Readability of Reading Books Supporting the National Literacy Movement for High School Students

Dewiyani Mulyaning Tyas [1✉], Subyantoro Subyantoro[2], Haryadi Haryadi[2]

[1.] SMA Negeri 1 Pemalang, Jawa Tengah, Indonesia
[2.] Universitas Negeri Semarang, Indonesia

Abstract

Readability is the extent of the problem of the discourse goals expressed using class rankings. in the precept of clarity, especially components of language shape or structure, the better the grade level, the extent of complexity of the reading additionally needs to be elevated. accordingly, the proper clarity of books at each grade level or stage of readers isn't always identical. This looks at pursuits to observe the clarity of analyzing books supporting the Gerakan Literasi Nasional published by using the Kemdikbud in 2018 for excessive faculty students. The clarity of studying books helping the countrywide Literacy motion posted via the Ministry of schooling and culture in 2018 for high college students is critical to study due to the fact its existence includes an assignment of individual constructing. GLN assisting studying books for high faculty students is to be had in printed and electronic shape/PDF. the broadcast version of the book is sent amongst/over faculties, libraries, and studying parks, whilst the electronic version can be accessed at no cost via the authentic internet site of the Language employer. consequently, the affordability and availability of the e-book are enough. proper legibility will maintain the life of the e-book amid the proliferation of virtual/digital e-book reading platforms that may be effortlessly accessed via the internet. This quantitative descriptive look aims to examine the legibility of six helping reading books for the national Literacy motion posted via the Ministry of education and tradition in 2018 for high school college students with the Fry chart as a means of measuring readability. primarily based on these measurements, its miles recognized that from the six books studied, it's far recognized that an e-book is at level 11, 2 books are at degree 10, 2 books are at degree 9, and 1 book is at degree 7. The results of this study can be used as a provision for literacy activists in choosing the right, quality, and meaningful reading for the reader.

INTRODUCTION

Unesco, an international education organization, proclaims *literacy for all*. This slogan emphasizes the right of every human being to be "literate" in life (2021). The slogan also emphasizes that everything in life requires literacy.

In line with this slogan, since 2016, the Kementerian Pendidikan dan Kebudayaan has initiated the Gerakan Literasi Nasional (GLN) as an implementation of Peraturan Menteri Pendidikan dan Kebudayaan Nomor 23 Tahun 2015 tentang Penumbuhan Budi Pekerti. This program mandates six literacy skills that must possess in the 21st century: language literacy (read and write), numeracy literacy, scientific literacy, digital literacy, financial literacy, and cultural and civic literacy (Laksono, Siupriyono, Wahyuni 2019). This movement also intended to foster a literacy culture, a habit of thinking that begins with reading and writing until changes in behavior and good character (Suragangga, 2017).

To facilitate this mission, the Language Development and Development Agency for the National Literacy Movement program publishes GLN supporting reading books for students at various school levels, including high school. GLN supporting reading books for high school students are a vital means to direct someone in living a normative life or by following the ethics and morals that apply in a society (Istiningsih in Putra, at all 2018) as well as being a generation who likes to read and has good character. The cultivation of noble character values is becoming increasingly urgent when, along with the pace of globalization, the character/morals that are compatible with the nation's culture have begun to erode and be replaced by foreign cultures (Fahmy, et al. 2015).

GLN supporting reading books for high school students published by Kemdikbud are enrichment books. Septarianto and Subyantoro (2016) explain that enrichment books are the learning support. It develops and maximizes the knowledge, skills, and attitudes of students. This book is not prepared entirely based on the curriculum or mandatory for students and teachers to use but optimizes learning (Syarifa, et al. 2015). Based on the material/content that dominates the book, GLN supporting reading books for high school students published by the Kemdikbud consist of knowledge enrichment books and personality enrichment books (Purnomo, et al 2015). Knowledge enrichment books are a means of providing varied knowledge (Jayanti, et al. 2015). Personality enrichment books position the reader in forming a humane personality framework.

