DEVELOPING PISA-BASED READING MATERIALS IN INDONESIAN CONTEXT IN THE FORM OF CONTINUOUS TEXT

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Abstract

The aim of this study was to develop PISA-based reading materials in Indonesian context in the form of continuous text. The subject of this study was tenth grade students at SMA N 1 Belitang. The procedure of the study consisted of three stages such as analysis, design, and evaluation. Instructional materials, students' need, learning environmental, and students' reading level were analyzed. The results of the analysis became the basis for designing the product development. Formative evaluation was conducted to see the validity, practicality, and whether or not the developed product had potential effect to the students. Validity was evaluated in expert review phase for its content, instructional design, and language. The product was stated to be very highly valid (3.5). The practicality was evaluated in one-to-one evaluation and small group phases. The results showed that the product was highly practical since the average score in both phases were 2.7 and 2.8, respectively. Field test phase aimed to evaluate whether or not the develop product had potential effect. The judgment of potential effect was seen from the mean score of the students in the field test. The results showed that the average score of the English version was 78 and the average score of Bahasa Indonesia version was 83. It means that PISA-based reading materials in Indonesian context in the form of continuous text was categorized as very had high potential effect to the students.

Keywords: PISA, PISA Reading Literacy, reading, reading material, Indonesian context, continuous text, developmental study, descriptive text, narrative text

1. INTRODUCTION

Reading is the common activity in the teaching and learning process. Reading helps students get knowledge and information related to their learning subjects. It is in line with what Cline, Johnstone, and King (2006, p. 2) state that reading is the process of deriving meaning from the text.

Reading is very important for students because by reading they can open the door for factual information about subjects in the world. In Indonesia, there is a saying membaca adalah jendela dunia (reading is the window to the world). Figuratively, this means reading can take students go to the places they have not visited. Reading also helps students discover new things (Davis, 2016). It is because students can get new knowledge and more information by reading some sources.

Considering the significant role of reading as a source of knowledge, being literate is important. Kementerian Pendidikan dan Kebudayaan (Indonesian Ministry of Education and Culture) (2016) states that in the 21st century the ability of literacy of learners is closely related to the demands of reading performance that lead to the ability to understand information in an analytical, critical, and reflective. It means students are expected to have an ability to analyze the information they have spoken usage critically

and reflectively. It is because being literate does not only allow people exchange information but also provides the opportunities for lifelong learning (UNESCO, 2006).

As described in the previous paragraph, reading is related to literacy. Kern (2000) states, literacy refers to the ability to read and write. In other words, when people have an ability to read and write it can be said that they are literate. Lawton and Gordon (1996, p.108) also define literacy as the level of skill in reading and writing that any individual needs in order to cope with adult life. It is crucial for adult life in informing decision making, personal empowerment, active and passive participation in local and global social community. Kementerian Pendidikan dan Kebudayaan (Indonesian Ministry of Education and Culture) (2016) define literacy as the ability in accessing, understanding, and use the information intelligently.

Furthermore, the fact shows that Indonesian reading literacy is categorized deficient. It is proven by the data form EF EPI (Education First English Proficiency Index) (2015) shows that the score of Indonesian adult English proficiency only 52.91 and it is in the 32nd rank out of 70 countries which is categorized as moderate proficiency. Another fact shows from Badan Pusat Statistik Indonesia (Indonesias' Central Bureau of Statistics) (2017) which declared that the national average of adult illiteracy rate was still 2.07% or 3.4 million illiterate people. Meanwhile, in South Sumatera there were 1.46 million people at the age > 15-year-old still illiterate. By the facts above, there must be hard effort done by the government as well as teachers in order to decrease the illiterate people in Indonesia.

In addition, the definition of literacy as defined by PISA (Programme for International Students Assessment) is an individual's capacity to understand, use, reflect on and engage with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society (OECD, 2015). However, to reach the understanding, using, evaluating, reflecting on and engaging with a reading text is a challenge for students. One of the possible reasons is concerned with text readability (Hendri, Inderawati & Vianty, 2016).

One of the reading literacy tests which are conducted to see students' reading performance is the Programme of International Student Assessment (PISA) Reading Literacy conducted by Organization for Economic Co-operation Development or OECD every three years. It is a collaborative effort among the OECD member countries to measure how well young adults at age 15 are prepared to meet the challenges of today's knowledge societies (OECD, 2000, p. 12).

PISA Reading Literacy test is conducted in the national language of participating countries. This means that for Indonesia it is conducted in Bahasa Indonesia. Indonesia has participated in PISA Literacy test since 2000. However, the results of the test showed that Indonesian students' literacy performances were below the average of PISA's standard score.

The poor performance of Indonesian students in PISA Reading Literacy tests which were conducted in Bahasa Indonesia has been investigated by Tiro, Hamra and Sukarna (2010) who found that there were some difficulties that students had in doing PISA Reading Literacy test and two of them were the truth of meaning translation from English to Bahasa Indonesia and the form of questions and grammatical in Bahasa Indonesia. In addition, the low score in PISA test is highlighted by Zulkardi, Hartono, and

Putra (2015) who claim the students' unfamiliarity about PISA test and the way how to solve PISA test as the reasons.

