FOG INDEX ON TEXTBOOKS OF INDONESIAN SUBJECT FOR CLASS X OF SENIOR HIGH SCHOOL IN STANDARD BASED CURRICULUM (SBC) AND CURRICULUM 2013 (A STUDY OF LEGIBILITY AND FEASIBILITY TEXTBOOKS)

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Abstract: This research aims to describe and explain the readability and feasibility of the text in the textbook of Indonesian subject for class X of senior high school in standard based curriculum (SBC) and curriculum 2013. This research is a qualitative descriptive study using fog index as a formulation to calculate the readability aspect. The data of this research are taken from Indonesian subject in standard based curriculum and 2013 curriculum. The data collection technique is taken using documentation. The research data validity is measured using source triangulation. The data were analyzed using interactive data analysis model. The results of the research are (1) the readability of the text books of Indonesian subject for class X of senior high school in standard based curriculum (SBC) is categorized as the readability that easy to understand (2) the readability of the text books of Indonesian subject for class X of senior high school in curriculum 2013 is categorized as the readability that easy to understand; (3) The differences appear not in term of readability. Instead, they are on the number and types of the texts that are used;(4) the textbook of Indonesian subject for class X in senior high school in standard based curriculum (SBC) is feasible, because it contains various types of text, meaning that it concerns with science and knowledge gained by reader.

Keywords: readability, feasibility, textbooks

INTRODUCTION

Skills or abilities to comprehend texts cannot be mastered easily by someone. A student secondary education level still finds difficulties in analyzing the contents in texts or reading materials.

The statement is proven by the following argument, firstly, it is found that “reading comprehension of the twelfth grade students in Surabaya reaches 117.85 wpm, and reading comprehension by 51%, such ability is included in mediocre category, because less than 70% of understanding with the minimum high school graduation of 250 wpm” (Kurniawati, 2012: 1). Secondly, the “reading abilities of tenth grade students of Natural Science Class is still low. It is shown by the average value of the class which only gets 7.1, whereas the minimum completeness criteria set is 7.5” (Kirana, 2015: 2). If viewed in terms of age, the students within the age of secondary level should not read texts with high difficulty.
The selected texts should be easy texts to be understood by them, such as sentences which are not too long and common diction usage. Therefore, textbooks should pay attention down to such details. The precision in writing certainly should be noted as well, which in this case also requires the author to create simple textbooks but rich in knowledge.

Good readers are supposed to have good abilities as well. Not simply being able to read and pronounce each word presented, but good reading is to understand the contents. Even to the reading abilities aimed to make conclusions and to know the purposes of the text creation. What should be noted by the readers is that not all lengthy texts are difficult to understand and concluded, likewise short texts are not necessarily easy to grasp the points and to conclude. Therefore, as said before; good readers are not only those who can read, but it is beyond that.

One should realize the comprehension abilities in each individual is not the same. However, if people want to become good readers, they should indeed have different abilities from common readers. Moreover, being a reader that is capable of processing information and messages contained in the texts is a skill that must be owned by them. So far, good readers have been discussed, thus good readers are those capable of collaborating logical thinking and reasoning when read. It is not much different from the opinions “in the process of understanding the information, the readers also studies the authors’ method in presenting their thoughts” (Tampubolon, 2015: 6).

Thereby, from the writings presented, the readers also need to know the authors, hence the readers can easily align what they receives with those expressed by the authors through their writings. It has been mentioned that good readers are those capable of involving logical mind and reasoning properly. Nonetheless, it cannot be ruled out that plentiful linguistic knowledge and vocabulary also affect the acceptance of the readers understanding. In line with the opinion stating “understanding a language is inseparable from the mastery of vocabulary. The amount of vocabulary mastered by an individual will determine the extent of their understanding of written language” (Robihim, 2008: 189).

Although the readers must have good reading abilities, an author should also consider to whom the writings will be conveyed. Thus, the authors must adjust to their target readers.

If the author assembles complex sentences, and use many less common terms with the target readers, for instance, the readers will certainly running out of time to find the purpose of writing. It will be in contrast if the writing is targeted to the people having high readability such as academics. Since the purpose of reading is communication between authors and readers, “reading as a result in the form of communication achievement of thoughts and feelings of readers and the author, which is obtained the readers through the process of reading” (Saddhono and Slamet, 2014: 106). Based on that opinion, it is clear that the author wants his work to be understood by the readers as a form of communication from both, although they do meet face to face directly.

