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The Dominant Factors Affecting Readability Levels in an English Textbook entitled "English on Target"

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Abstract

This study aims to investigate the readability of reading texts and the factors affecting readability based on Flesch Reading Ease Formula (1949), Dale-Chall (1949), and Coh-Metrix (2004). This research is a qualitative study that uses descriptive content analysis. The data source in this study is an English textbook entitled "English on Target" for eleventh-grade students and the data are collected by doing document analysis. To analyze the data, the interactive model proposed by Miles, Huberman, and Saldana (2014) is used in this study. The results of this study show that only a few reading texts in the textbook have suitable readability levels for eleventh-grade students. Based on each readability formula, there are four texts (Flesch Reading Ease Formula), one text (Dale-Chall formula), and three texts (Coh-Metrix Readability formula) that are qualified to be presented to eleventh-grade students. Besides, factors affecting readability in this study show that average syllables per words, percentage of hard words, Sentence Syntax Similar Value (SYNSTRUTa), and CELEX Frequency Value (WRDFRQmc), are determined in affecting the readability score. However, ten out of thirteen texts in this study show different readability levels from each formula used in this study because the indicators used in each theory are different. Thus, the researcher suggests that those three readability formulas are not suggested to be used together to examine readability since it can cause different readability results. In addition, the researcher suggests that the teacher can use other source reading materials in teaching reading.

Keywords: *Reading Texts, Readability, Flesch Reading Ease Formula, Dale-Chall, Coh-Metrix.*

INTRODUCTION

Reading is one of language skills that always involves visual-printed materials, such as, textbooks, letters, and articles that aim to interpret information and to enhance

knowledge. In Indonesia's teaching and learning context, textbook is primary source used in the classroom as stated in the regulation from The Minister of Education and Culture No. 8 year 2016. Textbooks as a primary source in teaching, cannot be separated from the readability that plays role in determining the difficulty level of reading texts. Readability is seen as an important aspect in teaching reading because pupils make optimal gains when they are instructed at a suitable level (Zakaluk & Samuels, 1988).

Thus, readability in English teaching is seen as crucial because materials that are too easy are claimed to be not challenging and inhibiting students' growth (Chall & Conard, 1991). On the other hand, materials that are too difficult inhibit the students to advance their skill. Readability in classroom is important because it provides reading text for students on the suitable level of challenge (Gunning, 2003). As a result, the teacher must provide the students with appropriate reading materials at their level to gain optimal outcomes in learning reading.

The readability of text can be measured in various ways because there are many factors involved in affecting the readability of text. According to Dubay (2004), the best indicators to predict the textual difficulty of text are vocabulary and sentence length. Therefore, those two factors become the most used indicators in many readability formulas. There are some readability formulas that are often used to examine readability of texts. For instance, Flesch Reading Ease Formula (1949), Dale & Chall formula (1949), Fog Index formula (1952), Fry Readability Graph (1977), and Coh-Metrix (2004) Readability Formula (2004).

Readability is seen as a crucial topic to study because the reading texts in the textbook need to be analyzed whether the readability of reading texts in the textbook has met the appropriate readability level for the targeted level. It is also important to analyze the factors affecting readability because the use of different factors in readability formulas can result in different readability levels even though the texts that are being measured are the same. However, research focusing in finding factors affecting readability is still understudied. Analyzing factors influencing readability is beneficial because it can be a reference for teachers to choose reliable readability measurement to examine reading texts.

In the last decade, some content analysis studies related to readability have been observed. Unsuitable readability for the targeted level accounted for most of the reading texts in these studies (Kodom & Pearl 2019; Indrawan 2018; Morales (2019); Yulianto 2019). However, none of these studies were done to investigate factors affecting readability of texts. Thus, to fill the gap from previous studies, the researcher will conduct a study regarding readability of text by investigating factors affecting readability in the textbook entitled "English on Target" for eleventh grade. Based on the stated research gaps, research questions can be formulated as follows: (a) What are the readability levels of reading texts in the textbook entitled "*English on Target*" based on Flesch Reading Ease Formula, Dale-Chall Formula, and Coh-Metrix Readability Formula? (b) What are the factors that contribute to the readability level of texts in the textbook entitled "*English on Target*"?.