For optimally used, The suitability of the reader's level with reading is closely related to readability. According to Abidin (201), readability is the level of book difficulty or discourse objectively. This definition refers to readability in terms of the form or structure of the language. Putra and Lukmana (2017) concluded that the higher the grade level, the more complex the text read must be. Wang (2017) states that if the presentation and complexity are different, although the reading theme is similar, the level of readability will also be different. The difference in complexity shows that the ideal readability at each grade level is not the same. Shen (2017), Çetġnkaya et al. (2018), and Türkben (2019) conducted readability research. According to Shen, the author's writing style affects the readability of his work. An author can pursue this distinctive style by paying close attention to differences in meaning, preferring concrete words to abstract words, avoiding clichéd expressions, getting used to using short sentences, and prioritizing active verbs.

Çetġnkaya et al. (2018:254) examined the readability of mathematics textbooks. From the results of this study, we know that the readability scores of math textbooks for grades V, VI, VII, and VIII analyzed are not in line with the grade level. Meanwhile, Türkben (2019) measures the readability of various texts in class V, VI, VII, and VIII textbooks using the Atesman readability formula and the Cetgnkaya-Uzun readability formula. From Çetġnkaya et al.'s research, we know that the readability of the narrative text is better than the readability of descriptive text.

Good readability conveys the author's message without making the reader frustrated

(because the reading is too difficult) or even feeling no challenge (because the text is too easy). Without proper readability, reading activities and reading content will become less meaningful. So that GLN supporting reading books for high school students convey various messages, have a positive impact on learning motivation and interest in reading, the readability must be by following per under the reader (Mulyaningsih 2014; Sari et al., 2018; Humairoh et al. 2016).

The readability of GLN reading books is an important thing. As a means of forming a character whose validity period is unlimited (not tied to the curriculum), we must maintain the existence of GLN reading books for high school students. High school students must get the benefits of GLN supporting books. These reading books can be an alternative reading for the digital native generation. That generation uses the internet as the primary source of information and reading materials (Rustan and Munawir 2020). These reading books can be an alternative reading

for the digital native generation. That generation uses the internet as the primary source of information and reading materials (Rustan and Munawir 2020). The GLN supporting books can add positive insight and compete with the many digital reading platforms whose contents are vulnerable such as consumerism, violence, to adult sexual content (Adiarsi et al. 2015). We will achieve these positive things if the book readability standards are good. The readability of reading books supporting GLN, especially for high school students, can also evaluate the book's eligibility. By the evaluation, the supporting books will be better in the future.

METHOD

This research is quantitative descriptive. The readability score or level of GLN supporting reading books for high school students is obtained from measurements using adapted Fry charts to Indonesian language discourse.

Picture 1. Fry Chart
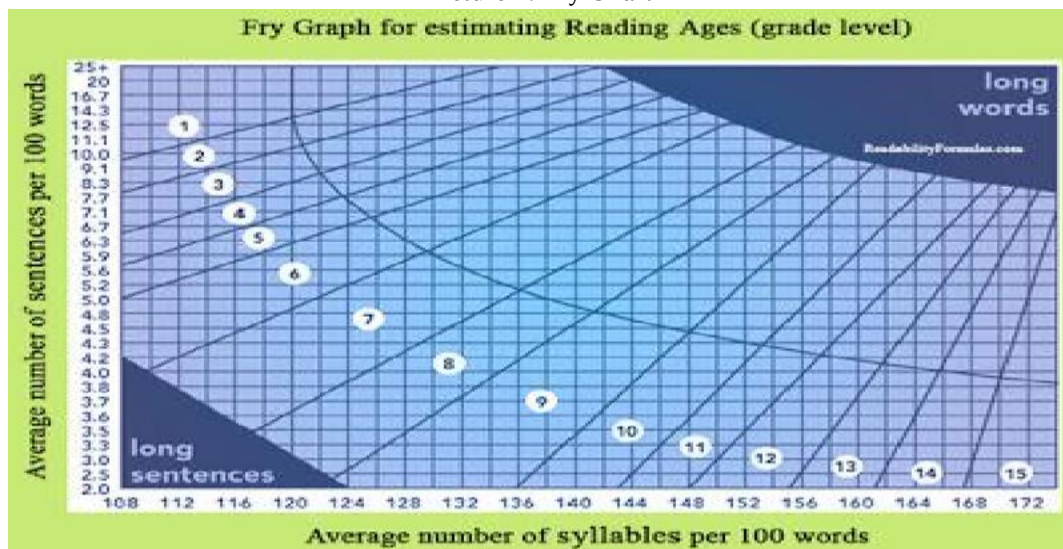
The numbers on the horizontal line show the number of syllables per hundred words in a representative piece of text. The numbers listed in the vertical line are the average number of sentences per one hundred words in a citation. The numbers lined up in the middle of the graph show the measured discourse readability rating. The shaded region on the chart is an invalid area. Readings in the region do not have a read rating.

