ISSN 1940-4387

Preventing SCHOOL Failure

Alternative Education for Children and Youth

VOLUME 57
NUMBER 2
2013

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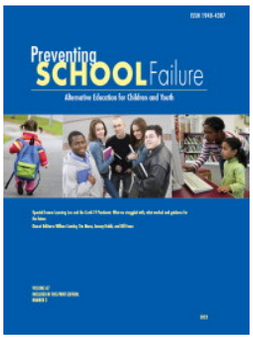

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Preventing School Failure: Alternative Education for Children and Youth

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/vpsf20

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To cite this article: Endang Sri Maruti, Bambang Eko Hari Cahyono, Rissa Prima Kurniawati & Muhammad Hanif (24 Feb 2023): Do Javanese textbooks convey relevant material? Evidence of readability and value of learning outcomes, Preventing School Failure: Alternative Education for Children and Youth, DOI: 10.1080/1045988X.2023.2181299

To link to this article: https://doi.org/10.1080/1045988X.2023.2181299

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PREVENTING SCHOOL FAILURE: ALTERNATIVE EDUCATION FOR CHILDREN AND YOUTH
https://doi.org/10.1080/1045988X.2023.2181299

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RESEARCH ARTICLE

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Do Javanese textbooks convey relevant material? Evidence of readability and value of learning outcomes

Endang Sri Maruti, Bambang Eko Hari Cahyono, Rissa Prima Kurniawati and Muhammad Hanif

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ABSTRACT

This study is aimed to analyze the readability level of the fourth grade textbooks in Javanese language used in Madiun, East Java, Indonesia then then connect with student learning outcomes. The data were obtained from 18 students, comprising 6 male and 12 female students between 10 and 12 years old. The secondary data were obtained from textbooks and worksheets used in primary schools. The data were analyzed using the Fry's Graph and the Klose's technique to determine the readability level of the textbooks. The results of data analysis indicated that the Javanese language textbooks had a score of 9.075, meaning that the textbooks are too difficult for the fourth grade students. This results in students having difficulty absorbing the material, so that students' learning outcomes in Javanese are below the required standard. The success of learning the Javanese language depends on an appropriate level of readability.

KEYWORDS

Javanese language; learning outcomes; legibility; readability; textbooks

Introduction

Researches related to readability have been conducted in various fields of discipline. In general, these studies scrutinize various aspects of language, education, media and communication studies, and even medical aspects in medical science. There have been innumerable researches on the readability of textbooks in education beforehand. However, there has been no research on readability in Javanese Language at the elementary school level. The readability of the textbooks analyzed was merely limited to textbooks in English (Miftaahurrahmi & Syarif, 2017) and Indonesian (Isabela, 2013; Johan, 2018; Widyaningsih & Zuchdi, 2015). Theoretically, the essential purpose of conducting a readability study in Javanese language textbooks is to find out the root cause of countless students who think that Javanese language books are more difficult to read and understand.

Readability research in education is typically conducted by analyzing and measuring the level of readability of English textbooks used in schools (Hakim et al., 2021; Hidayat, 2016; Levine, 2008; Sholihah, 2018; Tasaufy, 2017; Yulianto, 2019). The results revealed that the readings in English textbooks used in schools were difficult for students to read and understand. In communication studies, readability has also been investigated by (Fabian et al., 2017; Ju et al., 2020; Monton et al., 2019; Zou et al., 2019). The results exhibited that the level of readability, especially the privacy policy in online articles, was unreadable. Another readability study was conducted by Schumacher and Eskenazi (2016) in which the results stated that each candidate's speech evolved over time and that the candidate also varied his speech from one place to another. Readability research from the medical aspect in medical science is generally done especially in reading the results of medical tests (Basch et al., 2020; Dalziel et al., 2016; Skierkowski et al., 2019; Weiss et al., 2016; Zou et al., 2019). The results exposed that the results of the medical test had a low level of readability for patients with low literacy.

The aspect of textbook readability in education is one of the most essential studies. One of the determinants of the success of delivering teaching materials is the readability of the books used as handbooks (Peng, 2015). That is to say, the level of language difficulty used in the book is in accordance with the level of students' language skills. The readability of the book itself can be tested with several formulas, such as Reading Ease (RE). Human Interest (HI), Dac and Chall (DAC), Fog Index (FI), Fry Graph, Raygor Graph, and Klose Procedure (Ciampa, 2012). Previous studies only employed one of these formulas to measure readability. On the other hand, two formulas were used in this study as comparison, namely the Fry and Klose formulas.

