

Lexical Density of Reading Materials in An English Textbook: A Content Analysis

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Abstract

In reading, students are required to learn to comprehend the content of the text. Lexical density is one of the factors that influences students' reading comprehension. Lexical density is a condition of words' proportion in a text, which shows the ratio of content words (CW) and grammatical function words (GFW). This research used the "Passport to the World" English textbook for the 8th grade of junior high school to be analyzed. This study aims to find out the genres of reading materials offered by the curriculum 2013 found in the textbook and to examine the lexical density of the reading materials in the textbook. A qualitative approach was applied, while content analysis was used as the research design. Data were collected with document analysis. The findings showed that there are 3 genres of reading materials, among 5 genres offered by the curriculum 2013, included in the textbook such as descriptive, recount, and functional texts in the form of announcements. From those, it was found that two texts were categorized as low lexical density, 11 texts were categorized as medium lexical density, and four texts were labeled as high lexical density. In addition, the composition of this text did not reach the ideal ratio of 1:2:1 for index difficulty. However, this textbook can still be suggested to be used in the class with some usage modifications in the classroom.

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INTRODUCTION

Education is about learning skills and knowledge. It also means helping people to learn how to do things and supporting them to think about what they have learned. In education, English is important to be taught in the teaching and learning process because English is an international language. Intrinsically, there are four skills that have to be mastered by students in learning English, those are speaking, listening, writing, and reading. Besides, reading is a basic life skill, it becomes the foundation for children's success at school. Studies have shown that strong reading skills at an early age significantly impact academic achievement in later years, underscoring the critical role of reading in educational development (Snow, Burns, & Griffin, 1998; Grabe, 2009). Research also indicates that children who develop strong reading skills early on are more likely to excel in various subjects throughout their education and have better future academic and professional outcomes (Mol & Bus, 2011)

A textbook is one of teaching materials in education. According to Heinle (2000:175) the textbook is stimulus or instrument for teaching and learning process. A textbook is a key component of most subjects in the classroom. It plays an important role in the teaching-learning process because it is used to convey the teaching materials to students, to facilitate the teaching-learning process. The content represented in the textbooks are listening instructions, some exercises, writing tasks, some conversation scripts, and reading material. Through the reading text, students can get information and knowledge as well as vocabulary and grammar, the use of the tense forms, pronunciation, the idea forming, and many others provided, it can be done seriously and frequently. It is provided in several types which are called genres. Genre types are well organized based on the curriculum 2013. According to the curriculum 2013, there are five genres of reading materials that are required and should be taught to second-grade junior high school students: descriptive text, recount text, narrative text, procedure text, and announcement text (Prastikawati & Fauziati, 2016).

In the reading section, students usually find obstacles in understanding a text. Based on the preliminary study of researchers while carrying out Internship 1 in one of the junior high schools in Jember, the researcher asked several students in the class and found 10 out of 15 students faced problems in understanding the reading text. Besides, the researcher interviewed teachers in some schools at junior high school, where most teachers said that some students had difficulty in comprehending the reading text because they did not know the meaning of the vocabulary, the content of the reading text was too long where it made students have to read several times, some students were less concentric to read because they did not understand with what they were reading where it took a long time to

understand from the content of the reading, and also the material might not be understood when it was not served at their level. This statement was in a line with Pratiwi (2014) and Ibrahim et al. (2024), where she said the factor in the reading text is that sometimes students get difficult-to-understand reading text material because the reading text material does not match with their skill level. Similarly, Fitriani (2015) found that vocabulary knowledge and text complexity are major factors that hinder students' reading comprehension in junior high schools, with students needing additional time to process information and overcome comprehension barriers.

