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# **A Scientific Approach on Developing English Writing Materials for Teaching Learning Process During Early Post COVID Pandemic**

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**Abstract**---This research finds from need analysis that covers student's background, goal, necessities, lacks, wants and learning needs, a new design of English writing materials is vitally needed. The developed writing materials are validated by two experts; teacher and lecturer. Teacher scored 87.3 and lecturer scored 79.3. This score of validation means the English writing material developed by scientific approach are suitable for learning process for early post COVID pandemic.

**Keywords**---learning process, post COVID pandemic, scientific approach, teaching, writing material.

**Introduction**

Materials are used to provide a stimulus writing (Wigfield & Guthrie, 2013). Writing is considered one of the most difficult language skills to be acquired but also taught (Klimova, 2014). Writing is a means of extending and deepening student's knowledge; it acts as a tool for learning the subject matter (Graham & Perin, 2007). A teacher should be able to improvises their teaching in writing

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especially in post covid pandemic (Sharma et al., 2020; Budd & Ison, 2020). As learning process must be conducted in both virtual and face to face classroom called hybrid learning or blended learning (Olapiriyakul & Scher, 2006). Materials developments are both a field of study and a practical undertaking. As a field of study, it studies the principles, and procedures of the design, implementation, and evaluation of language learning materials (Husin et al., 2021). As an undertaking it involves is production, evaluation, and adaption of language materials, by teachers for their classroom and by materials writers for sale or distribution (Hashimova, 2021). Ideally, these two aspects of materials development are interactive in that the theoretical studies inform and are informed by the development and use of classroom materials (Tomlinson, 2003). Developing material is both a field of study and a practical undertaking. As a field, it studies the principles and procedures of the design, implementation, and evaluation of language teaching materials (Martín-Blas & Serrano-Fernández, 2009; Erbas et al., 2021). As a practical undertaking, it refers to anything which is done by writers, teacher or learners to provide a source of language input, to exploit those source in ways which maximize the likelihood of intake and to simulate purposeful output. Materials developers might write textbooks, tell stories, bring advertisements into the classroom, express an opinion, provide samples of language use or read a poem aloud (Tomlinson, 2011).

In teaching selection of materials for the classroom, us is very important as materials influence student's achievement (Vescio et al., 2008; Hoy & Spero, 2005). The government by minister of education in line with BSNP (Badan Standar Nasional Pendidikan) states that some factors that must be concerned in selecting the materials are (BNSP, 2006):

- Student's potential.
- The relevance of materials with the region characteristic.
- The physical, intellectual, emotional, social, and spiritual development of students.
- The implication of the materials for the students.
- The scientific structure.
- The actuality of the materials.
- The relevance to the student's needs.
- Time allocation

This research is to find out a suitable English writing material for senior high school student. Researcher takes one text book used by a state High School in Medan, North Sumatera Utara, Indonesia as a sample. The text book is used for the tenth grade.

## **Methodology**

Students of tenth grade senior high school is the sample of this research. The data is taken by using questionnaire to the students and expert and interview. Questionnaire is design based on the students' needs. After having the data from questionnaire then the data is being matched to writing material in text book. From the matching process then the new developed English writing material is being designed (Delgado et al., 2019).

## Data analysis, Discussion and Result

From questionnaire is found that mean score is 94.6 for students, from the teacher is 87,3 and the result by expert is 79,3. It is shown in table below.

Table 1  
The data of expert judgment from questionnaires

No	Aspects	Expert 1 (Lecturers)			$\Sigma 1$	Expert 2 (Teachers)			$\Sigma 2$	Expert 3 (Students)			$\Sigma 3$	Total
		A	B	C		A	B	C		A	B	C		
1.	Content	30	36	26		32	35	40		36	40	40		40
2.	Language	20	22	18		20	22	20		24	24	22		25
3.	Presentation	15	8	12		13	12	15		12	15	13		15
4.	Graphic	20	13	18		15	20	18		20	18	20		20
Total		85	79	74	79,3	80	89	93	87,3	92	97	95	94,6	100

## Evaluation of existing writing materials

The evaluation of the writing material is done in order to find out whether the existing writing materials are relevant and meet the students' needs or not. It is found that the existing materials do not cover the students' needs. In terms of aims, the score 2.02 shows that the objective of the existing writing materials is fairly relevant with the objective of the students (Suryasa et al., 2019). Next, the score 1.4 shows that the existing writing materials are not relevant with the learning situation this time, and the score 1.9 shows that the students in learning English especially in writing skill.