Books play a vital role. The problem is that students still have difficulty in understanding the material (Peng, 2015). This is evidenced by the data that students' scores do not meet the lower limit of academic grades. Therefore, what needs to be considered in the preparation of teaching materials is sentences because sentences are crucial linguistic units. The selection of the right sentence with the appropriate diction according to its level determines the readability of the book. An effective use of word frequency for text readability

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assessment should take a range of characteristics of the distribution of words frequencies into account (Chen & Meurers, 2018). As it is prominent in the practice of language and language teaching in Indonesia; the use of Javanese, Indonesian, and English languages has been more or less, in connexion. This is also considering the linguistic condition in Indonesia which is multilingual (Oktavianti et al., 2019).

In order a textbook to meet the expected requirements and objectives, the level of readability must be in accordance with the level of students' ability and reasoning. The suitability of the readability level of a book is essential because it can affect students' reading motivation and interest. The unavailability of books that are easy to read and understand is a challenge and a solution that is necessary to be found (International Literacy Association, 2018). To avoid such problems, a research on the readability of textbooks is necessary, especially Javanese language textbooks for the elementary school level. Readability is required to determine the level of difficulty or easiness of a text understood by students. This research will be limited to the readability of the 4th grade Javanese language textbooks used by elementary schools in Ponorogo Regency considering that this city has the similar books used.

Based on this background, this study aims to reveal the readability of textbooks, exclusively Javanese language lessons for the elementary school level. The readability is the ability of students as readers to interact with textbooks in Javanese. Thus, the focus of this research study is to analyze the readability level of Javanese language textbooks used by the fourth grade elementary school students in Madiun to determine the readability of Javanese language textbooks used.

Methods

This research was a quantitative descriptive research. The object of the research was the readability of the fourth grade Javanese language textbooks for elementary school level in Madiun, while the research subjects were the fourth grade Javanese language textbooks for the elementary school level in all Madiun Residency. Sample data were obtained from two schools in each district in Madiun Residency. Each sample was obtained from the textbooks and worksheets in Javanese language textbooks used.

Data collecting techniques employed were library technique and documentation technique. The collected data were then analyzed using Fry's readability formula (Fry, 1968) and the Klose procedure (Bormuth, 1968) to determine the readability of textbooks. The operational procedure of using Fry's readability formula included: (a) selecting a representative fragment of the discourse by taking 100 words. In this case, the words were a group of symbols delimited on the left and right; (b) counting the number of sentences in the discourse consisting of 100 words to the nearest tenth; (c) counting the number of syllables and sample discourse; (d) pay attention to Fry's graph. Vertical columns indicate the number of sentences per hundred words and horizontal rows indicate the number of syllables per hundred words. The data obtained in step (b), namely the average number of sentences and the data obtained in step (c), namely the average number of syllables plotted into the graph to find the common point. The form of Fry's graph is as follows.

Furthermore, the standard closing procedures are: (a) selecting text that is approximately 250 words long; (b) leaving the first and last sentences intact; (c) start omitting it from the second sentence, i.e., in every fifth word; and (d) mark the blank with a horizontal line. The analysis steps with the Klose procedure is as follows. First, give a number to the answer that is exactly the same as the original word. The other answers are not justified even though the meaning is identical. This is done if the number of participants is large. Second, the score is given not only to the exact same answer as long as the meaning in the structure of the context structure remains intact. The range of scores provided is 3-2-1-0. The formula used for measurement is as follows:

$$\left(\text{Total correct answers} : \text{sum of all} - \text{n}^{\text{th}}\text{words}\right) \times 100\%$$

The assessment of the Klose procedure is conducted with the following percentage criteria.

Results and discussions

In the sub-chapter of data analysis from the Madiun Residency, it was presented sequentially, namely: (1) complete discourse; (2) calculation and analysis of discourse based on Fry's graph; and (3) conclusion. In each district in Madiun Residency (6 regencies/cities) two samples of one textbook teaching materials (package book) were taken and one Student Worksheet (LKS). Three reading samples were taken from the textbooks, namely readings at the beginning, middle and end of the book. On the other hand, for the LKS, only two reading samples were taken at the beginning and at the end.

