriving the data from need analysis and textbook evaluation, the researchers designed the product specification of the "Critical English" Textbook. There are some stages in developing the material namely analyzing the syllabus, drawing the blueprint of the prototype, selecting the material, organizing the teaching procedures, and creating the tasks. Table 5 shows the product specification of the "Critical English" Textbook.

Table 3. Product Specification

No	Item	Elaboration
1	Objectives	<p>Chapter I:</p> <ol style="list-style-type: none"> 1. Students are able to identify and apply the use of expressions of asking for and providing information critically and praise them accurately 2. Students are able to identify the use ‘be’ and ‘adjective’ accurately and apply the accurately as well. 3. Students are able to use relevant vocabulary appropriately. 4. Students are able to create a dialogue of asking for and providing information. <p>Chapter II:</p> <ol style="list-style-type: none"> 1. Students are able to identify and apply the language features in the use of expressions of asking for and providing information.



		2. Students are able to use Simple Present Tense correctly in the context of daily life.
		Chapter III:
		1. Students are able to identify the social function and language features with its structure of a descriptive text.
		2. Students are able to create spoken and written Simple Present Tense in the context of asking for and providing information, and descriptive text.
		Chapter IV:
		1. Students are able to identify the social function and language features with its structure of procedure text.
		2. Students are able to create spoken and written Procedure Text of using things
2	Content	a. The materials are relevant to the basic competencies in the 2013 curriculum.
		b. The materials are based on the context of seventh-grade students
		c. "Critical English" Textbook supports the affective domain.
		d. "Critical English" Textbook covers LOTS 20% and HOTS 80%
		e. The dialogues and texts are relevant to the learning context
		f. The materials can motivate the students to build critical thinking skills
		g. The materials are interesting
3	Organization of the book	There are 7 Activities in every chapter.
		Activity 1 – Brainstorming (Practice the dialogue/Read the text/observe the picture)
		Activity 2 – Task/Vocabulary builder
		Activity 3 – TRUE FALSE Task (embedded HOTS in the items)
		Activity 4 – Grammar/Structuring
		Activity 5 – Grammar Practice
		Activity 6 – Task/Discussion
		Activity 7 – Creating text/dialogue

After designing the product specification, the researchers collect and arrange the materials including texts, dialogues, and tasks that are suitable for the seventh-grade students. The materials also adjust with the syllabus of the seventh-grade students.

4. Development of the textbook

Based on the product specification, the researchers develop the materials for "Critical English" with some considerations namely the level of the student, relevant and contextual dialogue or text, interesting tasks, and the coherence of



every chapter with another one. Picture 2 is one of the examples of activity in the "Critical English" Textbook.



Figure 2. Sample of Activity in “Critical English” Textbook

Figure 2 shows a procedure text in the "Critical English" textbook. It contains the steps of the operating cellular phone. There are also some pictures to help the students understanding the steps. The next activity after reading the above text is the TRUE FALSE task. Picture 3 shows activity 6 involving Criteria 4 and 5 in HOTS namely analyzing and evaluating.

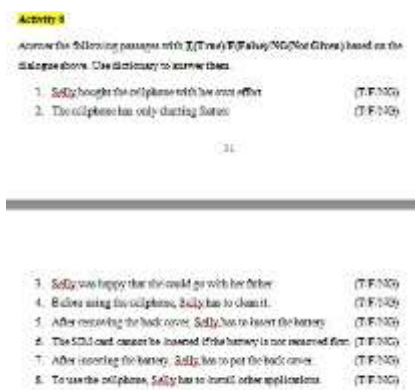


Figure 3. True False Task

Every item of the above True False Task is designed to develop the students' critical thinking skills especially in analyzing and evaluating. Anderson & Krathwol (2001) elaborates analyzing as the activity involving discriminating, distinguishing, selecting, finding, focusing, coherent, outlining, structuring, and deconstructing. The task in activity 6 involves the students to discriminating, coherent, and finding the point both in the statements and in the text. Evaluating activity enables the students to coordinate, detecting, monitoring, testing, and judging (Anderson et al., 2001). Some items in Activity 6 involves the students to coordinate and judging between the statement and the information available in the previous text.

5. Expert Validation

After developing the materials, the researchers validated the prototype to the expert of ELT and textbook layout to have better results of the “Critical English” Textbook draft. The data from the expert validation stage were obtained using the expert judgment sheet. The following table is the expert judgment sheet.

Table 4. Expert Judgement Sheet

No	Criteria	Description	Judgment	
			Yes	No
1	Objective	The textbook has clear objectives The objectives of the textbook correspond to the aims of Curriculum 2013		
2	Organization	The organization of the textbook has been in good order The layout and pictures are interesting for the students		
3	Content	The materials can provide sufficient vocabulary for the students The materials give chance for the students elaborating their critical thinking The passage stimulates the students' critical thinking The materials trigger to active discussion The materials give opportunities to share ideas and thoughts		
4	Language used	The language in the text has suited with the level of the students (grade VII) The directions of the task are understandable		

Based on the expert judgment sheet, the prototype of the Critical English textbook has met the criteria of a good textbook especially in developing the students' critical thinking. However, the experts suggested some revisions towards the draft. Table 5 is the review from the experts.



Table 5. Experts' Review

Expert on	Review
ELT Textbook	"The content is quite good. HOTS items are well embedded. However, it needs to be improved especially in the consistency of HOTS question items. It is better to organize the activity based on HOTS Criteria order."
Textbook Layout	"The organization of the book is quite good. Yet, it needs improvement in the pictures. Please try to find suitable pictures for seventh-grade students"

Based on the result of the above expert validation, the researchers revised some parts of the draft before trying it out in the classroom.

6. Try-out (feasibility studies)

Due to pandemic COVID-19 which lasted for 3 months, the try-out of the product occurred through online learning. The researchers sent the draft of the product to the English teachers to be used in their teaching and learning practices. The students had the soft file draft of "Critical English" given by their teachers through the e-learning platform. The questionnaire was made using Google form. After trying out the product toward both teachers and students filled out the Google form to give feedback on the product. Table 6 shows the result of teachers' and students' reviews on the "Critical English" draft.

Table 6. Teachers and Students' Review on Try-Out Stage

Respondent	Review
Teacher A	"The materials are interesting. Finally, I can apply HOTS in my classroom."
Teacher B	"My favorite part of this product is the Task. The task triggers the students' critical thinking. I need this textbook".
Student A	"The text is interesting as well as the dialogue. The task sometimes is hard to do but it's challenging, though"
Student B	"I like the pictures. It is eye-catching. The materials are also easy to be understood"

7. Finalization

After having try-out, the researchers did some finalization action namely adding three more chapters based on the syllabus of the seventh grade, adding some tasks, relevant pictures, and organizing the layout. The final product is the English Textbook entitled "Critical English" for Seventh Grade Students of Junior High School with the ISBN 978-623-6504-84-0 (Surtikanti & Hertanto, 2020). The textbook consists of 4 (four) chapters namely Asking for and Providing



Information, Simple Present Tense, Descriptive Text, and Procedure Text. Figure 5 is the look of Critical English textbook.



Figure 4. Critical English Textbook

Conclusion

In reference to the above findings, it is proved that the English textbook should be developed under HOTS basis to facilitate English teachers to maximally build the students' critical thinking. This is also supported by some theories that a good textbook can help teachers develop the teaching and learning practice to be more active and interesting. The development of HOTS in the English textbook is also facilitating the students to enhance their critical thinking skills which initiate the success of English language attainment. This study implies that selecting appropriate and challenging textbooks should be taken into account by English teachers especially when they would establish the students' critical thinking skills.

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