Guidance of the Fry chart.

(1) Choose a representative fragment consisting of 100 words.

(2) Count the number of sentences from one hundred words to the nearest tenth.

(3) Counting the number of syllables from the sample discourse up to the 100th word.

(4) Multiply the number of syllables by the number 0.6.

(5)   Plotting the numbers onto the Fry Graph.

(6)   This level of readability is approximate. Therefore, the discourse readability rating should increase and reduce by one level.

The object in this study is GLN supporting reading books for high school students published by the Kemdikbud. These books win the 2018 GLN supporting book writing competition for high school students. As explained by Haryadi (2015), the samples taken to determine the readability of reading books were obtained from the beginning, middle, and end of the book. The results of measuring the readability scores of the three sections are then averaged and plotted on the Fry chart. From the results, we will find the suitability of the reading book with the readers.

The following are the steps for measuring the readability of reading books supporting GLN published by the Ministry of Education and Culture for high school students.

(1) Classify The Gln Supporting Reading Books Published by The Ministry of Educationand Culture For 2018 High School Students Based on Fiction and Non-Fiction Categories. The Objects in This Research Are Non-Fiction Reading Books. From The Grouping, There Are Fifteen Non-Fiction Books to Study.

(2) Group The Book Parts into The Beginning, Body, And Closing. Measure Readability Using the Content Part.

(3) Calculate The Average of Representative Pages in The Book Content Section. From The Average Calculation, The Representative Page Is 49 Pages. The Selected Books Have 39 Pages To 60 Prototypical Pages. Thus, The Reading Time of Each Book Will Be Relatively the Same. The Six Books Consist of The Book *Bakti Muda Untuk Negara* (2018), *Tokoh-Tokoh Gerakan Paderi* (2018), *Multikulturalisme Makanan Indonesia* (2018), *Gunung Sewu: Unesco Global Geopark* (2018), *Lawang Kota Kenangan* (2018), And *Uma Mbatangu: Arsitektur Tradisional Sumba Di Kampung Adat Ratenggaro* (2018).

(4) Determine The Number of Samples (30% Of the Number of Representative Pages of Each Book).

Table 1: Number of Samples Readability Measurement

Titles	RP	ST
Bakti Muda untuk Negara	46	14
Tokoh-tokoh Gerakan Paderi	50	15
Multikulturalisme Makanan Indonesia	39	12
Gunung Sewu: Unesco Global Park	60	18
Lawang Kota Kenangan	49	15
Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro	44	13

Description:

Rp: Number of Representative Pages

St: Number of Sample Texts

(5) Select Sample Text by Applying the Principle of Determining Representative Fragments and Placing Them on The Data Card. Samples Were Taken From Three Parts: The Beginning, Middle, And End.

(6) Measuring The Readability of Each Sample Text by Applying the Principle of Measuring Readability Using the Fry Graph.

(7) Calculate The Average Number of Sentences and The Number of Syllables of The Sample Text from Each Selected Book as The Basis for Determining the Readability Level.