Data analysis results

In this section, the results of the analysis of the readability of textbooks in the form of textbooks and worksheets used by the fourth graders of Elementary School in Madiun were presented, consisting of the regency of Pacitan, Ponorogo, Madiun, Ngawi, Magetan, and the City of Madiun. From each region, 2 samples of textbooks were taken.

Results of data analysis using fry graphs

The reading sample data were obtained from the beginning of the book, in the middle, and at the end of the book, then the number of syllables and the number of sentences were counted. It was then calculated based on the Fry formula and the results were compared with the available Fry Graph (Fry, 1968).

After determining the sample data, the data were analyzed according to Fry's instructions. In this case, there are two steps; counting the average number of sentences per 100 words and counting the average number of syllables per 100

words. Subsequently, that the data were entered into the formula. The following displayed the average count per 100 words. The next was the calculation of the number of syllables per 100 words.

The text in Javanese:

Liburan semesteran wingi aku diajak Bapak lan ibuku dolan menyang pesisir Watu Ulo ing tlatah Kabupaten Jember. Pesisir Watu Ulo memper karo pesisir Sanur utawa pesisir Kuta ing Bali. Kahanan alame kang jembar tanpa aling-alingan. Ing wayah esuk bisa ndeleng jumedhule srengenge saka dhasare bumi. Ing wayah sore bisa nonton lakune srengenge kang pindha bal emas raseksa sethithik mbaka sethithik amblas ing dhasare bumi. Alune ombak kang anteng sesandhingan karo rungkute alas sakupenge. Kahanan mau nambahi eloke kawasan pesisir ing Kecamatan Ambulu iki. Para tamu sing kepengin nginep uga bisa, jalaran wis disedhiyani hotel kang jarake ora adoh karo segara. Mula swarane ombak keprungu pating njlegur saka papan panginepan (Soeparto, 2020)

The text in Indonesian:

Saat liburan semester kemarin, bapak dan ibu mengajak saya untuk mengunjungi pantai Watu Ulo di Kabupaten Jember. Pantai Watu Ulo mirip dengan pantai Sanur atau pantai Kuta di Bali. Keadaan alam sangat luas tanpa pikiran. Di pagi hari Anda bisa melihat matahari terbit dari dasar bumi. Di malam hari, Anda bisa menyaksikan pergerakan matahari yang menggerakan bola emas raksasa sedikit demi sedikit di dasar bumi. Suara ombaknya tenang dengan suara hutan di sekitarnya. Keadaan ini menambah keindahan kawasan pesisir di Kecamatan Ambulu. Tamu yang ingin menginap juga bisa menginap, karena sudah disediakan hotel yang letaknya tidak jauh dari laut. Kemudian suara ombak bisa terdengar menerjang dari pondok (Soeparto, 2020),

The text in English:

During the semester break yesterday, my father and mother invited me to visit the beach of Watu Ulo in Jember Regency. Watu Ulo beach is similar to Sanur beach or Kuta beach in Bali. The state of nature is vast without a thought. In the morning you can see the sunrise from the bottom of the earth. In the evening, you can watch the movement of the sun, which moves the giant golden ball little by little on the bottom of the earth. The sound of the waves is calm with the sound of the surrounding forest. This situation adds to the beauty of the coastal area in Ambulu District. Guests who want to stay can also stay, because they have provided a hotel that is not far from the sea. Then the sound of the waves could be heard crashing from the lodge (Soeparto, 2020).

After all the calculations were complete, then the calculations were entered into the formula, which was as follows.

Average number of sentences = 8 sentences
Number of syllables = $233 \times 0.6 = 139.8 = 140$ syllables
After observed on the Fry chart, the meeting point is in region 6.
Estimated readability = (6 – 1), 6, (6 + 1)

As a result, the discourse is suitable for students in grades 5, 6, and 7 (Junior High School).

The following is a more complete analysis of the results of the readability of each textbook in 6 Regencies.

Based on the six regions, it can also be described in the following graph.

Based on the above diagram, textbooks that match the level of readability used in Madiun, Magetan, and Ngawi Regencies, while the other three regions, namely Pacitan, Ponorogo, and Madiun Kota Regencies, are not appropriate.

Results of data analysis with Klose technique

In addition to being analyzed based on the fry graph, the above textbooks were also analyzed based on the Klose technique (Skorecova et al., 2016). In this technique, the fifth word from each sentence starting in the second sentence is omitted, then the missing text is filled in by several sample fourth grade elementary school students in the sample elementary school. The results of the readability analysis using the close technique are as follows.