- In terms of design and layout, the score 2.2 shows that the design of existing writing materials in term of structure, function, topic and skill is fairly relevant. The score 1.8 shows that the sequence of existing writing materials are fairly relevant. The score 1.4 shows that the connection between one topic to another in existing writing materials is relevant. The score 2.3 shows fairly relevant that the previous topic in existing writing could support the mastering of the next topic. The score 2.05 shows it is fairly relevant that the existing writing materials designed clearly.
- In terms of linguistic feature, the score 1.3 shows the grammatical used in the existing writing materials are less relevant to the student's ability. The score 2.6 shows it is relevant that existing writing materials provides the vocabularies related to the text. Next, the score 1.3 shows it is less relevant that the instruction for the exercises in the textbook could be understood easily by the student. Last, the score 2.2 shows it is fairly relevant that the exercises provided in the existing writing materials could increase students understanding towards the text.
- In terms of the topic, the score 0.4 shows it is less relevant and interesting for the students. The score 1.3 shows it is less relevant that the topic in the existing writing materials are appropriate to the students' ability. The score 1.2 shows it is less relevant that the topic in the existing writing materials could make the students learn English actively. Last, the 0.4 showed it was not relevant the topic in the existing writing materials are appropriate to students.

- In terms of learning method, the score 2.1 shows it is fairly relevant that learning method used in daily teaching and learning process is appropriate to the existing writing materials. The score 2.3 shows it is fairly relevant that the learning method in daily teaching and learning process is appropriate to the students' ability. The score 1.4 shows it is fairly relevant that the learning method used in daily teaching and process could motivate the students to learn English. The score 0.9 shows it is not relevant that the learning method used in daily teaching and learning process could make the students more active in learning English. The score 2.1 shows it is fairly relevant that the learning method used in daily teaching and learning process are based on scientific approach (Seidel et al., 2011; Cheng et al., 2009).
- In terms of skill, the score 1 shows it is less relevant and the existing writing materials could be integrated with another skill. Last, the score of 1.4 shows that it is less relevant and the existing writing materials could help the students to improve their writing skill.

Based on the result of materials evaluation described above, it is concluded that the existing writing materials need to develop as it is less relevant with the need of the students.

### The need analysis of students

Based on the result of the need analysis, the needs of the students are in detail as follow:

1. In terms of the student's background, the score 2.3 shows that the students are not really active in using English. Next, the score 0.6 shows that the student's ability in English is not in advanced level and the score 2.5 shows that they are not really often write an English text.

Table 2  
The result of need analysis in terms of student's background

No	Statements	Score	Level of agreement
1.	I tend to be more active in using English	2.3	Fairly agree
2.	My English ability is in advanced level	0.6	Not agree
3.	I often write an English writing text	2.5	Fairly agree

2. In terms of goal, the score 3.3 shows that the students agree that they learn English as their provisions to get a better job in the future.

Table 3  
The result of need analysis in terms of student's goal

No.	Statements	Score	Level of agreement
1.	I learn English as my preparation to get a good job in the future	3.3	Agree

3. Necessities mean to find out what the students' need a function in the target situation. The score 2.7 shows that the students agree that one of the skills they need in learning English is writing.

Table 4  
The result of need analysis in terms of student's necessities

No	Statements	Score	Level of agreement
1.	One of skill I need in learning English is writing	2.7	Agree

4. In terms of lack, the score 2 shows that the students fairly agree that they get difficulties in understanding the main idea of an English text. Next, the score 2.6 shows that the students agree that they get difficulties in understanding purpose in reading the text.