RESULTS AND DISCUSSION

This research analysis focused on the readability of GLN reading books published by Kemdikbud for high school students, especially in language form. This research will describe the results of calculating readability book *Bakti Muda untuk Negara* (2018), *Tokoh-tokoh Gerakan Paderi* (2018), *Multikulturalisme Makanan Indonesia* (2018), *Gunung Sewu: Unesco Global Park* (2018), *Lawang Kota Kenangan* (2018), dan *Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro (*2018).

Table 2 Readability of Six GLN Supporting Reading Books published by Kemdikbud in 2018 for High School Students

| Book Title	SA	SyllA X 0.6	Level
Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro	5.5	159.6	11 (class X. XI. and XII)
Multikulturalisme Makanan Indonesia	6.5	159.4	10 (class IX. X. and XI)
Bakti Muda untuk Negara	5.9	155.1	10 (class IX. X.and XI)
Lawang Kota Kenangan	6.5	151.9	9 (class VIII. IX. and X)
Gunung Sewu: Unesco Global Park	7.25	150.16	9 (class VIII. IX. and X)
Tokoh-tokoh Gerakan Paderi	12.1	150.8	7 (class VI. VII. and VIII)

Description:
SA: Sentence Average
SyllA: Syllables Average

Based on Table 2, the GLN supporting reading books published by Kemdikbud for high school students have different readability scores. *Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro* in zone 11. In the principle of measuring legibility using the Fry chart, the book is suitable for students of grades X, XI, and XII to read. The readability of the book *Multikulturalisme dalam Makanan Indonesia* and the book *Bakti Muda untuk Negara* is in zone 10. Thus, the book is suitable for students of grades IX, X, and XI to read. The *Lawang Kota Kenangan* book and the *Gunung Sewu: Unesco Global Geopark* are located in zone 9. In other words, according to the principle of measuring readability using the Fry chart, the book is suitable for reading by students in grades VIII, IX, and X. The book *Tokoh-tokoh Gerakan Paderi* is in zone 7. Based on the principle of measuring legibility using the Fry chart, the book is more suitable for students of grades VI, VII, and VIII to read.

By looking at Table 2, we know that the higher the average number of sentences and the number of syllables, the lower the reading level in general. On the other hand, the lower the average number of sentences and the number of syllables, the higher the reader's level.

Picture 2: Readability of GLN Supporting Reading Books published by Kemdikbud in 2018 for High School Students
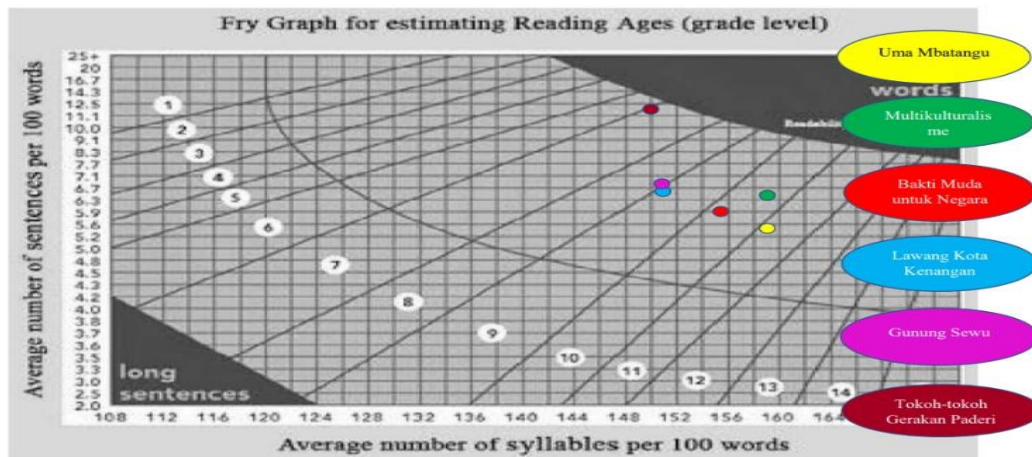
In this research, sample selection will determine the readability score. It is preferable to choose a representative fragment on the same page. If the quoted passage is not enough 100 words, then the quote "crosses over" to another page. Quotations also start at the beginning of the paragraph. In addition, the selected representative text does not contain any numbers or details that involve numbers. In using the Fry chart, each digit of the number same with one syllable. It is vulnerable to being ignored when counting syllables.