Based on the calculation results above, the textbooks used in Pacitan Regency. Ponorogo, Madiun, and Ngawi were at the level of frustration which stated that the books used were unreadable by students and were not suitable for use in learning. The distribution of the six regions can be seen in the following graph.

Based on the above diagram, textbooks appropriate to their level of readability are used in the districts of Madiun, Magetan, and Ngawi, while the other three regions; Pacitan Regency, Ponorogo, and Madiun Kota, are not appropriate.

Discussion

The indicator of the readability of a non-dialog text is the readability of each paragraph. In order to be able to understand a text, it is necessary to have a complete understanding of each paragraph that form the text (Puspaningtyas et al., 2020). The number of sentences in a paragraph can be used as an indicator of whether or not the main idea developed in a paragraph is simple or complex (Yulianto, 2019). This means that the number of sentences affects the level of readability of the paragraph. The decreasing number of sentences from a certain limit in a paragraph can be used as an indicator that the related paragraph is getting denser and the information conveyed explicitly is getting less and less (Fitzgerald, 1981). On the other hand, if the number of sentences is more than needed, in the paragraph there will be repetition (redundancy) of sentences which will ultimately affect the reader's understanding of the paragraph (Larcher, 2020).

The recent readability formula uses two benchmarks, namely (a) sentence length, and (b) word difficulty level (Sulistyaningsih et al., 2014). The longer the sentence and the longer the words, the more difficult the reading material is and vice versa. If the sentences and words are short, the discourse in question is classified as an easy discourse.

There is the relationship between word frequency and text readability and provides concrete options for more effectively making use of lexical frequency information in practice (Chen & Meurers, 2018). According Lipari et al. (2019), development of education materials should be designed with the goal of increasing understandability and actionability. The data analysis found many compound sentences. In addition, there are many uses of expressions in Javanese proverbs. Where the words used are quite long and unfamiliar.

The use of syllables containing the phonemes/dh/and/th/ makes it difficult for students to read let alone understand them (Sasangka, 2011).

In determining the readability of a text, a study is carried out on three things, namely the readability of the text, the background of the reader, and the interaction between the text and the reader (Bormuth, 1968). Readability relates to reading events that are carried out by someone, so that it will be related to aspects of (1) the reader; (2) reading; and (3) background. These three components will be able to explain the readability of textbooks. The existence of different components in each reading certainly affects the understanding of the reader. As stated (Onafiani, 2015), that the difference in sentence structure in the passive form in one language can be of different forms and varieties.

Based on the two types of approaches to calculating readability in the Javanese language textbooks above, there were different results. The results of the calculation using the fry graph stated that there were 3 areas where the level of readability of textbooks suitable to the elementary level, namely Madiun, Magetan, and Ngawi. Conversely, based on the calculation of the close technique, there were only 2 areas suitable for the elementary level, namely Madiun and Magetan. The difference occurred because of the difference in the subjects chosen. This result was also in accordance with the opinion of Widyaningsih and Zuchdi (2015) which stated that respondents in the Klose calculation were selected based on certain categories and aimed to facilitate the limitation of respondents,. Nevertheless, the selection of these categories had a significant effect in this study. By selecting respondents according to the direction of the class teacher, those students with fairly good achievements, after being tested with the Klose technique, the results were no longer frustrated, but independent and instructional.

In addition to these differences, there are countless absorbed vocabulary in Javanese language and mostly are taken from Sanskrit (Zen, 2016). It is this loan word that makes the level of frustration in the Klose technique possible; the vocabulary is still relatively new and even foreign to elementary school children (Chen & Meurers, 2018). Even the teachers have to explain the words into Indonesian by looking for the appropriate equivalent. This is of course contrary to the opinion (Tiani, 2015) which states that there are striking differences in the structure of Phonology, Morphology, and Syntax between Javanese language and Indonesian language. These differences should be a special note and consideration for Javanese language teachers in elementary schools (Crossley et al., 2017).

