



Unveiling Indonesian EFL Textbooks Content: Lexical Density and Readability

Alifia Berlianti¹, Slamet Utomo², Atik Rokhayani³

¹ Pendidikan Bahasa Inggris, Universitas Muria Kudus, Kudus, Jawa Tengah

Corresponding E-Mail: alifia.berlianti@gmail.com

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Abstract

The complexity of reading text can be determined by lexical density and readability levels. The purposes of the research are to find the lexical density and readable level of reading text in local textbooks of Indonesian EFL. This research took a descriptive qualitative approach; the document of this study was fourteen reading text selected from each chapter from *Modul Belajar Praktis Bahasa Inggris*. The researcher grounded on Ure's (1971) for lexical density and Flesch's (1994) for determine readability level. After analyzing the data, the result show that all lexical density of the reading texts was high and the readability score ranging from 43.46 to 80.36. Based on Flesch's (1994) from the fourteen reading texts from this textbook was classified into 5 level: easy for two texts, fairly easy for five texts, standard for two texts, fairly difficult for three and difficult for three.

Keywords: *Indonesian EFL, Lexical Density, Readability, SFL, Textbooks*

Introduction

Among the four main skill that should be master when learning language, reading is one of important language skill that everyone should develop. Reading skill is essential because it can develop spelling, writing, comprehension and increasing vocabulary in learning activity. English is the important language nowadays, all over the world use English weather as mother language, second language or foreign language. To reach students' comprehension, teachers have to select suitable for their student.

Textbook become primary source because easy to find and practice. (Nurhidayah et al., 2023) argue that textbook is crucial things in any language program. In high targeted goal, textbook play an important role in the teaching and learning process (Madjdi & Rokhayani, 2018). It also has means that textbook is a

tool to developing 4 mains of language. In education context, a language textbook contains conversation transcript, writing task, listening instruction and reading material. Additionally, textbook is a foundation for students' practice.

As student, understanding English reading text is not easy. Based on simple interview that was conduct with 3-5 Indonesian students, they state some English text is difficult to understand. It happened because the length of the text, unknown vocabulary, and not interested with reading content. All of these refer to lexical density and readability on the text itself. According to Nurcahyo et al. (2024) to the difficulty level/high of the books influence the literacy. Lexical density and readability have influence in the difficulty level. It because lexical density related to amount information of a text, while readability related to the level of ease, understandable the reader or not.

In reading sentences or texts, we read to extract information. English vocabulary contains two linguistical items, there are lexical item (content word) that contain of a mean and grammatical item (grammatical word) that construct of a sentence. Lexical density is related to word content. The first concept of lexical density was introduced by Ure (1971). He states that lexical density is ratio lexical to grammatical in words. Then Halliday (1985) refine the lexical density concept to percentage of lexical items to the number of clauses. Lexical density is referred to number of lexical of function word per clause (Sudrajat & Wachidah, 2022).

According to Zeeland & Schmitt (2013) lexical coverage and amount lexical item that known by the learner is needed for reading comprehension. It means that lexical density provides information and meaning through reading. When lexical items of a written language increase, the text more informative, more complicated, more difficult to read and to understand (Halliday, 1985). It can be referred, when the lexical items of a written language are low it will contain less information and easy to understand. In short, lexical density is a calculation to measure how dense the content words into percentages and this research follows Ure's definition of lexical density by dividing total number of content words with total number of words in each text. Based on the formula below, if the result surpasses 40%, it can be referring that text contains higher lexical density

Readability is important aspect in measuring level of text. Yulianto (2019) defines readability as the ease of written language that can be comprehend by the reader. According to Bahrudin (2016) readability refer to the difficulty of a written language and the level of readable of a written language to target population. It is because the target can read and comprehend to a written language that appropriate for their level. It can be concluded that readability affect to reader comprehension. There were many various of readability formula, but mostly measure by semantic and syntactic complexity. It refers to word length, syllables, writing style, language, and structure.