Referring to what Tiro et. al. (2010) and Zulkardi et. al. (2015) have reported, the writer wanted to develop PISA-based reading Materials in two versions which were in Bahasa Indonesia Version and English Version but in Indonesian context. The rationale was it was hoped that develop PISA-based reading Materials in Indonesian context in the form of continuous text can give the contribution to the government in order to support the movement which stated in Indonesia 2013 curriculum and in increasing the students' score in PISA Reading Literacy Test. And then the product was written as the booklet as the reading materials in teaching and learning process. Another reason was to facilitate students in teaching and learning process in way to help them in solving the test. Moreover, Indonesian context will be used, therefore students will be familiar with the topics.

It is important to use Indonesian context in reading materials because many students have problem on their interest on reading caused by the unfamiliarity of the context used. A study done by Kweldju (1996) found that the reasons behind the lack of students interest in reading included students limited background knowledge, inability to understand the content of the text, and complicated organizational structure of the text. It is in line with the study done by Rukmini (2004) that the reasons behind students lack of interest in reading was students unfamiliarity with various genres employed in reading text. It can be said that the term unfamiliarity became a problem of the students in reading. Since PISA is something new for the students, the writer tried to developed PISA-based reading materials in Indonesian context that can be used for the teachers and students in the classroom. It was expected that it can help students in knowing how PISA test works by having the texts used which in Indonesian context.

This product can be used by the teachers in teaching reading in class in order to guide the students to think by using HOTS (High Order Thinking Skill) as like the questions form in PISA. Based on the study done by Abdullah, Abidin and Ali (2015), students in Malaysia also have the problem in PISA test which was their ability in using HOTS since the questions tested in PISA involve the use of HOTS. By that fact, it is important for the teachers to improve the ways how teaching and learning processes held in the classroom. The ways can be supporting the students to have critical thinking and HOTS. Those ability advocated in the PISA test that have always been included as part of curriculum (Thien, Razak, Keeves, & Darmawan, 2016).

To start with, the writer chose SMA N 1 Belitang as the place where this present study was going to undertake. The reason was the lowest average score of reading literacy wass in the village (Tiro et. al., 2010). Furthermore, the writer did a small survey there. the data showed that from 23 sampled students, 74% stated they had high interest in reading in English, 82% of them also often have reading activity in English in their daily life. However, when they were asked about PISA Reading Literacy test, all of them or 100% of them have not known yet about it. The writer also gave them one of the reading text of PISA Reading Literacy Test 2009 entitles "Macondo" to the students. The results showed that most of the students had problems in getting the meaning of some words; it was shown by 91% of the students argued that the vocabulary used in the text were hard to understand and 78% of them stated that PISA questions were not easy to answer.

The writer's intention to develop PISA-based reading materials within Indonesia context was in accordance with what highlighted by Inderawati and Vianty (2017) that the development of teaching and learning materials, especially in reading literacy, still need greater improvement.

The effort to develop PISA-based reading materials had been done by the postgraduate study students of Language Education Program (English Education) in 2016 by having a workshop on "Understanding the Reading Materials in PISA". The workshop was attended by English and Bahasa Indonesia teachers from some schools in South Sumatera. As stated by one of the speakers contributing to this workshop, to use texts with local-based context is important (Exley, 2016). In this workshop, the participants were guided to develop reading materials which shared similarities as demonstrated in PISA Reading Literacy Test. As suggested by Exley (2016), in developing the reading materials, teachers should consider the compatibility between the age of the students and the readability of the text. The writer herself had also practiced developing PISA-based reading materials (reading texts and the questions) in Instructional Materials Writing and Evaluation which was one of the subjects she enrolled in the academic year 2016/2017.

As stated previously, this study was focused on developing PISA-based reading materials based on the two types of text used in PISA. According to PISA frameworks (OECD, 2015), there are two types of text which are the focus of PISA reading literacy test: continuous text and non-continuous text. The tenth graders were the participants because as it is related to PISA Literacy test, most of the students who are in that grade are already in 15 years old.

Referring to the explanation above, the objectives of this study were to find out whether or not the developed PISA-based reading Materials in Indonesian context in the form of continuous text were valid and practical, and whether or not the developed PISA-based reading materials in Indonesian context in the form of continuous text had potential effect.

2. METHODOLOGY

This study was applied developmental research since the aim was to develop PISA-based reading materials in Indonesian context in the form of continuous text. According to Seels and Richey (1994), developmental research is defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria for internal consistency and potential effect. It is also defined as one of the educational research in which the alternative of solutions is developed to overcome complex educational problems (McKenney & Reeves, 2012).

Developmental research is related to formative evaluation (Tessmer, 1993). Therefore, this study will apply formative evaluation model proposed by Tessmer (1993). Formative evaluation is a "judgment of the strengths and weaknesses of interaction in each developing stage, for purposes of revising the interaction to improve its potential effect and appeal (Tessmer, 1993, p.11)."

The population of this study was the tenth grade students in SMA N 1 Belitang. the subject of the study was selected purposively based on the basis of their instructional reading levels in every phase of formative evaluation. In one to one test, there were students who were frustration, instructional, and independent readers from the

prospective reading levels that have chosen. Six students were represented from three different reading level that has chosen for the small group test. The last was field test that was not the same students who already involved in the previous phase.