In connection with the explanation above, it is also related to the abilities of the readers, in this case are the learners. A writer must use common language, good syntax,
long sentences, and sentences that do not have a high level of complexity. Therefore, the learners can understand the text they read. It will be risky if the understanding gained by learners is different from the understanding obtained by the teacher. If the learners experience barriers in understanding the text, it would hamper the learning process.

The understanding obtained by the teachers and learners should be similar. The aligned comprehension is necessary for both hence the activities are not hampered and useful to create a proper learning process. It is unfortunate if the text read by teachers and learners brings forth different understanding, as clearly the learning in the classroom will be disrupted. Disruption means ineffective and inefficient learning process, even to the failure in achieving good learning goals. Meanwhile, “each activity, teaching, environmental design, and etc. are functionalized to be predetermined final goals” (Hamalik, 2013: 6).

Therefore, proper text selection for learners is needed. The appropriate text selection actually is the duty of writers and editors, unexceptionally the teacher, as the ones is using them are the teachers and learners. Learners themselves may also be involved in determining the selection of the text, because in the end the ones that seriously need to understand the text are them. The government as an education provider and textbook providers should be involved in selecting and sorting, so that textbooks are in line with national education goals and in accordance with the level of education of the learners. If all the parties related play their role properly, then the learning will take place well and go in line with predetermined objectives.

One way to determine whether textbooks have an easy or difficult readability can be performed with measuring the readability using formula. This research selected fog index formula as a benchmark for measuring the readability of the textbooks. Fog index formula as readability formula has criteria in choosing the text that will be measured by means of “taking text segment minimally 100 words” (Saptono, Fitrianingsih, et al, 44: 2013).

Meanwhile, the textbooks becoming the object of research are the tenth grade students SBC and 2013 Curriculum Indonesian Subject textbooks. Speaking of textbooks, according to Regulation of Minister of National Education Number 2 of 2008 on Books in Article 1, paragraph (3) reads, textbooks in primary, secondary, and higher education hereinafter referred to as textbooks are mandatory textbooks for use in units in primary, secondary or higher education including learning materials in order to increase faith, devoutness, noble character, and personality, mastery of science and technology, increased sensitivity and aesthetic capabilities, increased kinesthetic abilities, and health which is based on education national standards.

The selection of SBC and 2013 Curriculum textbooks as published by the ministry, the educators should pay attention to aspects of readability, text selection, and consistent with the curriculum.

This research is aimed to describe and explain (1) the readability of The Tenth Grade Students SBC Indonesian Subject Textbook; (2) the readability of The Tenth Grade Students 2013 Curriculum Indonesian Subject Textbook; (3) the differences of
readability in The Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbook; (4) the feasibility of textbooks in terms of the type of text used.

In connection with the text readability, the readability is the abilities of an individual to comprehend a text. It does not only come to that extent, text readability may imply level of ease and difficulty of the text to be understood by the readers. Gilland proposes that “readability is related to three things, namely ease, attractiveness and understandability” (Kusmana, 2008: 124). It is also in line with the opinion of Harjasujana saying “readability is whether a reading appropriate or not to certain readers seen from the level of difficulties” (Indrawati and Subadiyono, 2001: 135). After the calculation is done on the text, then an individual can determine their readability value.

Through the readability value, a text can reflect whether it belongs to easy or difficult readability. Not only seen from value, but it is inevitable that aspects of language also affects readability. “The readability aspects are also related to the level of language ease (vocabulary, sentences, paragraphs, and discourse) for the students in accordance with their education level” (Muslim, 2011: 88). Thereby, language aspects, such as vocabulary, sentences, paragraphs, and the discourse also influence the level of text ease when referring to these opinions, in addition to the counting as indicated by the numbers. Meanwhile, the formula can be used to calculate the readability value “are formulas Flesch, Fog Index, SMOG, and Fry Graph” (Yasa, 2013: 239).

There are previous studies that are relevant to this research. Meanwhile, the research in question is entitled “Study of Content, Language, and Readability of The Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbook”. The results of the research show that the books of which readability being examined have easily understood categories, and good in terms of language and content. Meanwhile, in the second research entitled “A Comparative Study of the Readability of English Textbooks of Translation and Their Persian Translations” (Kolahi, 2012:344-361) which mentions research results that Persian translation textbooks are less understandable than the English translation of text books. These two studies assess the readability of textbooks by using fog index formula.