Many researchers found that the factor influencing difficulty in reading text was lexical density. Lexical density is a condition of words' proportion in the text which shows the ratio of the content word and grammatical items. Halliday (1985:64) explains that lexical density is the number of lexical items as a proportion of the number of running words. Those words include content words (nouns, verbs, adjectives, and adverbs), and grammatical function words (pronouns, prepositions, conjunctions, auxiliary verbs), and it shows the complexity of words within the text. Literally, lexical density is to measure how informative a text is. The text with a high proportion of lexical density contains more information than a text with a low lexical density (Ure, 1971; Fang, 2005). Research by Fang (2008) and Miskiyah & Amaliya (2022) also highlights that readers often find high lexical density texts more challenging due to the information load presented in a limited number of words, emphasizing the relationship between lexical density and reading comprehension.

According to the quotation above, the researcher analyzed the reading material that was found in the Passport to the World Textbooks for 8th Grade of Junior High School published by *Tiga Serangkai*. The researcher used this textbook to find out the genres of reading materials offered by the curriculum 2013 which are found in the textbook and to examine the lexical density from reading materials in the textbook.

METHODS

This research used qualitative approach and content analysis was used as the research design. According to Ary (2010), "Content analysis focuses on analyzing and interpreting recorded material to learn about human behavior. The material may be public recorded, textbooks, letters, film, tapes, diaries, themes, reports, or other documents." Meanwhile, this research analyzed the content of reading material in the English Textbook entitle "Passport to the World" for 8th Grade of Junior High School published by 3 *Serangkai* through analyzing the lexical density

of the reading materials and the genres of reading materials suggested by the curriculum 2013.

Document analysis was used to collect the data. There were some steps used by the researcher to collect the data. The first step was collecting the data by buying the textbook. Afterward, The researcher read and reread the textbook repeatedly and carefully, then found the important detail from all reading material in the textbook. The next step was separating the reading materials that are relevant to the research into an analysis table. The technique of data analysis was based by Ary (2010), 1. Familiarizing and organizing, 2. Coding and reducing, 3. Interpreting and representing. Meanwhile, to test the validity of the data the researcher used investigator triangulation.

RESULTS AND DISCUSSION

The genre of reading material in the " Passport to the World" english textbook for 8th grade of junior high school purposed by the the curriculum 2013

"Passport To The World: A Fun and Easy English Book for Grade 8 Junior High Schools" is a textbook to develop junior high schools students' competence in English. This book provide a fun learning activities which also displayed in such way so that the students learns English in easy ways. To acomodate with more meaning context, this book is assisted by some hi-tech application (by the usage of QR Code), in order to get in touch with the global world. The implementation of HOTS exercises is another highlight in this book.

From all reading text in the textbook the researcher classified the genre of the reading text as can be seen below:

Table 1. Genres of the Text in Each Chapter in the Textbook

Text	Title of Reading Text	Chapter	Page	Genre
1.	Bazaar and Festival	4	91	Announcement Text
2.	Two Rabbits	5	115	Descriptive Text
3.	Scenery of Kenya	5	117	Descriptive Text
4.	My Pet Cat	5	120	Descriptive Text
5.	My Country	5	121	Descriptive Text
6.	Ondel - Ondel	5	126	Descriptive Text
7.	My School	5	128	Descriptive Text
8.	Rina's Activity	6	138	Descriptive Text
9.	Sarita is a Young Blogger	6	144-145	Descriptive Text
10.	Uncle Martin	6	151	Descriptive Text
11.	Two Bags	7	169-170	Descriptive Text
12.	Siska	7	180	Descriptive Text
13.	Dina Won the Match!	8	198-199	Recount Text
14.	A Trip to Borobudur	8	205-206	Recount Text
15.	Cinema	8	209	Recount Text
16.	Mother's Day	9	237	Announcement Text

17.	Diving in Bunaken Island Rewund	9	237	Recount Text
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As it can be seen from table 1, there are 17 topics or titles of reading text provided in this book. These texts were spread across 6 chapters within the book. Moreover, the genre of the text also varies having descriptive, recount, announcement type of text. To make it clearer, total genre of each reading materials can be seen in the following table:

Table 2. Total Genre of Reading Material in the Textbook

No.	Genre	Chapter	Page	Total
1.	Announcement Text	4 and 9	91 and 237	2
2.	Descriptive Text	5, 6 and 7	115, 117, 120, 121, 126, 128, 138, 144-145, 151, 169-170 and 180	11
3.	Recount Text	8 and 9	198-199, 205-206, 209 and 237	4
4.	Narrative Text	-	-	-
5.	Procedure Text	-	-	-

Based on table 2, there are three genres of reading material found in the English Textbook. The dominant was descriptive text, then recount text and the last was the announcement text. Those genres of reading material are reading material provided by the curriculum 2013. Unfortunately, this textbook did not provide two genres that were narrative text and procedure text that also suggested by the curriculum 2013.

Lexical density of reading material in the "Passort to the World" english textbook for 8th grade of junior high school based on the curriculum 2013.

To count the proportion and know the qualification of lexical density in the text the researcher applied the formula by Ure (as cited in Syarif, 2018).

$$LD = \frac{\text{The Number of Lexical Items}}{\text{The Total of Lexical Items (CW+GFW)}} \times 100\%$$

Qualification of the lexical density:

1. 41-50% = low (easy to understand)
2. 51-60% = medium (still quite easy to understand)
3. 61- 70% = high (difficult to understand)
4. more than 70% = very high (very difficult to understand)

Note: LD = Lexical Density

CW= Content Words

GFW= Grammatical Function Words

Table 3. Total of Lexical Density in Each Reading Text

No.	Title of Reading Text	Genre	CW	GFW	LD	Qualification of LD
1.	Bazaar and Festival	AT	48	41	53,93%	Medium
2.	Two Rabbits	DT	174	111	61,05%	High
3.	Scenery of Kenya	DT	78	57	57,77%	Medium
4.	My Pet Cat	DT	101	88	53,43%	Medium
5.	My Country	DT	90	78	53,57%	Medium
6.	Ondel – Ondel	DT	83	50	62,40%	High
7.	My School	DT	49	61	44,54%	Low
8.	Rina's Activity	DT	62	45	57,94%	Medium
9.	Sarita is a Young Blogger	DT	113	72	61,41%	High
10.	Uncle Martin	DT	81	76	51,59%	Medium
11.	Two Bags	DT	121	96	55,76%	Medium
12.	Siska	DT	34	35	49,27%	Low
13.	Dina Won the Match!	RT	69	48	66,66%	High
14.	A Trip to Borobudur	RT	267	201	57,05%	Medium
15.	Cinema	RT	43	30	59,72%	Medium
16.	Mother's Day	AT	28	20	58,33%	Medium
17.	Diving in Bunaken Island Rewund	RT	52	36	59,09%	Medium

Note: LD = Lexical Density; CW= Content Words; GFW= Grammatical Function Words; AT=Announcement Text; DT=Descriptive Text; RT=Recount text

DISCUSSION

Based on the tables, it shows three genres of reading material found in the textbook, they are; descriptive, recount, and functional text in the form of announcement. The dominant text was the descriptive text that represented 11 times which were in the chapter (5, 6, and 7), then continued by recount text that represented 4 times which were in the chapter (8 and 9), and the last was the announcement text that represented 2 times which were in the chapter (4 and 9).

Unfortunately, this textbook did not provide two genres of reading material that were also purposed by the curriculum 2013, those genres were narrative text and procedure text. In conclusion, this “Passport to the World” English textbook did not fulfill the criteria genre of reading materials purposed by the curriculum 2013 that should be taught for the second grade of junior high school. It is in line with Mulyadi’s (2019) study that showed several textbooks in the market did not fully align with the required genre coverage in reading materials as outlined by the the curriculum 2013.