The procedures were in line with the ones proposed by Akker (1999) which consisting of analysis, design, and evaluation.

There were four analyses were conducted. The first was instructional analysis. In this phase the writer analyzed the English curriculum for tenth-grade students based on Indonesian 2013 curriculum and PISA Reading Literacy. The next was students' need analysis, this analysis was conducted to find out the information about students' need analysis, the writer gave the questionnaire adapted from Petrus (2012) to the students dealing with students' reading interest, students' knowledge about PISA, and student' interest in knowing PISA test. The information from the questionnaire was used for the writer in designing the product. After that learning environmental analysis, the writer observed the environment regarding the facilitation of reading book in the school. The last was students' reading level analysis to determine the subject of the study and in matching the students reading ability with the readability text used in develop PISA-based reading materials in Indonesian context in the form of continuous text. Informal Reading Inventory by Stark (1981) was used to analyze the students' reading level.

The next phase was design. In this phase, the writer designed PISA-based reading materials in Indonesian context in the form of continuous text dealing with the type of the text used in PISA which is continuous text: descriptive text and narrative text. After that, the writer produced the prototype of the product. The product was constructed in paper-based design. The product matched with three major task characteristics in PISA Reading Literacy Test such as situation, text, and aspects.

In designing the product, the writer used two of the texts used in PISA Reading Literacy Test in 2009 which were descriptive text and narrative text. Furthermore, in determining the readability levels of text used in PISA and the product, which are appropriate to students, those reading text analyzed by using Flesh Kincaid.

The last was the evaluation. In this phase, the writer implemented a prototype of the product based on the feedback or comments from the questionnaires. In evaluating the product, the formative evaluation developed by Tessmer (1993) was used. It consisted of 5 stages which were self-evaluation, expert review, one-to-one evaluation, small group evaluation and field test. Those steps are illustrated below:
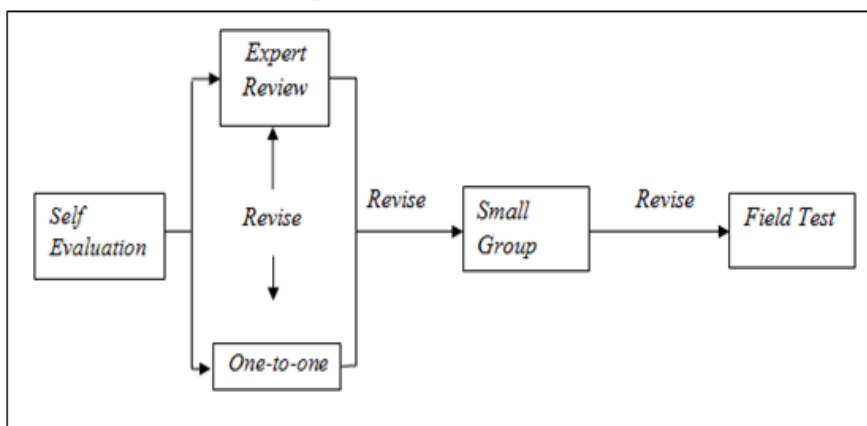
Formative Evaluation by Tessmer (1993)

The activity was done in the first stage which was self-evaluation. After that, the writer reevaluated and rechecked the product in term of content, instructional design, and language.

Next, the product was evaluated by three experts who were capable in the aspect of the validity of the product related to the content, instructional design, and language. The writer used expert validation and their comments or suggestion to revise the product to increase its validity.

The third stage was one-to-one, in this phase the writer asked the three students as the tester and after that, the students ask the comment about the assessment which already done. This stage was conducted to find out the information from the students in order to know the practicality of the product.

The fourth was small group evaluation. After the writer revised the product, develop PISA-based reading materials in Indonesian context in the form of continuous text was evaluated by the six students in small group. This evaluation was used as the guideline in considering the practicality of the product.

The last stage of the evaluation was the field test. This stage was aimed at finding out whether or not PISA-based reading materials in Indonesian context in the form of continuous text had potential effect to the students.

In collecting the data, there were three instruments used in developing PISA-based reading materials in Indonesian context in the form of continuous text. Those were questionnaire, expert validation, and developed reading materials.

In analyzing the data, the writer analyzed the validity, practicality, and whether or not PISA-based reading materials in Indonesian context in the form of continuous text had potential effect. The validity of the product was validated based on experts' evaluation. After applying PISA-based reading materials in Indonesian context in the form of continuous text, the students who included in one-to-one and small group evaluation gave their comments on the questionnaire related to the develop product. After that, to determine the practicality of the product, the data from the questionnaire were administered. The last was field test. Before field test done, the writer made the developed product into two versions that were in English version (PISA-based reading materials in Indonesian context in the form of continuous Text) and Bahasa Indonesia version. It was because, in real PISA Reading Literacy test, the test is conducted in the national language of participating countries. This means that for Indonesia it is conducted in Bahasa Indonesia. After that, the students were answering both reading test that the range of time was one week. The first week students answered the English version, and in the following week, they answered Bahasa Indonesia version.