In brief, readability was created to measure the level of ease in comprehending text (Miskiyah & Amalia, 2022). Cohesiveness determines the readability; it is central factor in fluent and comprehension. The motivation, interest

and ability to read also develop readability of a text. If reader have strong motivation to read, they will understand easily. Not only that interest and having good ability in reading will make easy to comprehend. Flesch Reading Ease (FRE) formula is introduced by Rudolf Flesch in 1949 with book titled *The Art of Readable Writing*. This statistical formula analyze readability through number of words, syllables and sentences in written language. Wekes et al. (2022)state that FRE formula is reliable, most tested and most popular.

There were so many researches about lexical density and readability in different approach, different variable, different collecting data, and different formula, but there are still few studies that addressing English textbooks used in Indonesian classroom especially in *Kurikulum Merdeka* textbook. Most of the previous study has been conducted in international contexts within general curriculum framework and lack of evaluate textbook used under the current Indonesia's curriculum. Furthermore, few studies have explored how lexical density and readability affect students; performance and understanding during assessment.

Kurikulum Merdeka, the Indonesia's most recent curriculum that emphasized critical thinking, student enter learning, using accessible learning material. It encourages the use of authentic texts and requires educator to ensure learning resource are aligned with student learning goal. By evaluating lexical density and readability of the textbook, this research provides new insight to evaluating these materials is correspondent or not correspondent with student and curriculum.

This study aims to know (1) what is lexical density of reading texts in *Kurikulum Merdeka* that published by local private publisher? and (2) what is readable level of reading texts in *Kurikulum Merdeka* that published by local private publisher? Its importance to understanding linguistic characteristic in educational text to optimize student. In EFL context, the student may face some challenges in acquiring the target language. Lexical density and readability are crucial thing of text complexity and accessibility.

By analyzing these features, the teacher can find out that reading text is challenging for the students or not. Not only that, it also can find suitable teaching strategy to teach the material. Teacher can predict the text is easy, plain or complex for the students Rizkiani et al. (2022). It can be concluded that lexical density and readability of a text important to identify because it helps the purpose of learning so it can be achieved easily.

Method

This research belongs to descriptive qualitative approach as the research methodology because it focuses on analysis and interpretation of reading text in textbook. The data of the study will be analyzed by identifying and analyzing the text, the data will be explained (Ary et al., 2010) This research will be based on library research. The researcher will try to collect data from literatures example from books, journal and others data source(Arikutno, 2006). It aims to acquire written source

from textbook through reading and analyzing.

The source of this data of this research is reading text that contained in local English textbook published by local private publisher. In doing this research, the researcher will take reading text in odd semester of 11th grade textbook as the main data. This book contains 3 chapter and 3 genres. The researcher will analyze total 14 text (6 multimodal text, 4 descriptive text and 4 analytical exposition). The data that will be used classified as qualitative data from word and sentences. The data itself will be researched and conclude a certain conclusion.

In order to analyzing the data, the calculation of lexical density can be done by counting, in this process the lexical items of the reading text will be counting online with parts-of-speech.info focus on lexical items and recheck manually. After that calculating, counting the total of lexical items with total of word as known with Ure's formula below:

$$Ure's\ Lexical\ Density = \frac{Number\ Lexical\ Items}{Total\ Number\ of\ Words} \times 100$$

The result of lexical density can be classified as 'high' lexical density if the result exceeds 40% (Rizkiani et al., 2022). While, readability level was analyzed using Flesch Reading Ease formula. In this process, total of word, total of sentences, and total of syllables of the reading text will be check with online website analyzemywriting.com and focus on total of word, sentences and syllables. After counting the total of word, sentences and syllables.

$$Score = 206.835 - (1.015 \times ASL) - (84.6 \times ASW)$$

In which:

1. Total score : Total score with ranging between 0 until 100
2. ASL : Average Sentence Length (formulated with total word divided by total sentences)
3. ASW : Average Number of Syllables per Word (formulated with syllables divided by total words)

Lastly, concluding, in this step the result of readability test will be conclude based on the level of Readability Test using Flesch Reading Ease Scale. The table below shows the relevance of Flesch Reading Ease formula score from 0 until 100.