**RESEARCH METHODS**

This research was a qualitative descriptive study. The data found were calculated based on fog index formula. The data found by doing a deep observation to data sources, taking into consideration the characteristics of the fog index formula. Sources of data in this research were The Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbook. The data collection techniques used in this research were documentation techniques. The validity of research data employed source triangulation. The data analysis technique in this research used an interactive model: data reduction, data presentation, and conclusion.

The readability calculation in this research uses fog index formula. The method used fog index as written by Sitepu is as follows (2012: 121).
1) Select description of the reading material containing 100 words as a sample with the following provisions: a. Repetitive words are calculated as two words; b. The word used more than once is counted as one word; c. Abbreviations or numbers are counted as one word.

2) Count the Average Sentence Length (RPK-Rata-rata Panjang Kalimat) by: a. Counting the number of complete sentences in 100 words sampled; b. Counting the average sentence length by dividing the number of complete words with the number of sentences.

3) Count the number of words consisted of three syllables or more, not including proper names (i.e. person's name, city name, etc.). These words are considered difficult for the students to understand.

4) The words with more than two syllables (the result of step 3) are divided by the total number of words (100) in order to obtain the percentage (%) of difficult words (KS) in the samples.

5) Add RPK (results of step 2) into KS (the result of step 4). Multiply the result of step 5 with 0.4. The mathematical formula is: readability level = 0.4 (RPK + KS).

The Fox Index Readability Value Range

<table>
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<tr>
<th>Range</th>
<th>Category</th>
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<tbody>
<tr>
<td>&lt;3</td>
<td>Considered too easy</td>
</tr>
<tr>
<td>&lt;7–3</td>
<td>Considered easy</td>
</tr>
<tr>
<td>&gt;8–12</td>
<td>Considered difficult</td>
</tr>
<tr>
<td>&gt;12</td>
<td>Considered highly difficult</td>
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RESULTS AND DISCUSSIONS

Readability of SBC Indonesian Subject Textbooks

Based on the calculation of text readability using the fog index formula done to The Tenth Grade Students SBC Indonesian Subject Textbook, it was found that as many as 57 texts are in majority text with a range of readability value < 7-3 or having a category which is considered easy. Based on the research results, the average text contained in The Tenth Grade Students’ SBC Indonesian Subject Textbooks are easily read texts. The details of the range of readability value by 57 texts found in the textbooks calculated using the following fog index formula.

The 48 texts are those having the readability value range < 7-3. It means it is included in easy category. Text amounted to 8 is the text with a range of readability value < 3, meaning it is included in overly easy category. Text amounted to 1 is the text with readability value range > 8-12. It means it is included in difficult category. Meanwhile, the range of readability value > 12 or in the category which is considered too difficult is not found in The Tenth Grade Students SBC Indonesian Subject Textbook. Simply, the readability calculation can be seen in the following table.
Meanwhile, the research written with the title “Readability of Language Textbooks Prescribed for Junior Secondary School and Students Performance in Reading Comprehension in Bayelsa State, Nigeria” (Perekeme ana Cathrine, 2012:89-96) it can be said that the readability of the secondary school textbooks in Nigeria is included difficult. It was characterized by evidence that the learners have difficulty in understanding of the textbooks. The next research entitled “Readability of Comprehension Passages in Junior High School (JHS) English Textbooks in Ghana” (Ewie, 2015:35-68), with research results showing that English textbooks used in secondary education are hard to understand. Meanwhile, in the research conducted on SBC textbooks produces easy readability value.

**Readability of 2013 Curriculum Indonesian Subject Textbooks**

Based on the calculation of text readability using fog index conducted in The Tenth Grade Students 2013 Curriculum Indonesian Subject Textbook, it is found that as many as 22 texts are mostly text with a range of values legibility <7-3 or considered as easy category. Based on the research results, the average text contained in The Tenth Grade Students 2013 Curriculum Indonesian Subject Textbook are text that can be read easily. The details of the range of readability value by 22 texts are found in the textbooks calculated using the following fog index formula.

The text amounted to 16 are texts with readability range value of < 7-3, it means it is included in overly easy category. The texts amounted to 5 are texts with readability value range of <3. It means it belongs to overly easy category. Text amounted to 1 is the text with the readability value range > 8-12, It means it is included in category which is considered difficult. Meanwhile, in readability value range > 12 or in overly difficult category is not found in The Tenth Grade Students 2013 Curriculum Indonesian Subject Textbook. In a simple way, the calculation results of textbooks readability can be seen in the following table.