To find out whether or not PISA-based reading materials in Indonesian context in the form of continuous text had potential effect, the resulting score of students were calculated to find out the percentage of the students who passed the score criteria which is 70. The test can be considered has potential effect if 70% or more students reach minum criteria which is 70 in answering the developed product. The percentage were calculated as follows:

$$\text{Mastery percentage (\%)} = \frac{The\ number\ of\ students\ obtaining\ score}{The\ total\ number\ of\ students} \; x \; 100$$

3. FINDINGS AND DISCUSSION

Here are the results of analysis phases, design phase, self-evaluation, expert review, one-to-one evaluation, small group evaluation, and field test.

3.1 Analysis Phase

In the instructional analysis phase, the writer analyzed the learning materials of English used by teacher and students in daily teaching and learning process. In fact, there were some sources of learning materials but the characteristics of the reading materials are far from PISA-based. All the materials used only provided in preparing students in doing the reading test for the final exam.

Moreover, dealing with materials related to descriptive text and narrative text, the writer analyzed the worksheet used by teacher and students in classroom learning. There were some descriptive texts and narrative texts found on the worksheet but still, the texts were just like the text that usually had in daily reading class. It means that the texts were far from how PISA Reading Literacy test works.

Next, PISA Reading Literacy Test were also analyzed. PISA frameworks 2015 were used as the guideline in analyzing PISA Reading Literacy Test. It was found that there were three major task characteristics in PISA Reading Litearcy test: situation, text, and aspect. Situation refers to the intended the text. Text refers to continuous text in PISA Reading Litearcy Test. Aspects refers to the characteristics of the question used in PISA Reading Litearcy Test. In this study the writer chose PISA Reading Literacy test 2009. In PISA Reading Literacy Test 2009, there were ten units which consisted of five texts of non-continuous form, three texts of continuous form and two texts in multiple form that are the combination of both non-continuous and continuous form. The writer chose only two texts from PISA Reading Litearcy Test 2009 as the basic reading materials that would be developed which were Macondo and Destination Buenos Aires.

Students need analysis was conducted in order to find out the information about the students' reading interest, knowledge about PISA, interest in knowing PISA test. The aspecs which stated in the questionnaires were their perspective dealing with students' habit in reading, knowledge about PISA, understanding about descriptive text, perspective in reading descriptive text, expectation toward PISA test, problem in reading, problem when they read an example of PISA test, and expectation in knowing PISA test. To find out the information about these, a questionnaire adapted from Petrus (2012) consisting of 25 items was given to 97 tenth grade students from three different classess. The results are as follows:

Table 4.1 the summary of students need analysis

Aspects of Questionnaire	Percentage
Student' ability in learning English was still need improvement	28%
Students' interested in reading English text	75%
Students who had low frequency in independent reading at home.	84%
Students who were not known about PISA	100%
Reading text in PISA 2009 is difficult	72%
Students who already learned descriptive and narrative text	89%
Students who were not familiar about the topic used in PISA	88%
Students who felt that Indonesian context in English text facilitate students in getting new information about Indonesia	86%

Students who loved to read English text which the topic used were familiar	88%
Students who felt that the familiar topics helps them to understand the reading text and the questions	93%
Students who realized that knowing PISA test is important for their knowledge	88%
Students who felt that PISA test was need to introduce and applied in teaching and learning process	83%
Students who supported the increasingof Indonesian rank in PISA test.	93%
The problems faced by the students in reading English text	
Vocabulary	43%
The length of the text	22%
Unfamiliarity of the topic	15%
The difficulty of the topic used in English text	12%
The problems faced by the students in the process reading English text	
Main idea	40%
The information of the text	14%
What students' got after their read the text	21%
In understanding the conclusion of the text	24%
The problems faced by the students in reading PISA test	
Vocabularry	48%
The length of the text	12%
Unfamiliarity of the topic	28%
The difficulty of the topic used in English text	11%
The problems faced by the students in the process of reading PISA test	
Main idea	26%
The information of the text	28%
What students' got after their read the text	18%
In understanding the conclusion of the text	18%
Students' Expectation towards effort in increasing the score of PISA	
Enrich the reading materials with the original text of PISA in taching and learning process	6%
Practice in doing PISA test in English frequently	16%
The topic used changed into Indonesian context with familiar vocabulary for 15-year-old students	51%
Enrich the reading topic which the same type of PISA and discussed by the stduents and teacher in teaching and learing process	19%

Based on the results of students needs analysis above students realized that learning English is very important, but their ability in learning English was still need improvement. Many students were also interested in reading English text, but there are still many of them had low frequency in independent reading at home.

Although all the students realized about the important of having an ability in reading English text, but none of them did not know about PISA. It was proven when the writer gave two examples of text used in Reading Literacy in PISA, there were 72% of students said that the reading test was difficult. Even though there were 89% of students said that they already learned about descriptive text and narrative text, there were still

86% of students did not familiar about the topic used in PISA test. It was because there were 88% of students loved to read English text which used Indonesian context.

Indonesian context in English text facilitate students in getting new information about Indonesia because students loved to read English text which the topic used were familiar. It helps them to understand the reading text and the questions.

Furthermore, based on the students' need analysis, it can be concluded that developed PISA-based reading materials in Indoensian context in the form of continuous text was needed to be developed.