Table 1. Readability Index

| Score | Level of Readability |
|----------|----------------------|
| 0 to 29 | Very Difficult |
| 30 to 49 | Difficult |
| 50 to 59 | Fairly Difficult |
| 60 to 69 | Standard |
| 70 to 79 | Fairly Easy |
| 80 to 89 | Easy |

90 to 100

Very Easy

Results

Textbook Analysis

Modul Belajar Praktis Bahasa Inggris for 11th grade students were published by CV Viva Pakarindo in 2022. This textbook was organized by a lot of people and became a compiled team. Pages four in this textbook attached the learning objective of the English language as a subject phase F grade XI both for odd and even semesters based on *Kurikulum Merdeka*. This textbook has 80 pages and 3 chapters.

Chapter 1 focuses on asking and giving opinions, reference and inference, and multimodal text (caption) with the theme *“Digital Literacy for the Future”*. Chapter 2 has the theme *“Keeping the Environment Well”* and focuses on adjective phrases and descriptive text. Chapter 3 the material focuses on analytical exposition and identifies the main idea, aim and detailed information about the text with the theme *“Healthy Lifestyle for Happier Life”*.



Figure 1. Cover of Modul Belajar Praktis

Findings of Lexical Density and Readability

The purpose of the research is to discover the lexical density and readability of a local textbooks that publish by private publisher. This textbook also used by some school in Indonesia. The data that already collected and calculated can be seen in table as follow:

Table 2. Finding of Lexical Density

| No. | Lexical Items | | | | Total of Lexical Items | Total of Words | Lexical Density |
|--------|---------------|------|------|------|------------------------|----------------|-----------------|
| | Noun | Verb | Adj. | Adv. | | | |
| Text 1 | 4 | 2 | 3 | 2 | 11 | 17 | 64.71 |
| Text 2 | 23 | 22 | 8 | 6 | 59 | 114 | 51.75 |
| Text 3 | 14 | 16 | 2 | 8 | 40 | 68 | 58.82 |
| Text 4 | 19 | 12 | 9 | 4 | 44 | 60 | 73.33 |
| Text 5 | 26 | 11 | 4 | 4 | 45 | 80 | 56.25 |
| Text 6 | 8 | 8 | 3 | 2 | 21 | 40 | 52.50 |

| | | | | | | | |
|----------------|-----|----|----|----|-----|-----|--------------|
| Text 7 | 81 | 34 | 16 | 11 | 142 | 224 | 63.39 |
| Text 8 | 73 | 52 | 34 | 21 | 180 | 262 | 68.70 |
| Text 9 | 144 | 64 | 27 | 11 | 246 | 379 | 64.91 |
| Text 10 | 85 | 48 | 25 | 14 | 172 | 283 | 60.78 |
| Text 11 | 52 | 87 | 39 | 26 | 204 | 324 | 62.96 |
| Text 12 | 83 | 75 | 19 | 11 | 188 | 277 | 67.87 |
| Text 13 | 146 | 84 | 53 | 27 | 310 | 443 | 69.98 |
| Text 14 | 132 | 84 | 44 | 16 | 276 | 400 | 69.00 |
| AVERAGE | | | | | | | 63.21 |