The prototypical sample represents difficult words in the reading book. The readability level in Fry's graph depends on word complexity (Haryadi 2015). The complexity of the word depends on the number of syllables that make up the word. The more syllables there are, the more complex the word is. The more time it takes to understand the meaning of the word.

In addition, the readability level based on Fry's graph also depends on sentence length (Haryadi 2015). The more words in a sentence, the longer the sentence, the more difficult it is to read. On the other hand, the fewer words in a sentence, the shorter the sentence, the easier it will be to read. The reading process affects the understanding and the duration of the reading. The length of a sentence is very dependent on the number of words that compose it.

The sentence length also affects the reach of the eye. The longer a sentence, the harder it is for the eye to reach it in one glance. Readers need to move their eyes more than once with different objects of view to understand a long sentence. Moreover, if the sentence contains new terms, readers will stop longer on the word so that it takes longer to capture the information in the sentence. The complexity of the sentence in Fry's formula is directly proportional to the length of the sentence and the complexity of eye movements when reading.

Operating Fry graph, the zone or levels of book readability are associated with education levels (Haryadi 2015). It is solely to facilitate the readability measurement, the higher education level, ideally the higher reading power. Readers with higher education levels should understand complex sentences better than readers with lower levels of education.

Based on sentence length and the number of syllables, Fry's chart is more appropriate to apply to non-literary texts, principally descriptive non-literary texts whose sentences tend to be straightforward. Illustrative non-literary texts allow the author to describe or make details, including numerous technical words. Fry charts are not recommended for measuring literary texts, whether prose, poetry, or drama. The characteristics of sentences, lines, or dialogues in literary works are different from the sentences that make up non-literary texts. Force non-literary text measuring tools on literary texts will break the validity of the findings.

The composition of the book content is very influential on the readability. For example,

the book *Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro*. That book contains information about the traditional culture and architecture of Sumba. In the book, every picture presented is always accompanied by a description that clarifies what the image means, not only a caption. Particularly, in *Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro*, pictures approving the author's description. In addition, the author also describes the meaning of technical words immediately. The reader does not need to open the glossary to find out the word's meaning.

It is different with the book *Gunung Sewu: Unesco Global Geopark.* The book content has the same concept as *Uma Mbatangu: Arsitektur Tradisional Sumba di Kampung Adat Ratenggaro*. The book consists of descriptive information equipped with photos or pictures. It also contains many foreign terms or technical terms. However, explanations for these images are generally only as captions. The meaning of unfamiliar or technical terms is not stated directly in the content section but in the glossary. It makes the number of sentences in the content section getting less. The lack of sentences in the knowledge enrichment book impacted Fry's graph assessment.

Based on these findings, we know that the proportion of text and image is crucial. According to Sitepu (2012), the illustrations and texts distribution in reading books for high school students is 10:90. In other words, the right non-fiction reading book for high school students is a book with more text than illustrations. Directly including explanations of pictures or technical terms in the book content is one of the ways to get these circumstances, not just relying on a glossary. It will be easier for readers to get comprehensive information too.

Interesting findings look in the process and results of measuring the readability of the book Multiculturalism Indonesian Food and the book *Bakti Muda untuk Negara*. Both books are at the same level, namely level 10 (worth reading for students in grades IX, X, and XI). However, the two books have different compositions of text contents.

The *Multikulturalisme Makanan Indonesia* book is a knowledge enrichment book that describes twelve Indonesian foods that affected other nations. The book has 46 pages of content with 39 representative pages. The proportion of unrepresentative pages is only 15%. It is far less than the author's explanatory text because the book focuses on telling the history of these foods. Food pictures only serve as a message reinforcement and occupy a small part of the book page.