Table 5  
The results of Need Analysis in Terms of Students' Lack

No.	Statements	Score	Level of agreement
1	I got difficulties in understanding the main idea of a writing text	2	Fairly agree
2	I got difficulties in understanding text organization	2.6	Agree
3	I got difficulties in analyzing the writer's purpose in reading the writing text I write	2	Fairly agree

5. In terms of wants, the score 3 shows that students agree that they need to master many English vocabularies. Next the score 3 shows that the students agree that they need the ability to answer the comprehension questions of writing text. Last, the score 2.5 shows that the students fairly agree that they learn English from the textbook.

Table 6  
The result of need analysis in terms of students wants

No.	Statements	Score	Level of agreement
1	I need to master more vocabularies in English	3.08	Agree
2	I need the ability to answer question from writing text easily	3.02	Agree
3	I learn English from the English textbook	2.5	Fairly agree

6. In terms of learning need, the score 1.8 shows that the students fairly agree that they have ever written an English text about their environment. The score 3.1 the students agree that English writing materials in which the topic are related to their sociocultural environment are important to learn. The score 3.8 the students strongly agree that they are interested in learning English writing materials about ecotourism places North Sumatera. The score

3.5 shows that the students agree that they are interested in learning English writing materials about history in North Sumatera. The score shows 3.5 agrees that they are interested in learning English writing about historical events. The score 3.6 shows that the students strongly agree that they are interested in learning English materials. The score 3.3 shows that the students agree that they are interested in learning English writing materials with picture in which the topic the topics are related. Last, the score 3.1 shows that the students agree that they like the activity to answer the comprehension question after writing a text.

Table 7  
The result of need analysis in terms of students learning need

No.	Statements	Score	Level of agreement
1.	I have ever learned to write the writing text	1.8	Fairly agree
2.	The topic of English writing text related is important to learn	3.1	Agree
3.	It is easier for me to understand the English writing text whose topics is related	3.8	Strongly agree
4.	I like to learn the reading text about ecotourism places	3.8	Strongly agree
5.	I like to learn the writing text about the historical places	3.5	agree
6.	I like to learn the writing text about historical event	3.5	Agree
7.	I like to learn the writing text about the legend	3.6	Strongly agree
8.	I like to learn the writing text with the picture whose topic is related	3.3	Agree
9.	I like the writing activity when we must answer the question related the text provided	3.1	Agree

Based on the questionnaire and interview result, it is concluded that to design the appropriate English writing materials are vitally important. Designing scientific approach English writing materials helps both teachers and students in teaching and learning process (Efklides, 2006). It makes the students to be more students comprehend easily. Result of interview also gives contribution in designing the new English writing materials.

### **Developing scientific approach-based materials**

In this research, the materials development is based on scientific approach. Following some principles of scientific approach-based materials development proposed by Ken Hyland, the writing materials development are as follows:

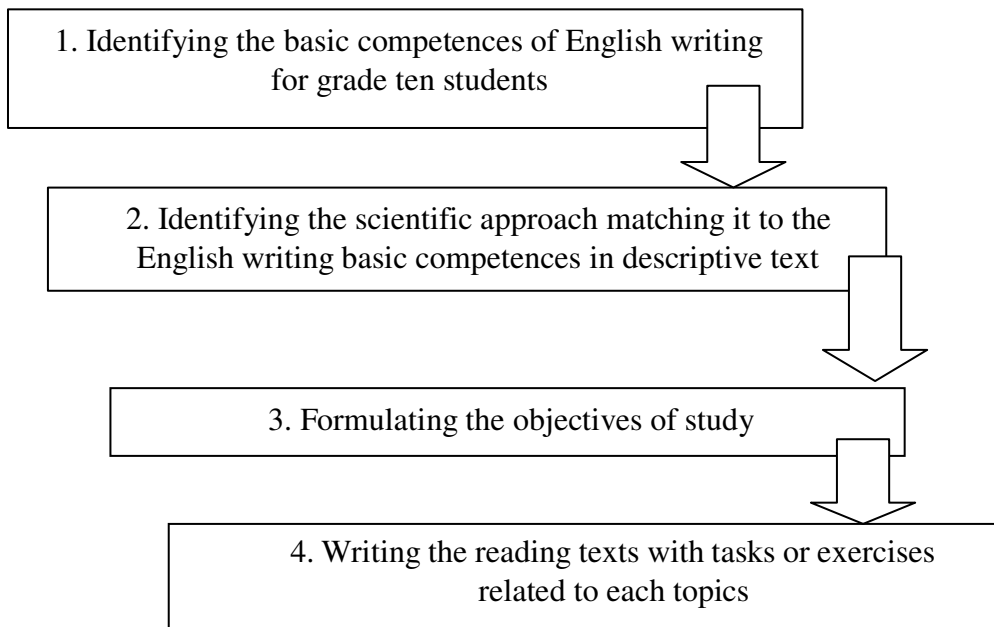


Figure 4. Diagram of Scientific Approach-Based Materials Development

1. Identifying the basic competence in descriptive text of writing materials of grade ten students. From the basic competences in descriptive text, there is the genres learnt by the grade ten students. They are descriptive genre about place, person, and historical place.
2. Identifying the scientific approach and matching it to the English writing basic competence in descriptive text

The scientific approach that is familiar to students is considered to be the topic of writing text. based on interview result, some topic that the teacher taught appropriate to develop are:

Table 8  
Text title in before developed writing materials

No	Genre	Task	Topic	Text Title
1.	Descriptive text	1	Tourist destination	Pair work
		2		Rewriting description Pair work
		3		Writing a descriptive essay

Table 9  
Text title in after developed writing materials

No	Genre	Task	Topic	Text Title
1.	Descriptive text	1	Tourist	1. Museum Sumatera Utara
				2. Taman Lumbini
				3. Gereja Graha Annai Velangkani
		3		4. Mursala Island
		8		Maimun palace
				Borobudur Temple

3. Formulating the objective of the study aimed at finding out what the students should get after studying the materials. The objectives of the study were formulated from the English writing basic competences in descriptive text for grade ten students.
4. Reading the Writing Text with the Task or Exercises Related to each Topics In reading materials, the objectives of the study must be considered so that materials could fulfill the standard that has been set in 2013 curriculum. In this development, the materials consisted of texts, explanation of each genre that helped students understanding the genres they learnt, and also tasks or exercises. Each text considered of 9 until 10 tasks. Each tasks had different aim that had been set in accordance to the objectives study.

### **The first draft of English writing materials**

The developed materials consist of one unit. Further explanation about this unit 1. Unit 1 is derived from core competence 1,2,3,4 and basic competences 1.1, 2.3, 3.7, 4.8, 4.9, 4.10. the topic of this unit is characteristic and description about Tourist Attractions and Historic Buildings as the object of grade ten. The title of Unit 1 is "what are the Tourist Attractions and historic Buildings are famous?" this unit main goals is to enable students to describe characteristics of tourist attractions and historic building orally or written form. The focus grammar is simple present tense.

The core competences require the students to be able to analyze the social function, text structure, and language features of descriptive text and also able to produce the txt in spoken and written forms. The unit is divided into two cycles: spoken cycle and written cycle in which each cycle consists of several tasks. The are 9 tasks in the unit, 2 tasks belong to getting started activities, 7 tasks belong to writing activities. The description of each task in Appendix F.

After being evaluated by experts, they have given some comments and suggestion related to the developed English writing materials. The first experts (the lecturer) suggests that the task or exercises might be added. Another suggestion from the first reviewer was that add more explain the materials. They are about the grammatical errors as well about adding some pictures in the blank page to make the materials more interesting. In addition, the second expert (the English teacher) also give his suggestions. Make the color brighter and add more explain

the materials. The title of unit 1 is “What Is the Tourist Attractions and Historic Buildings Are Famous?” this unit focuses on descriptive text about the characteristics of the tourist attractions and historic buildings. The main goal of this unit is to make students be able to describe characteristics of the tourist attractions and historic buildings whether orally or in written form. The focus of the grammar is simple present tense.