Table 3. Finding of Readability

| No. | Total Words | Total Sentences | Total Syllable | ASL (Average Sentence Length) | ASW (Average Sentence per Word) | RE |
|----------------|-------------|-----------------|----------------|----------------------------------|------------------------------------|--------------|
| Text 1 | 17 | 1 | 24 | 17.00 | 1.41 | 70.14 |
| Text 2 | 114 | 7 | 151 | 16.29 | 1.32 | 78.25 |
| Text 3 | 68 | 5 | 94 | 13.60 | 1.38 | 76.08 |
| Text 4 | 60 | 4 | 102 | 15.00 | 1.70 | 47.79 |
| Text 5 | 80 | 5 | 123 | 16.00 | 1.54 | 60.52 |
| Text 6 | 40 | 4 | 55 | 10.00 | 1.38 | 80.36 |
| Text 7 | 224 | 14 | 305 | 16.00 | 1.36 | 75.40 |
| Text 8 | 262 | 13 | 428 | 20.15 | 1.63 | 48.18 |
| Text 9 | 379 | 15 | 617 | 25.27 | 1.63 | 43.46 |
| Text 10 | 283 | 12 | 421 | 23.58 | 1.49 | 57.04 |
| Text 11 | 324 | 10 | 470 | 32.40 | 1.45 | 51.23 |
| Text 12 | 277 | 23 | 389 | 12.04 | 1.40 | 75.80 |
| Text 13 | 443 | 26 | 676 | 17.04 | 1.53 | 60.44 |
| Text 14 | 400 | 19 | 643 | 21.05 | 1.61 | 49.47 |
| AVERAGE | | | | | | 62.44 |

The table presents lexical density and readability result obtained from Indonesian EFL textbook that published by local private publisher. The result of analyze show the range score and grading level. It showcasing that the lexical density was high and readability are varied, ranging from easy to difficult.

Discussion

Lexical Density of the Textbook

Lexical density concept refers to amount of lexical item, a text with higher lexical density contains more information. A higher lexical density means a higher proportion of content words (noun, verb, adjectives, adverb). Miskiyah & Amalia (2022) argue that text with high lexical density can be more difficult to understand.

From the calculation of lexical density in previous chapter, there was no text in the textbooks with under 40%. It can be concluded that the text from this textbook was 'High' and potentially challenging for reader. The lexical density results ranges

from 51.75% to 73.33%. The highest lexical density was produced by text 4 with Someone Opinion, while the lowest is text 2 with Blog post. In line with research that conducted by Rizkiani et al. (2022) on Facil's 'Advance Learning Textbook, it can be mean that this textbook had distinctive structure among the text and show that the textbooks were dense.

In detail, Text 2 (Blog) had 114 total words but the lexical density is lowest among all of text which was 51.75%. Meanwhile the same genres of text, the highest lexical density calculation from Text 4 (Someone Opinion) had 60 total words with score 73.3%, which is a short text from social media can be heavy loaded with information. It confirming that text length doesn't necessarily correlate with textual complexity.

The lowest total words among the text from Text 1 (Rose_Ann) which only 17 of total words had lexical density score 64.71%, other hand the highest total word among the text was Text 13 (Why Instant Noodles are Unhealthy) with 443 total number of words and score 69,98%. From the significant different in length, but the both of text are classified as high lexical density. It can be mean the lexical density isn't depending on text length and the primarily is influence by ratio of lexical to grammatical words

In contrast, Text 1 with only 17 words still managed into high lexical density with score 64.71%, it showing that brief text doesn't equal to simplicity. This align from Nunan (1992) that state short text can be lexically dense if composed to deliver information. A short text especially social media post or caption had high lexical density because avoid function words conversational fillers, so a short text (caption) can maintain high information load per word.

This finding also supported by Rizkiani et al. (2022) that found some short text in the Facil's Advance Learning English showed that higher lexical density than the longer text, it depending on genre and function of text itself. Similarly, comes from Putri et al. (2024) found in text that write by students with less than 100 words has similar lexical density with published textbook because focusing on lexical items. For short, from text 1 and text 13 can be concluded that genre and structure driven the lexical density.

Readability of the Textbook

Readability is a tool to measuring a text is suitable for reader. It refers to level of ease which a reader can comprehend written language. According to the data presented in previous chapter, across from 14 text the readability result ranging from 43.46 to 80.36 within average score 62.44 and categorized as 'Standard'. The result show that some texts are relative to readable and others are perhaps exceeding high abilities in comprehending.