The Fry graph which was originally used to measure the readability of English texts, after being applied in Javanese language, can be considered to have significant results (Kleijn, 2018). This is in accordance with what was stated by Fitzgerald (1981) that the number of samples determines the accuracy of the calculation. Whatever the language, if the number of samples meets the criteria, the results are definitely accurate. The sample taken in this study has met the criteria, namely by taking the discourse on the beginning, middle, and the end of the textbook used. The discourse taken was also a complete discourse, not in the form of separate sentences like the sentences used in the questions. The number of sentences in the discourse taken has also met the criteria, the sentences were not too long and not too short. The number of syllables in each word contained in the sample sentences also met the criteria. However, in the Javanese language, there are indeed many syllables that are rather long and consist of the original letters of the Javanese script such as thick and thin letters (Subiyanto, 2010). This may have a slight effect on the readability of the Javanese text. In addition to the phonological process, the morphological process of the Javanese language which is quite unique also has a significant effect. As identified by (Shiyani, 2017), in the children's reading suitable for school age consumption, many words already contain affixations, reduplications and quite diverse compositions.

The use of different textbooks is determined by the Subject Teacher Consultative Team (MGMP) or Teacher Working Group (KKG) for each regency. Most of The Javanese language KKG team members from Madiun, Magetan, and Ngawi graduated from bachelor graduates of Javanese Language and Literature Education. Teachers of local content of Javanese language in the three districts are not taught by class teachers who come from bachelor Elementary School Teacher Education (PGSD), but teachers of local content of Javanese language who are familiar with Javanese grammar, so that the selected and used textbooks are also appropriate for elementary school students. It would be different if the Javanese language teacher comes from bachelor PGSD who only accepts 2 credits of Javanese language courses during the bachelor level. This certainly makes teachers who graduated from bachelor PGSD are different in quality and understanding of Javanese language material compared to teachers who graduated from S1 Javanese Language Education (Maruti et al., 2021).

The results of this study also supported what was stated by Kaplan et al. (2011) concerning the various reasons that caused the failure of language learning in schools. In this case, the main cause is the lack of Javanese language teaching materials, so that the teacher take up the material at will. Similar to learning English, Javanese language learning activities, of course, require teaching materials and materials such as complete dictionaries, grammar, spelling, textbooks, audio cassettes, computer disk programs, and many other resources that should all be provided free of charge or at least affordable. The difficulty experienced by Javanese language teachers is what causes many teachers to take up texts to be included in teaching materials without paying attention to the level of readability.

Conclusions

Based on the results of the data analysis and discussion, it can be concluded that there is a number of textbooks and worksheets used in Madiun Residency that are not suitable to use for the expected result. The textbooks are suitable for grades 6 (elementary school), 7 and 8 (junior high school). On the other hand, based on the Klose technique, the textbook is categorized as frustrated, which means that the book is inappropriate because it is too difficult for the

fourth graders to understand. This requires attention from the KKG team, especially in the Madiun Residency in designing textbooks or selecting Javanese language textbooks for the fourth graders to match their level or readability. Thus the students will be easier to read and understand the contents of the readings. In general, textbooks used at all levels will be used successfully if they are in accordance with the level of readability of the level. Elementary school student textbooks are different from high school student textbooks. This research is only limited to elementary school students; further research needs to be done on high school student textbooks.

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References

Basch, C. H., Mohlman, J., Hillyer, G. C., & Garcia, P. (2020). Public health communication in time of crisis: Readability of on-line COVID-19 information. *Disaster Medicine and Public Health Preparedness*, *14*(5), 635–637. https://doi.org/10.1017/dmp.2020.151

Bormuth, J. R. (1968). The cloze readability procedure. *Elementary English*, *45*(4), 429–436.

Chen, X., & Meurers, D. (2018). Word frequency and readability: Predicting the text-level readability with a lexical-level attribute. *Journal of Research in Reading*, *41*(3), 486–510. https://doi.org/10.1111/1467-9817.12121

Ciampa, K. (2012). Reading in the Digital Age: Using Electronic Books as a Teaching Tool for Beginning Readers/La lecture à l'ère numérique: l'utilisation de livres électroniques comme outil d'enseignement pour les lecteurs débutants. *Canadian Journal of Learning and Technology/La Revue Canadienne de L'apprentissage et de La Technologie*, *38*(2–3).