The book *Bakti Muda untuk Negara* is a personality enrichment book that contains biographies of the young generation who have contributed to helping others. Of the 69 content pages, there are 46 representative pages and 23 (33%) unrepresentative pages. Many pages contain mostly photos/pictures, brief descriptions, one page contains aphorisms that do not reach a hundred words, and pages only contain images.

The high percentage of pictures (photos) in the book *Bakti Muda untuk Negara* is closely related to the book's mission as a collection of biographies. To make the biographies more memorable and convincing to the readers, various photos of the biographical figures are listed in large size. On the first page of each biography, for example, a portrait of the biographical character's life documentation occupies half of the page or more. Not infrequently, amid in biographical descriptions, documentation of figures appears again. Aside from being an impression booster, the image is also a distraction for readers so they don't get bored reading biographies. In addition to pictures, at the end of each biography, there is always a special page to put aphorisms, messages, or motivations from the characters being discussed.

On the one hand, the proportion of *Bakti Muda untuk Negara's* book complicates the process of determining a representative sample or fragment in the book becomes more difficult. However, on the other hand, from these findings, it can be concluded that there are other principles in the selection of reading books for high school students. The principle is "pictorial biographies

suitable for high school students are books with text containing long sentences or complex sentences". This finding is concluded by observing the fact that although the book *Bakti Muda untuk Negara* has a much larger proportion of pictures than the book *Multikulturalisme Makanan Indonesia*, it has more content pages with an average number of fewer sentences. The average number of sample sentences for the *Multikulturalisme Makanan Indonesia* book was 6.5 sentences, while the average number of sentences for the *Bakti Muda untuk Negara* book sample was 5.9 sentences. In other words, the sentences in the book *Bakti Muda untuk Negara* are generally more complex or longer than the sentences in the book *Multikulturalisme Makanan Indonesia.*

CONCLUSION

Reading books supporting the National Literacy Movement published by Kemdikbud in 2018 for high school students have varying levels of readability, especially when viewed from the aspect of language form or structure. Of the six books studied, it is known that one book is at level/zone 11, two books are at level/zone 10, two books are at level/zone 9, and one book is at level 7.

From the measurement results, it can be concluded several principles for selecting the right non-fiction reading books for high school students: (1) not only paying attention to the suitability of the topic but also paying attention to the complexity of the words and sentences that compose it; (2) the proportion of the text is much more than the proportion of images; (3) if you want an illustrated biography, make sure it has more text-filled pages.

This finding does not necessarily make the books unfit for reading. In addition to the average number of sentences and the average number of syllables, the author's ability to present discourse in a reading book greatly affects the level of readability. In addition, the understanding of the contents of the book by the reader should also be considered in determining the feasibility of reading books.

REFERENCES

Abidin, Y. (2010). *Strategi Membaca: Teori dan Pembelajarannya*. Rizky Press.

Adiarsi, G. R., Stellarosa, Y., & Silaban, M. W. (2015). Literasi Media Internet di Kalangan Mahasiswa. *Humaniora*, *6*(4), 472.

Çetġnkaya, G., A., Y. A., Çelġk, T., & Özpinar, Ġ. (2018). Readability of Texts in Secondary School Mathematics Course Books". *Asian Journal of Education and Training*, *4*(4), 250–256.

Fahmy, Z., Nuryatin, A., & Subyantoro. (2015). Pengembangan Buku Pengayaan Memproduksi Teks Fabel Bermuatan Nilai Budaya untuk Siswa SMP". *Seloka: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, *4*(2), 86–93.

Haryadi. (2015). *Pokok-pokok Membaca: Kajian Teoretis*. Farishma Indonesia.

Humairoh, Z., Nurchasanah, & Mudiono, A. (2016). Keterbacaan Buku Teks Kelas IV dan V SD dalam Kurikulum 2013". *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, *1*(2), 165–170.