<table>
<thead>
<tr>
<th>Number of Text</th>
<th>Category</th>
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<tbody>
<tr>
<td>5</td>
<td>Considered too easy</td>
</tr>
<tr>
<td>16</td>
<td>Considered easy</td>
</tr>
<tr>
<td>1</td>
<td>Considered difficult</td>
</tr>
<tr>
<td>-</td>
<td>Considered highly difficult</td>
</tr>
</tbody>
</table>

Other research that have ever conducted entitled “Readability of Igbo Language Textbooks in use in Nigerian Secondary Schools” (Eze, 2015: 97-101) shows that Igbo language textbook is included in non feasible readability, or in this case it can be said...
that readability on such textbooks is difficult. Another study entitled “The Role of Readability in Science Education in Ghana: A Readability Index Analysis of Ghana Association of Science Teachers Textbooks for Senior High School” (Gyasi, 2013:9-19) yields finding that the textbooks studied are difficult to read and understood by learners. Based on the previous two researches, it shows the difference in the research results. This research shows the calculation results in Curriculum 2013 textbooks have an easy readability.

The Differences of the Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbooks

After thoroughly observation and assessment of The Tenth Grade Students’ SBC Indonesian Subject Textbooks, the data generated indicate that the number of the texts is 57. The amount of texts can be studied for their readability using fog index formula. Furthermore, the value or readability range can be found. The entire texts which are amounted to 57 actually have a majority text of 48 texts which are easily categorized considered or included in the readability value range < 7-3.

Meanwhile, in the observation and studies done to The Tenth Grade Students’ 2013 Curriculum Indonesian Subject Textbook, the data obtained indicate the texts are amounted to 22. Overall 22 texts have the majority of 16 texts which are categorized easy, hence it is included in the readability value range <7-3.

If seen in terms of text readability, both The Tenth Grade Students’ SBC and 2013 Curriculum Indonesian Subject Textbook have no difference. That is, these two Indonesian textbooks have similarity in readability, i.e. easy to understand. However, differences emerging from these textbooks are outside the readability aspect. The difference emerging is the number of different texts and the text types used. The Tenth Grade Students SBC Indonesian Subject Textbook has 57 texts, whilst The Tenth Grade Students’ 2013 Curriculum Indonesian Subject Textbook has 22 texts. The text type used is also different between the two which will be discussed later in the next chapter.

The Text Type in the Tenth Grade Students’ SBC and 2013 Curriculum Indonesian Subject Textbooks

There are various types of texts used in The Tenth Grade Students’ SBC and 2013 Curriculum Indonesian Subject Textbook. Meanwhile, the text type used in both books is described below.

The Text Type in SBC Textbooks

Based on the study results to The Tenth Grade Students SBC Indonesian Subject Textbook, the texts found are narration, description, exposition, argumentation, persuasion, short stories, poetry, and speeches. Below are the descriptions of the texts found.
If seen in terms of the usage, the narrative paragraphs presented are in accordance with the regular order. In addition, it can be said that this paragraph is created and written as entertaining paragraphs since this text type is used in story writing, such as novel or short stories. "Narrative texts or narratives closely correlate to storytelling of something. narrative paragraphs are commonly found in short stories, novels, tales, and others” (Rahardi, 2009: 167). Thereby, this paragraph is a paragraph presenting the story, such as short stories, novels, tales, etc. meanwhile, the use of narrative texts are found in the first chapter and fourth chapter.

The text made based on everything seen through the author’s sensory is description. The illustration done by the author is certainly not the real in the form of images, but the depiction or portrayal in question is to pour it into words and sentences. Keraf argues “description writings are form of writing that last with the effort of the authors in providing details and the objects being discussed” (Mahargyani, Waluyo, et al, 2012: 32). The use of the description texts is found in chapter II and chapter V.

Exposition text is a description “illustrating a procedure or process, providing definitions, explaining, describing, interpreting the idea, explaining a chart or table, reviewing something. The exposition is also an essay presenting knowledge or information” (Samsudin, 2012: 4). Thereby, texts or paragraphs while writing and presenting are focused on one object only but providing in-depth explanation with various sources. The use of exposition texts are found in Chapter III and Chapter VII.

The paragraphs containing one’s assumptions or opinions are also called arguments. In line with it, “arguments writings usually are aimed to convince the readers, including proving their opinion or their arguments” (Nurudin, 2007: 78). In addition to the paragraphs containing personal opinion, such paragraph could be a writing that can be used to convince someone. Certainly, in convincing others, authentic and empirical evidence and records are needed. The use of argumentative texts is found in Chapter IX.