In learning environmental analysis the writer did an observation of learning environment in SMA N 1 Belitang. The results of the observation are described as follows:

Table 4.2 The Results of the Observation of Learning Environment

No	Facility/ Activity	Availability
1.	Standardized library	Available
2.	Good reading book in Bahasa Indonesia	Available
3.	Reading Book in English	Not Available
4.	School Literacy Movement (Gerakan Literasi Sekolah) which is an activity of 15 minutes reading everyday at the begining of the study in the morning.	Available
5.	Sources as additional reading materials in International standard (e.g PISA)	Not Available
6.	The information for teachers and students about international standardized test as PISA.	Not Available

The information described in the table suggests that the school was lack of information and sources about international standardized test which is very important to know by the teachers and also the students. Therefore, all the people in that school were not well-known to PISA Reading Literacy test. Furthermore, the use of developed PISA-based reading materials in Indonesian context in the form of continuous text during the teaching and learning process could be a solution for the success achieving learning objective and government program which is stated in School Literacy Movement (Gerakan Literasi Sekolah): increasing the Indonesian rank of PISA .

Students' reading level analysis was conducted to determine the subject of the study and in matching the students reading ability with the readability text used in develop PISA-based reading materials in Indonesian context in the form of continuous text. With hopes of the readability levels of developed descriptive text and narrative text were appropriate to students' reading level. In this analysis, the writer used Independent Reading Inventory developed by Stark (1981). The level of reading text in the test included level 2, 3, 4, 5, and 6. The reason of giving these reading levels was the tent grade students' reading achievement was at low level and based on the previous study done by Lestari (2015) that reading level of the tenth grade students was in level 4. The results of the test are described in the following table:

The Distribution of Students' Reading Level

Text Level	Reading Stage					
	Frustration (CN= ≤6)		Instructional (CN=7-8)		Independent (CN=9-10)	
	NOS*	%	NOS*	%	NOS*	%
Level 2	21	22%	36	37%	40	41%
Level 3	31	32%	36	37%	30	31%
Level 4	27	28%	41	42%	29	30%
Level 5	63	64%	23	24%	11	12%
Level 6	72	73%	20	21%	5	6%

Source: Modified from Stark (1981)

*NOS = Number of Students

*CN = Correct Number

Based on the results, it is shown that in the text level 2 students were at independent level which was 41%. Meanwhile, text at level 3 and 4 students were succeeding at instructional level which was 37% and 42%. However, in text level 5 and 6 were still at frustration level which were 64% and 73%.

3.2 Design Phase

In this phase, the writer designed developed PISA-based reading materials in Indonesian context in the form of continuous text. First of all the writer choose two texts from PISA Reading Literacy Test which were Macondo and Destination Buenos Aires as the main reading materials used in PISA Reading Literacy Test. The next step was writing PISA-based reading materials in Indonesian context in the form of continuous text based on the PISA framework 2015.

To know the readability of the text, the PISA-based reading materials in Indonesian context in the form of continuous text and PISA Reading Literacy Test 2009 were checked by using an online tool which was Flesh Kincaid. There were 3 texts consisting of narrative and descriptive text. The illustrated of the results were described as follow:

The Readability Level of Developed PISA-based Reading Materials and PISA Reading Test 2009

NO	Tittle	Readability Level	Remarks
Reading Text for PISA Reading Literacy Test 2009			
1.	Destination Buenos Aires	9	Developed
2.	Macondo	15	
Reading Text for PISA-Based Reading Materials			
3.	Destination to Jakarta	9	Developed and Translate
.	Heading to Palembang	9	
.	Belitong	12	

Based on the information described in table 4.4, the text in PISA Reading Literacy 2009 test included Destination Buenos Aires (Level 9) and Macondo (Level 15). Meanwhile, the text in PISA-Based Reading Materials included Destination to Jakarta (Level 9), Heading to Palembang (Level 9, and Belitong (Level 12). Refering to the

readability level above, the writer had developed the text for four times but still the readability level did not change. Although the level of the text is not in line with the students' reading level, the text were appropriate for age 15. Since the PISA Reading Literacy Test is derived for 15-years-old students, this text would be available for students in grade X whereas the age usually at 15 years old.

3.3 Evaluation

In this phase, the evaluation and revision were conducted together because those two stages were connected each other. Before being processed the next evaluation, the developed PISA-Based reading materials might be revised. As it was stated before that this study were used five stages of formative evaluation proposed by Tessmer (1993). It consisted of experts' review, and one-to-one evaluation in prototype 1, small group evaluation in prototype 2, and the field test was conducted in prototype 3.

The evaluation was needed to improve the quality of the developed products. Thus, to know the validity of the product, firstly it was evaluated by three experts in experts' review phase. After that, the practicality of the product was determined based on the students' comments in one-to-one and small group evaluation phase.

Afterward, to see whether or not the PISA-Based reading materials had potential effect there was calculating the percentage of the students who passed the minimum score criteria (KKM).

Self-Evaluation

Before developed PISA-Based reading materials given to the experts, the writer evaluated it. It was considered that there were some mistakes related to the use of the words, the grammar, and the sentence structure including the questions followed that should be revised by the writer. Those stages were conducted to find out the difficulty of the products so that the writer could revise the products to be valid, practical, and has potential effect.