Jayanti, T., Nuryatin, A., & Mardikantoro, H. B. (2015). Pengembangan Buku Pengayaan Menulis Cerita Biografi Bermuatan Nilai-Nilai Pendidikan Karakter bagi Peserta Didik Kelas VIII SMP" Seloka. *Jurnal Pendidikan Bahasa dan Sastra Indonesia*, *4*(2), 65–71.

Laksono, B. A., Supriyono, & Wahyuni, S. (2019). Literasi Finansial dan Digital Keluarga Pekerja Migran Ditinjau dari Latar Belakang Pendidikan". *Jurnal Pendidikan Dan Kebudayaan*, *4*(2), 139–151.

Mulyaningsih, I. E. (2014). Pengaruh Interaksi Sosial Keluarga, Motivasi Belajar, dan Kemandirian Belajar terhadap Prestasi Belajar". *Jurnal Pendidikan Dan Kebudayaan*, *20*(4), 441–451.

Purnomo, P., Zulaeha, I., & Subyantoro. (2015). Pengembangan Buku Pengayaan Menulis Teks Eksposisi Bermuatan Nilai-nilai Sosial untuk Siswa SMP". *Seloka*, *4*(2), 118–124.

Putra, A., Ardiwinata, J. S., & Hasanah, V. R. (2018). Komponen Pembelajaran Program Literasi Budaya di Eco Bambu Cipaku". *Jurnal Pendidikan Dan Kebudayaan*, *3*(2), 141–151.

Putra, D. A., & Lukmana, I. (2017). Text Complexity in Senior High School English Textbooks: A Systemic Functional Perspective". *Indonesian Journal of Applied Linguistics*, *7*(2), 436–444.

Rustan, E., & Munawir, A. (2020). Eksistensi Permainan Tradisional pada Generasi Digital Natives di Luwu Raya dan Pengintegrasiannya ke Dalam Pembelajaran. *Jurnal Pendidikan dan Kebudayaan*, *5*(2), 181–196.

Sari, N., Sunarno, W., & Sarwanto. (2018). Analisis Motivasi Belajar Siswa dalam Pembelajaran Fisika Sekolah Menengah Atas". *Jurnal Pendidikan dan Kebudayaan*, *3*(1), 17–32.

Septarianto, T. W. & Subyantoro. (2016). Pengembangan Buku Pengayaan Menulis Teks Laporan Hasil Observasi yang Bermuatan Kearifan Lokal Untuk Peserta Didik Kelas X SMA". *Seloka*, *5*(2), 216–224.

Shen, Y. (2017). On Improving Text Readability by Creating a Personal Writing Style". *English Language Teaching*, *10*(3), 95–100.

Sitepu, B. P. (2012). *Penulisan Buku Teks Pelajaran*. Remaja Rosdakarya.

Suragangga, I. M. N. (2017). Mendidik Lewat Literasi untuk Pendidikan Berkualitas". *Jurnal Penjaminan Mutu Lembaga Penjaminan Mutu Institut Hindu Dharma Negeri Denpasar*, *3*(2), 154–163.

Syarifa, L. L., Subyantoro, & Nuryatin, A. (2015). Pengembangan Buku Pengayaan Teknik Memproduksi Teks Cerita Ulang yang Bermuatan Kearifan Lokal bagi Peserta Didik Kelas XI SMA". *Seloka*, *4*(2), 102–110.

Türkben, T. (2019). Readability Characteristics of Texts in Middle School Turkish Textbooks". *Educational Policy Analysis and Strategic Research*, *14*(3), 80–105.

Unesco. (2021). *Literacy". Https://en.unesco.org/themes/ literacy*.

Wang, T. (2017). Interpreting The Readability in Simplified Editions of Children's Literature from A Thematic Perspective: A Case Study on Alice's Adventures in Wonderland". *Indonesian Journal of Applied Linguistics*, *7*(1), 201–205.