On another side, from the 17 reading texts in the textbook, there were some reading texts that included low, medium, and high lexical density. Two texts were categorized as low lexical density, 11 texts were categorized as medium lexical density, and 4 texts were categorized as high lexical density. Four reading texts (texts 2, 6, 9, and 13) were categorized as high lexical density because their lexical density was between 61% to 70%. They contained more content words than grammatical function words, which means that the text was difficult to be understood because it contained a lot of information. As said by Khamahani (2015), “the higher the density the more difficult and complicated the text is”. Meanwhile, the eleven texts (text 1, 3, 4, 5, 8, 10, 11, 14, 15, 16, and 17) were categorized as medium lexical density because their lexical density was between 51% - 60%. Further, the two texts left (text 7 and 12) were categorized as low lexical density because the lexical density was between 41% - 50%. As stated by Rahmansyah, (in Maimunah, 2019) “if the texts have more grammatical items than the lexical items, the text is categorized to a lower lexical density” and also Khamahani (2015) said “text with a lower density easier to understand”.

Based on the lexical density analysis that had been conducted, a certain text which had more total number of words did not determine that the text was difficult to understand. As we could see that the text entitled “A Trip to Borobudur” had 468 total words and the text entitled “Two Rabbits” had 285 total words. Meanwhile, the result of lexical density analysis showed that the text entitled “Two Rabbits” had high lexical density than the text titled “A Trip to Borobudur” even though the text entitled “Two Rabbits” had a fewer total number of words. The example above showed that the reading text that had more total words did not determine it would have a higher level of lexical density. As Johansson (2008) said, “low lexical density contains many pronouns and auxiliaries rather than nouns and verbs”. In brief, the majority of reading text in the textbook was not difficult to understand. It could be verified because the dominant lexical density was medium. Hence, this English textbook is appropriate to be applied in the teaching-learning process as well (Fang, 2008).

In addition, a good test should have a varied index difficulty which consists of easy, moderate, or difficult. In terms of reading material, a textbook should also apply the criteria of index difficulty. Hartati (2019) suggested that a good test should have a ratio of 1: 2: 1 for its easy, moderate, and difficult items. It means that the test should have 25% easy, 50% moderate, and 25% difficult. It also happens to the reading material in the textbook. Based on the findings, the percentage of lexical density could be known that the easy item was 11,76%, the moderate item was 64,70%, and the difficult item was 23,52%. It could be concluded that the ratio of this text had not reached the ideal ratio 1:2:1.

The moderate items had reached the ratio of index difficulty, whereas the easy and difficult items had not reached the ideal ratio because the number of their percentages was not balanced. Heaton (1988) stated that “the inclusion of difficult items may be necessary in order to motivate the good students, the inclusion of easy items will encourage and motivate the poor students.” The ratio imbalance was because of the incomplete of reading text’s genre. This book did not provide narrative and recount text, whereas the curriculum 2013 had recommended five genres of reading texts that should be exist in the textbook.

CONCLUSION

In conclusion, from the data analysis, it was found three genres of reading material represented in the English textbook, those were descriptive text, recount text, and announcement text. Descriptive text was the dominant reading text in the textbook. It was represented 11 (eleven) times, continued by recount text that was represented 4 (four) times, and the last was announcement text that was represented twice. Unfortunately, this textbook did not provide narrative text and procedure text which was recommended by the curriculum 2013 either.

On another side, related to the second focus of this research, the researcher found 2 texts as low lexical density which means the texts is easy to understand, 11 texts as medium lexical density which means the texts is quite easy to understand, and 4 texts as high lexical density which means the texts is difficult to understand. It means that the majority of the text in the textbook was not difficult to be understood by the students. In addition, the composition of this text had not reached the ideal ratio 1:2:1 of index difficulty because the composition of reading text in this textbook was easy 11,76%, moderate 64,70%, and difficult 23,52%.

This textbook is still suggested to be applied in the English class, yet the teacher should modify the material by adding reading texts from other sources to fulfill those five genres proposed by the curriculum 2013.

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