Expert Review

The next phase of evaluating the developed product was experts' review. There were three experts in this phase. First was the expert on the content, the expert of instructional design, and the expert of language. The experts had evaluated the products and given their comments and suggestions on the questionnaire. All of the experts said that the products were valid with revision. It means that the writer should revise the products which related to the content, instructional design, and language. The summary of the results of questionnaires is shown in the table below.

Summary of Expert Review

Aspects	Average Score	Remarks
Content	3.8	Very Highly Valid
Instructional Design	3.8	Very Highly Valid
Language	3.0	Very Highly Valid
Total Average Score	3.5	Very Highly Valid

Moreover, based on the expert's response on the questionnaire, the data indicate that the average score (3.5) of three aspects of content, instructional design, and language exceeded 2.51 which were categorized as highly valid. As Kubiszyn and Borich (2003)

said that the product will be classified valid if the average scores of questionnaires will not be less than 2.51. It means that the develop products met the components of language, PISA knowledge (content), and it is interrelated with the component of the curriculum (instructional design). It is in line with Akker (1999) that materials are considered valid when the products met the requirements of state-of-the-art of knowledge (content validity) and all components should be consistently linked to each other (language and instructional design).

One-to-one Evaluation

One-to-one Evaluation was conducted to find out the practicality level of developed PISA-Based reading materials. In this phase, there were three students representing frustration, instructional, and independent reader. Students were asked to read and review the developed reading materials individually. Questionnaire were handed to students aiming to evaluate the practicality of product after they have read the product. The average score of questionnaires were calculated the practicality was interpreted based on the average score calculated from the questionnaire. The summary of the results of questionnaires is shown in the table below.

Summary of Practicality in One-to-one Phase

Aspects	Average Score	Remarks
Relevance to Students' Need	2.7	High Practicality
Materials Presentation and Attractiveness	2.6	High Practicality
Evaluation	2.8	High Practicality
Total Average Score	2.7	High Practicality

The next activity was a discussion session. Students were asked their opinion of the developed product. In term of the topic of the developed reading materials, students responded the PISA-Based in reading materials positively. They said that they were quite familiar with the place used like Palembang, Jakarta, and Belitong. This developed product helped students in understanding PISA-based in reading matetrial. It was because the students were familiar with the topics used in the develop reading materials. All of them marked some difficult words in the text. They said that the words were new for them and they need to open dictionary first to find out the meaning of the word. Moreover, they said that developed reading materials helps them to get familiar with PISA Reading Literacy test.

In addition, the main point in this phase was vocabulary. All of the students had more that 2 difficult words in the text. Meanwhile, the students who categorized as frustration and instructional readers ha more difficult words that the students who categorized as independent reader.

Referring to the average score of the total scores above, it means that the product had high practicality level. It is in line with Akker (1999) that if the product had high practicality, meaning as the product is easy to use by the students. It means that the developed PISA-based reading materials could be comprehended by students in different reading level. Therefore, the writer could continue the next evaluation phase.

Small Group Evaluation

The practicality of developed product was also assessed in small group evaluation phase. The product in this phase called prototype 2 which was the revision of the product in one-to-one phase. In this phase involved 6 students in which every three students categorized to frustration, instructional, and independent readers. The students were not the same as those who were in one-to-one evaluation.

Small group evaluation was conducted in two meetings. Allocation time for each meeting was 90 minutes. Students asked to read the prototype 2 before they filled the questionnaires. The questionnaires were given to the students as the basis of practicality evaluation. The calculation of practicality in small group evaluation is shown in the table below.

Summary of Practicality in Small Group Phase

Aspects	Average Score	Remarks
Relevance to Students' Need	2.8	High Practicality
Materials Presentation and Attractiveness	3.0	Very High Practicality
Evaluation	2.7	High Practicality
Total Average Score	2.8	High Practicality

The results of questionnaires showed that practicality of the developed product was high. The first aspect of practicality, relevance to students' need, had been evaluated as very high. It can be said that the product was relevant to the students. Reading text which described some places in Indonesia was appropriate to students in grade ten. Furthermore, the product also matched with their background knowledge of the topics used.

The second one was materials presentation aspect was assumed very highly practical. It was affirmed that the materials were easy to be understood as well as the topic used in the reading text. It is proven by the students that there was no grammatical error in the developed reading materials.

The last one was the evaluation. This aspect was evaluated high practical. Both directions presented and questions items have been understandable. The numbers of questions were adequated enough, and they were organized in two different form. The questions represented the same aspect used in PISA. Dealing with multiple choice questions, the distracter were written very well and the structure of distracters were all homogeneous in order that students did not only guess the answer. Furthermore, for the short answer and essay, they were also written-well so that the students were easy to understand the questions.

Furthermore, all aspects of practicality have been examined, and the results showed that the developed product was highly practical. In discussion session, students didn't report some difficulty in reading the text. In conclusion, the developed product was ready to be evaluated whether or not the developed product has the potential effect on the students in field test without revision anymore.

Field Test

The last phase of the evaluation was field test. this phase was done in real class, which was in X Science 2 class. There were 30 students participated in field test phase.