Crossley, S. A., Skalicky, S., Dascalu, M., McNamara, D. S., & Kyle, K. (2017). Predicting text comprehension, processing, and familiarity in adult readers: New approaches to readability formulas. *Discourse Processes*, *54*(5–6), 340–359. https://doi.org/10.1080/0163853X.2017.1296264

Dalziel, K., Leveridge, M. J., Steele, S. S., & Izard, J. P. (2016). An analysis of the readability of patient information materials for common urological conditions. *Canadian Urological Association Journal = Journal de L'Association Des Urologues du Canada*, *10*(5–6), 167–170. https://doi.org/10.5489/cuaj.3578

Fabian, B., Ermakova, T., & Lentz, T. (2017). Large-scale readability analysis of privacy policies. *Proceedings of the International Conference on Web Intelligence* [Paper presentation]. 18–25. https://doi.org/10.1145/3106426.3106427

Fitzgerald, G. G. (1981). How many samples give a good readability estimate?: The fry graph. *Journal of Reading*, *24*(5), 404–410.

Fry, E. (1968). A readability formula that saves time. *Journal of Reading*, *11*(7), 513–578.

Hakim, A. A., Setyaningsih, E., & Cahyaningrum, D. (2021). Examining the readability level of reading texts in English textbook for Indonesian senior high school. *Journal of English Language Studies*, *6*(1), 18–35. https://doi.org/10.30870/jels.v6i1.8898

Hidayat, R. (2016). The readability of reading texts on the English textbook.

International Literacy Association. (2018). *The case for children's rights to read* (pp. 1–26).

Isabela, S. N. (2013). Analisis Keterbacaan Wacana Buku Sekolah Elektronik Bahasa Indonesia Jenjang SMP. *Bahtera Bahasa: Antologi Pendidikan Bahasa Dan Sastra Indonesia*, *1*(1–2).

Johan, G. M. (2018). Analisis kesalahan berbahasa Indonesia dalam proses diskusi siswa sekolah dasar. *Jurnal Pendidikan Bahasa Dan Sastra*, *18*(1), 136–149. https://doi.org/10.17509/bs_jpbsp.v18i1.12153

Ju, J., Wei, S. J., Savira, F., Suharsono, Y., Aragão, R., Linsi, L., Editor, B., Reeger, Sievers, W., Michalopoulou, C., Mimis, A., Editor, B., Ersbøll, E., Groenendijk, K., Waldrauch, H., Waldrauch, H., Bader, E., Lebhart, G., Neustädter, C., … Saillard, Y. (2020). No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title. *Journal of Chemical Information and Modeling*, *43*(1), 7728. U. https://online210.psych.wisc.edu/wp-content/uploads/PSY-210_Unit_Materials/PSY-210_Unit01_Materials/Frost_Blog_2020.pdf https://www.economist.com/special-report/2020/02/06/china-is-making-substantial-investment-in-ports-and-pipelines-worldwide

Kaplan, R. B., Baldauf, R. B., Jr., & Kamwangamalu, N. (2011). Why educational language plans sometimes fail. *Current Issues in Language Planning*, *12*(2), 105–124. https://doi.org/10.1080/14664208.2011.591716

Kleijn, S. (2018). *Clozing in on readability: How linguistic features affect and predict text comprehension and on-line processing*. LOT Publishing.

Larcher, D. (2020). Understanding the incomprehensible: Redundancy analysis as an attempt to decipher biographic interviews. In *Qualitative voices in educational research* (pp. 126–138). Routledge.

Levine, P. A. (2008). *Healing trauma*. ReadHowYouWant.com.

Lipari, M., Berlie, H., Saleh, Y., Hang, P., & Moser, L. (2019). Understandability, actionability, and readability of online patient education materials about diabetes mellitus. *American Journal of Health-System Pharmacy: AJHP*, *76*(3), 182–186. https://doi.org/10.1093/ajhp/zxy021

Maruti, E. S., Yulianto, B., Suhartono, & Samsiyah, N. (2021). How is the awareness of Javanese language phonology of elementary school teacher candidates?: Descriptive qualitative study. *Elementary Educational Online*, *20*(1), 1397–1407. https://doi.org/10.17051/ilkonline.2021.01.140

Miftaahurrahmi, F., & Syarif, H. (2017). The readability of reading texts in English textbooks used by senior high school students in West Sumatera. In *Advances in social science, education and humanities research (ASSEHR)* (pp. 199–203). Atlantis Press.