### Validation

The validation process of final writing materials is done by the experts. They are three experts evaluated the materials. The result of expert judgment is presented below:

Table 10  
The score of expert judgment for English writing materials

No	$\Sigma 1$	$\Sigma 2$	$\Sigma 3$	Total
Total	79,3	87,3	94,6	261,2
Average				$\frac{\Sigma 1 + \Sigma 2 + \Sigma 3}{3}$ $= \frac{777,33 + 887,33 + 779,66}{3}$ $= 887,0066$

The result of experts' judgement is 87,6. It meant the materials were in “Good” category.

In addition, the experts are not only asked to give their evaluation, but also give their comments and suggestions about developed materials. Their comments are about the weaknesses of the materials and suggestions to improve the developed materials. The following table is the description of the expert's feedback. The result of the expert's judgement comments and suggestions are presented below:

Table 11  
The result of experts judgments comments and suggestions

No.	Aspects	Experts 11	Experts 2222	Experts 3333
1.	Content	Add more tasks or exercise Add more explain the materials	Add more tasks or exercises	No revisions
2.	Language	No revisions	No revisions	No revisions
3.	Presentation	No revisions	No revisions	No revisions
4	Graphic	Add more colors to make it interesting	Make the colors brighter	No revisions

The result is gathered by administering interview to English Teacher and distributing questionnaire to 36 students. The interview and questionnaire results prove that the students need English writing materials which is contained the appropriate knowledge or topic with syllabus and students' level. The developed materials are descriptive text. the development of writing materials in descriptive texts is conducting 3 phases: Preliminary study, designed the model of writing materials and Development the model of writing materials. The new writing materials are validated by two experts. Based on the experts' judgement result, the score is 87.06 which belongs to good category, since the range is (70-89). The process begins with identifying students' needs by conducting the need analysis. The students' needs are divided into two: Target needs and learning needs. It was conducted on September 1<sup>th</sup> by distributing 24 questions to grade X students. The topics of the writing materials are all related to tourist attractions and historic buildings.

The developed materials consist of one unit. The inputs for the materials are chosen in accordance to the core competences and basic competences in Curriculum 2013. The writing steps applied in the materials followed Scientific-approach based writing steps which were taken from Curriculum 2013. UNIT 1 is derived from basic competences 1.1, 2.3, 3.7, 4.8, 4.9, 4.10. it focused in descriptive text explaining about characteristics and description about tourist attractions and historic buildings. Knowing about the characteristics and descriptions of tourist attractions and historic buildings is simpler and may provide students with sufficient knowledge to do the activities. Each unit in the developed materials consist of introduction (getting started), main lesson (observing, questioning, experimenting, associating, and networking).

The number of tasks for each unit the writing materials are almost the same with UNIT 1 consists of 9 tasks. Each unit of the materials begin with introduction stage. It consists of tourist attractions activities and also provides students with necessary vocabulary that are relevant to the topic of each unit.

The next stage is the main lesson. The learning steps in the main lesson follow the steps of scientific approach-based writing activities: observing, questioning, experimenting, associating, and networking. This stage focuses guiding students to reach the competences as stated in the core competences and basic competences. Students do additional activity outside the class to apply what they have learned by doing practices which are set to be closely resembling the actual situation in daily. Reflection parts gives students chance self-evaluate their progress in doing the activity in the tasks and how much achievement that they managed to achieve.

The materials that have been developed are called the first drafts. They are the evaluated by an expert. The material evaluation is relevant with the standard of material evaluation proposed by BNSP. There are 33 questions in the questionnaire distributed to the expert that covered four aspects of material evaluation proposed by BNSP: the appropriateness of content, the appropriateness of language, the appropriateness of presentation, and the appropriateness of graphics.

Based on the discussion and data analysis it can be concluded that the material of the writing in the students' book needs a development as it must follow the situation of the general system of education including the environment.

Limitation:

- This research is done by taking an English text book published by Education Minister of Indonesia.
- The research is done in a condition of education system affected by pandemic COVID.

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