First of all, the writer made the product in to two versions such as in English version and Bahasa Indonesia version. After that The students were answering those reading test that the range of time was one week. The first-week students answered the English version, and in the following week, they answered Bahasa Indonesia version. The results showed that all of the students passed the minimum score which was 70. With the average score of the English version was 78 and the average score of Bahasa Indonesia version was 83. It means that based on both average scores, PISA-based reading materials in Indonesian context in the form of continuous text was categorized as very had high potential effect on the students.

4. DISCUSSION

This study was aimed at developing PISA-based reading materials in Indonesian context in the form of continuous text. The procedures of the study were in line with the ones proposed by Akker (1999) which consisting of analysis, design, and evaluation. Before the product developed, some analyses were conducted such as instructional, students' needs, learning environmental, and students' reading level.

An instructional analysis was done to identify English curriculum for tenth-grade students based on Indonesian 2013 curriculum dealing with whether or not the materials about descriptive text and narrative text taught in tenth-grade students. In this study found that there were some sources of learning materials at SMA N 1 Belitang. Unfortunately, all the materials used were only for students' preparation examination proposed by Indonesia 2013 Curriculum. Meanwhile, as stated in the Indonesia 2013 curriculum (The purpose of having Gerakan Literasi Sekolah (School Literacy Movement)) that our government wants to improve the Indonesia rank of PISA. Meanwhile, the available materials in that school were not enough to reach the program held by the government. The next was analyzed PISA Reading Literacy Test relating to the characteristics in PISA test such as: situation, text, and aspect (OECD, 2015). Situation refers to the intended the text. The text refers to continuous text in PISA Reading Literacy Test. Aspects refer to the characteristics of the question used in PISA Reading Literacy Test. Those three aspects became the basis for designing the prototype 1. Besides, instruction in the teaching and learning process should also focus on providing a range of strategies for understanding text, involving students in an extended discussion of text meaning and interpretation, and increasing motivation and engagement (Inderawati &Vianty, 2017) as what PISA proposed in assessing the quality of education.

Students' needs analysis was conducted to find out the students' reading interest, students' knowledge about PISA, and student' interest in knowing PISA test. Those information gathered by using a questionnaire adapted from Petrus (2012) consisting of 25 items. From the results of students' needs analysis, it can be seen that all the students realized about the importance of reading the especially English text, unfortunately, all of them did not know the information about PISA. Most students said that the reading test was difficult. Even though some of them said that they already learned about descriptive text and narrative text, there were still many of them were not familiar with the topic used in PISA test. It was because most of them loved to read English text which used Indonesian context. Based on the comment given by the students in the analysis phase, Indonesian context in English text can facilitate students in getting new information about Indonesia because students loved to read English text which the topic used were familiar.

It was also because it can help them in understanding the reading text and the questions. It is in line with what Anthony, Pearson, and Raphael (1993) that students who have background knowledge which is similar to the reading text for example in Indonesian context, will be read very helpfully in reading the text. Regarding the background knowledge of students, PISA Reading literacy test was new for the students at SMA N 1 Belitang, meaning that the materials were not in line with students' background knowldge. In conclusion, based on the students' need analysis, developed PISA-based reading materials in Indonesian context in the form of continuous text was needed to be developed.

Another analysis was learning environmental analysis. This analysis was conducted to get the information about the availability facilities used in that school. It was found that the school was lack of information and sources about the international standardized test which is very important to know by the teachers and also the students. Moreover, dealing with PISA knowledge, students never read and heard the information about the international standardized test as PISA. Although there was an activity like School Literacy Movement (Gerakan Literasi Sekolah), but the school did not realize the purpose why the government proposed that movement. That is why there were also no sources as additional reading materials in International standard as PISA. Meanwhile, Kweldju (1996) found that the reasons behind the lack of students' interest in reading included students' limited background knowledge. It can not be denied that all of the students in that school did not know the information about PISA and they found the difficulty in doing PISA test. It is in line with the study done by Rukmini (2004) that the reasons behind students lack interest in reading was students' unfamiliarity with various genres employed in reading a text. It can be said that the term unfamiliarity became a problem of the students in reading especially in reading PISA test. Whereas, schools and teachers should become familiar with, and begin to implement, a length of strategies for improving reading literacy across the curriculum, including in English classes (Inderawati & Vianty, 2017). Furthermore, acording to PISA Frameworks 2015 (OECD, 2015) questions given in the PISA test were categorized as HOTS question. Many countries had the same problem in Indonesia which the low score in PISA test. In malaysia for example, students also have the problem in PISA test which was their ability in using HOTS (Abdullah, Abidin and Ali, 2015). It can be said that the fact in another country maybe became another reason the low score of PISA test in Indonesia.

The last analysis was students' reading level analysis. This analysis was used to determine the subject of the study and in matching the students reading ability with the readability text used in develop PISA-based reading materials in Indonesian context in the form of continuous text. The writer used Informal Reading Inventory developed by Stark (1981). The level of reading text in the test was at level 2, 3, 4, 5, and 6. It was because reading level of the tenth-grade students was in level 4 (Lestari, 2015). The results showed that in the text level 2 students were at independent level. Meanwhile, text at level 3 and 4 students were succeeding at the instructional level. However, in text level 5 and 6 were still at frustration level. This results showed that students reading level were at level 4.