Persuasive texts are the type of essay conveyed by certain means, short, interesting, and are aimed to make people believe, confident and influence the readers thus they are persuaded to things being communicated” (Sitorus, 2013: 5). Thus, persuasion texts are those having functions to engage and persuade someone to agree and believe in the writings that they read. The use of persuasive texts is found in Chapter XIV.

Short stories are type of simple stories that are not lengthy. Poe argues about the definition of a short story that “short stories are those finished in one occasion, approximately half or two hours” (Nurgiyantor, 2010: 10). Hence, short stories are those when read do not require a long time and certainly do not have overly complicated story. The use of short story texts is found in chapters II, IV, V, VI, VII, VIII, IX, X, XI, XII, and XIII.

The next texts frequently appear in the Indonesian subject is poetry. “Poetry is a form of literature that expresses the poet’s thoughts and feelings imaginatively and prepared by constructing entire the power of language with the construction of a physical structure and inner structure” (Sulistyorini, 2010: 13). Thereby, poetry is a literary work that can be written by anyone using imaginative abilities, feelings, and a selection of
beautiful words. The use of poetry texts found in chapters II, IV, V, VI, VIII, XI and XIV.

Speech texts or more commonly referred to as speech is “text or script used by people to present the ideas to many people” (Widiantara, Wendra, et al, 2014: 3). Thereby, speech texts are writings containing ideas and notions that previously have been made by a person who will make a speech. The most recent findings on textbooks that are used in textbooks are speech texts in chapters XIII and XI.

Text Type in 2013 Curriculum Textbooks

The findings in the tenth grade students 2013 Curriculum textbooks include texts used in report on the observation, complex procedures, anecdotes, negotiation, and exposition.

The observation report texts are in the form of written reports which are made after conducting observations and research to specific objects. “Report texts are texts containing common illustration to report something in the form of observations. The report texts are also called clarification texts as they contain clarification types of things based on certain criteria” (Pasaribu, 2014: 2). The use of observation report texts is found in the lesson activities 1, 2, and 3.

Texts containing steps or means such as instructions on how to use goods are also called complex procedure texts. Regarding to this, there is the assumption that the complex procedure text is “texts describing steps completely and clearly on how to do something” (Kosasih, 2013: 131). The use of complex procedure text is found in lesson II, activities 1, 2, and 3.

Anecdotes are retelling an event experienced by a person. Retelling story is transformed into an interesting and amusing story. “Anecdotes may contain events that irritates or ridiculous events for participants who experience them” (Damayanti, Martha, et al, 2014: 2). The use of anecdotes text found in the lesson IV, activities 1, 2, and 3.

Negotiation texts according to Sabalala “are the form of of social interaction serving to reach an agreement among the parties who have different interests” (Dewi, Suandi, et al, 2015: 5). Therefore, the negotiating text is a conversation or discussion done by the parties concerned. The use of the negotiating texts is found in the lesson V, activities 1, 2, and 3.

There is one kind of the same text on both of the textbooks being examined. It is exposition texts. The use of exposition texts is found in lesson III, activities 1, 2, and 3.

CONCLUSIONS

Readability contained in the Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbooks published by the Ministry of Education has good readability. What means by good here refers to the range of fog index value which is considered easy. Range of values <7-3 are considered easy, as from all the text in the textbooks studied apparently have the text majority with that value. Furthermore,
regarding difference in readability, difference in readability on both books is not found as both of them have the similar easy readability. In fact, the difference of the two lies in the number and type of text used. Meanwhile, the text type used varies. Tenth Grade Students SBC Indonesian Subject Textbooks use text types such as narration, description, exposition, argumentation, persuasion, short stories, poetry, and speeches. Meanwhile, Tenth Grade Students 2013 Curriculum Indonesian Subject Textbooks use this type such as observation reports results, complex procedures, anecdotes, negotiation, and exposition.

Good textbooks should consider various aspects before being delivered to educational actors. Aspects that should be considered are not limited to the readability and choice of text type only. However, other elements should be noted, such as characters that will be built in the learners. assessments are also required in each area beforehand as eventually textbooks published by the ministry of education will be vastly distributed to regions. The textbooks should only reach developed regions. Tenth Grade Students SBC and 2013 Curriculum Indonesian Subject Textbooks published by the ministry should be books that can be used for learning in school and a reference in order to improve Indonesian Subject learning and should be up to date, judging from good readability and feasibility of text types for developing knowledge of the learners.

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