The highest readability was produced by Text 6 (Book Recommendation) with total 80.36 which mean the text is in 'Easy' level, this text has short and clear sentences. The other side, the lowest readability was Text 9 (Seoul the Best in

Recycling) had 43.46. and categorized as 'Difficult' level, this low score due to long and complex sentences, contain many syllables, and increasing cognitive load.

From the readability result, the researcher found that there were five levels of readability text in 11th grade textbooks. The result can be seen as bellow:

1. Easy Level

This level the score should be ranging from 80 to 89. In this textbook, there was only one text that categorized as 'Easy'. This text was Text 6, it contains readability score 80.36. From the result, Indonesian EFL students in senior high school should able to understand this text without difficulty.

2. Fairly Easy Level

The score in this level should be ranging from 70 to 79. There were 5 text that demonstrate as 'Fairly Easy'. It contains, Text 1 with score 70.14, Text 2 with score 78.25, Text 3 with score 76.08, Text 7 with score 75.40, Text 12 with score 75.80. From the result, Indonesian EFL students in senior high school expected to comprehend these texts easily.

3. Standard Level

The score in this level the readability level should belong from 60 to 69. There were 2 text that demonstrate as 'Standard'. Text 5 with score 60.52 and Text 13 with score 60.44. From the result, Indonesian EFL students in senior high school expected to comprehend these texts quite easily.

4. Fairly Difficult Level

The score in this level should be ranging from 50 to 59. There were 3 texts stand out with 'Fairly Difficult'. It contains, Text 10 with score 57.04, Text 11 with score 51.23, Text 4 with score 47.79. From the result, Indonesian EFL students in senior high school can comprehend and understand the text. It because all this text was suitable and matched for students in 10th until 12th grade (Putri et al., 2024).

5. Difficult Level

The score in this level should belong from 30 to 49. There were 3 texts categorized with 'Difficult'. It contains Text 8 with score 48.18, Text 9 with score 43.46, Text 14 with score 49.47. In this level, Indonesian EFL student considered difficult and challenging.

Implication of Lexical Density and Readability in Textbook

The relation lexical density and readability is part of consideration in understanding the complexity of reading materials, especially in an EFL context. Lexical density measures the proportion of content-carrying words (nouns, verbs, adjectives, adverbs) relative to the total number of words Ure's, while readability according Flesch's is to measure how easy or difficult a text is to comprehend based on sentence length and syllable count. This study, all 14 texts analyzed from the local textbook exhibited high lexical density ranging from 51.75% to 73.33% and varied readability scores ranging from 43.46 to 80.36.

In this finding reveal that texts with high lexical density do not always correspond to low readability scores, and vice versa. For example, Text 13 had the highest lexical density 69.98% and was categorized with a “Standard” readability score 60.44, while Text 9 also had high lexical density 64.91% but was classified as “Difficult” based on its readability score 43.46. This aligns with the theoretical explanation by Halliday (1985) and Nunan (1992), that emphasize high lexical density indicates informational richness, but readability also depends on syntax, sentence complexity, and word length.

A text can be lexically dense yet still be readable if it using clear and concise sentence structures. On the other hand, long, compound sentences with many syllabic words may reduce readability, even if lexical density is high. Texts with high lexical density and low readability can overwhelm students if the teacher not support and accompanied in learning activity while another side, text with low density and high readability may be too simple.

Conclusion

This research conduct aimed to knowing the lexical density and readability reading passage in 11th grade English textbook that published by Indonesian local publisher. From the previous discussion the conclusion can be drawn that, the analyze of lexical density revealed that the average of lexical density score on this textbook was 63.2%, the score of lexical density ranging from 51.75% to 73.33% and all of the text was categorized ‘High’. The analyze of readability revealed the diverse of the result from the text book. The average of readability score on this textbook was 62.44 and categorized as ‘Standard’ level. In this textbook, the readability classified into five levels. By knowing lexical density and readability in student textbooks can improving students’ English skill especially in reading comprehension.

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