PISA-based reading materials in Indonesia context in the form of continuous text had to be valid in terms of instructional design, content, and language. Therefore, validation process involved the review of the expert of instructional design, content, and

language. Instructional design, content, and language design were evaluated by the expert of Instructional design, content, and language. Based on the expert's review, the data showed that the product was highly valid. It is because the average score were higher that 2.51 which were categorized as highly valid (Kubiszyn and Borich, 2003). It means that the developed products met the components of language, PISA knowledge (content), and it is interrelated with the component of the curriculum (instructional design). It is in line with Akker (1999) that materials are considered valid when the products met the requirements of state-of-the-art of knowledge (content validity) and all components should be consistently linked to each other (language and instructional design). Inderawati and Vianty (2017) also stated in their study that developing reading literacy provided by teachers must bring all categories in the content, process, and context of PISA.

Practicality was evaluated in the one-to-one and small group phase. In both phases, the product was considered as highly practical. It was because the developed product was on the basis of students need. As what Kubiszyn and Borich (2003) said that when the average score of the questionnaire exceeded 2.51 it means that the product was highly practical.

Acording to the results of the validity and prcticality above, there were significant difference in term of the score. The average score of expert validation were 3.5 meanwhile in from the students were 2.7 and 2.8. It can be said that the procuct was valid in term of its criteria, but the students still met the difficulties when they tried to use this product as reading materials. In one-to-one evaluation, the student who was frustrational claimed that some vocabularies were difficult to understand, she needed to open dictionary first to find out the meaning of the words. This fact also happened in small group evaluation. The difference results score between the experts and the students maybe because of the difficulty in students knowledge about vocabulary used in developed product.

The last evaluation was field test. A field test was conducted in order to find out whether or not PISA-based reading materials in Indonesian context in the form of continuous text had the potential effect to the students.

Before having the field test, the writer arranged the product into two versions such as in English version and Bahasa Indonesia version. It was because the final product was in Bahasa Indonesia version since the real PISA Reading Literacy Test is conducted in countries national language. The reason why the writer developed the product in English version first, it was because the original text in PISA is written in English. Referring the final product which was in Bahasa Indonesia version, it was hoped that develop PISA-based reading materials in Indonesian context in the form of continuous text can give the contribution to the government in order to increase the students' score in PISA Reading Literacy Test. And then the final product was written as the booklet as the reading materials in teaching and learning process.

In the field test, the students were answering those reading test with the length of time was one week. The first-week students answered the English version, and in the following week, they answered Bahasa Indonesia version. The results showed that all of the students passed the minimum score. It means that based on both average scores, PISA-based reading materials in Indonesian context in the form of continuous text was categorized as very had high potential effect on the students.

The obstacle of this study was time allocation. The study was followed timetable in school. Nevertheless, in the middle of the research and three days before this study end, the students were free and they did not come to school because the twelve-grade had an exam. But the data gathered is still effective to be analyzed.

5. CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

Results of study that have been discussed previously can be concluded as: the developed PISA-based reading materials in Indonesian context in the form of continuous text was validated for its instructional design, content, and language in which the validity for each was 3.8, 3.8, and 3.0. The average score of validity was 3.5 implying the product was very highly valid and the developed PISA-based reading materials in Indonesian context in the form of continuous text was evaluated in one-to-one and small group evaluation for its practicality. In one-to-one evaluation, the practicality was 2.7 indicating highly practical. The practicality in small group was 2.8 also indicating highly practical. The judgment of potential effect was seen from the mean score of the students in the field test. The resulting score of students were calculated to find out the percentage of the students who passed the score criteria which is 70. The results showed that the average score of the English version was 78 and the average score of Bahasa Indonesia version was 83. It means that PISA-based reading materials in Indonesian context in the form of continuous text was categorized as very had high potential effect to the students.

5.2 Suggestions

Based on the results of the study, there are five suggestions proposed for the teachers, schools, and other reseachers. First, it is important to have instructional reading materials that reflect the characteristics of PISA Reading Literacy Test. Teachers have to improve the PISA-based materials in order to introduce this international standardized test like PISA Reading Litearcy Test. It is because the teachers as the facilitator for the students in teaching and learning process. the materials in school is the responsibililty of the teachers wheter the class will be on the right track or not.

Second, it is suggested for teachers to use PISA-based reading materials in Indonesian context in the form of continuous text as additional reading materials in class in order to lead students to think beyond the text and guiding the students in having HOTS (High Order Thinking Skill) as like in the characteristics of PISA Reading Literacy Test. By having this rading materials the students can learn more about how HOTS work in the questions of the text given in the test. Because all the questions given in the text ara part of HOTS questions.

Third, schools should also supply more reading materials in English to facilitate students and teachers in their reading activity in teaching and learning process. schools also provides the example of PISA test in order to introduce this international test to the teachers and also students.

Fourth, It is suggested to other future researchers to evaluate the students reading literacy by using PISA-based reading materials in Indonesian context in the form of continuous text to see how students use their HOTS. The last, the researchers also suggested to develop other kind of text used in PISA so that the reading materials which is PISA-based will be more complete.

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