Monton, O., Lambert, S., Belzile, E., & Mohr-Elzeki, D. (2019). An evaluation of the suitability, readability, quality, and usefulness of online resources for family caregivers of patients with cancer. *Patient Education and Counseling*, *102*(10), 1892–1897. https://doi.org/10.1016/j.pec.2019.05.010

Oktavianti, I. N., Chaerani, N., & Prayogi, I. (2019). Analisis kontrastif nominalisasi dalam bahasa Inggris, bahasa Indonesia, dan bahasa Jawa. *SASDAYA: Gadjah Mada Journal of Humanities*, *3*(2), 103–119. https://doi.org/10.22146/sasdayajournal.50343

Onafiani, L. (2015). Analisis Kontrastif Struktur Kalimat Pasif Bahasa Jepang dengan Kalimat Pasif Bahasa Jawa. *Jurnal Ilmiah Mahasiswa FIB*, *3*(4–5).

Peng, C.-C. (2015). Textbook readability and student performance in online introductory corporate finance classes. *The Journal of Educators Online*, *12*(2), 35–49. https://doi.org/10.9743/JEO.2015.2.6

Puspaningtyas, A. A., Suhandi., & A., Hernani. (2020). Analysis on readability of scientific literacy enrichment book on earth science concept. *Journal of Physics: Conference Series*, *1521*(4), 042103. https://doi.org/10.1088/1742-6596/1521/4/042103

Sasangka, S. S. T. W. (2011). *Bunyi-bunyi distingtif bahasa Jawa*. Elmatera Publishing.

Schumacher, E., & Eskenazi, M. (2016). A readability analysis of campaign speeches from the 2016 US presidential campaign. *ArXiv Preprint ArXiv:1603.05739*.

Shiyani, K. (2017). *Analisis Morfologi Bahasa Jawa dalam Wacan Bocah pada Majalah Djaka Lodang Tahun 2015*. PBSJ-FKIP.

Sholihah, I. B. (2018). *An analysis of readability level of reading texts in English Textbook entitled Bahasa Inggris for Senior High School Students Grade XII*. UIN Sunan Ampel Surabaya.

Skierkowski, D. D., Florin, P., Harlow, L. L., Machan, J., & Ye, Y. (2019). A readability analysis of online mental health resources. *The American Psychologist*, *74*(4), 474–483. https://doi.org/10.1037/amp0000324

Skorecova, I., Teleki, A., Lacsny, B., & Zelenicky, L. (2016). An easy to compare tool for more readable (physics) textbooks. *Physics Education*, *51*(6), 065009. https://doi.org/10.1088/0031-9120/51/6/065009

Soeparto. (2020). *Wasis Basa Piwulang Basa Jawa Sekolah Dasar*. Widya Duta.

Subiyanto, A. (2010). Proses fonologis Bahasa Jawa: Kajian Teori optimalitas. *Bahasa Dan Seni, Tahun*, *38*, 154–165.

Sulistyaningsih, L. S., Laksono, K., Mintowati, M., & Pratiwi, Y. (2014). *Membaca 2*.

Tasaufy, F. S. (2017). The readability level of the reading texts in english textbook entitled 'bahasa inggris x.' *Edulitics (Education. Literature, and Linguistics) Journal*, *2*(2), 62–69.

Tiani, R. (2015). Analisis Kontrastis Bahasa Jawa dengan Bahasa Indonesia. *HUMANIKA*, *21*(1), 1–6. https://doi.org/10.14710/humanika.21.1.1-6

Weiss, K. D., Vargas, C. R., Ho, O. A., Chuang, D. J., Weiss, J., & Lee, B. T. (2016). Readability analysis of online resources related to lung cancer. *The Journal of Surgical Research*, *206*(1), 90–97. https://doi.org/10.1016/j.jss.2016.07.018

Widyaningsih, N., & Zuchdi, D. (2015). Uji keterbacaan wacana pada buku teks bahasa Indonesia kelas V SD Negeri di Kecamatan Wonogiri. *LingTera*, *2*(2), 144–155. https://doi.org/10.21831/lt.v2i2.7373

Yulianto, Y. (2019). An analysis on readability of english reading texts with automated computer tool. *J-SHMIC: Journal of English for Academic*, *6*(1), 81–91. https://doi.org/10.25299/jshmic.2019.vol6(1).2675

Zen, A. L. (2016). *Perubahan Fonologis Kosakata Serapan Sansekerta dalam Bahasa Jawa [Analisis Fitur Distingtif dalam Fonologi Transformasi Generatif]*. Diponegoro University.

Zou, Y., Danino, S., Sun, K., Schaub, F. (2019). Youmight'be affected: An empirical analysis of readability and usability issues in data breach notifications. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1–14).