LITERATURE REVIEW

Reading text is one of teaching materials used to teach reading in English classroom. According to Tomlinson (1998), teaching materials refer to “anything that is used by the teachers or the learners to facilitate the learning of a language”. In teaching reading in Indonesia’s teaching and learning context, the texts are usually taken from the textbook published by Minister of Education. Textbook as a source to teach in the classroom is inseparable with the texts presented in the textbook. Anderson and Anderson (1997) describe that text as collection of words that are gathered to transfer meaning from the creation of a piece of text. Anderson and Anderson (1997) also explain that “texts are pieces of spoken or written language created for a particular purpose”. It can be seen from the definition above that text is made of words both in forms of spoken or written language that is intended to communicate opinion or experience from authors.

As an important source in teaching, the quality of materials in the textbook must be guaranteed. In line with the statement, Cunningsworth (1984) states that “textbook is a book written by experienced and well-qualified people and the material contained in them is usually carefully tested in pilot studies in actual teaching situations before publication”. In another definition, Cortazzi and Jin (1999) describe a textbook as a teacher, a map, a resource, a trainer and an authority. Based on the definitions above, it can be concluded that textbook is a book seen as a collection of qualified texts as primary resource containing suitable material written by competent people in the relevant field to be the guidelines for teachers in the teaching and learning process.

According to Cunningsworth (1995) textbooks play several roles in English Language Teaching (ELT). The roles of textbooks are mentioned as an effective resource for self-directed learning and self-study; a valuable resource for presentation material (written and spoken); a source of ideas and activities for learner practice and communicative interaction; a reference source for students; a syllabus; a support for less experienced teachers to gain confidence and demonstrate new methodologies. Besides, playing several roles in English teaching context, textbooks have some functions, such as individualization of instruction, organization of instruction, tutorial contribution, and improvement of teaching.

Texts in textbooks cannot be separated from the readability that deals with the difficulty of text. Readability is defined as the total of related elements in written materials that affect a group of readers’ success (Dale and Chall, 1949). On the other hand, Harry Maclaughlin (1969) defines readability as the degree to which an intended group of people can find reading materials interesting and understandable. Bailin & Graftein (2016) also describes that readability is the difficulty to which a particular reader can understand what is communicated in the text. Based on the explanation from experts above, readability takes part in students’ understanding of texts by considering how difficult and how easy a text is. Researches in readability have also been developed to improve the validity and readability of readability measurement. In conclusion, readability is the degree of text difficulty to be understood by the students that deals with several factors both from text and individual’s ability.

Readability can be measured in various ways. Readability formulas are developed to measure the textual factors of texts. Some of the readability formulas that are widely used are Flesch Reading Ease Formula, Dale-Chall Formula, and Coh-Metrix Readability Formula. The equations of each formula can be described as:

Flesch Reading Ease Formula:

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

Where: Score is position on a scale 0 (difficult) to 100 (easy). ASL is average sentence length calculated from the number of words divided by the number of sentences and ASW is average syllables per words calculated from the number of syllables divided by the number of words.

Dale-Chall Formula:

$$\text{Score} = 1.579\text{PDW} + 0.496\text{ASL} + 3.6365$$

Where: Score is reading grade of reading texts. PDW is percentage of difficult words (words that are not found in Dale-Chall list) and ASL is average sentence length in words.

Coh-Metrix Formula:

$$\text{RDL2} = -45,032 + (52,230 \times \text{CRFCWO1}) + (61,306 \times \text{SYNSTRUTa}) + (22,205 \times \text{WRDFRQmc})$$

Where: RDL2 is readability score based on Coh-Metrix. CRFCWO1 is Content word overlap. SYNSTRUTa is Sentence syntax similarity and WRDFRQmc is CELEX Log minimum frequency for content words.

Several studies have been conducted in the field of reading text readability. Kodom & Pearl investigated the readability of three textbooks used by diploma students. The findings show that the readability levels of the three textbooks range between 'fairly difficult' and 'difficult' which also means that the textbooks have low readability level. This finding is similar to study done by Morales (2019) who analyzed the readability and type of questions in Chilean EFL Textbooks wherein the result shows that the textbook for eleventh-grade students shares low readability level. In Indonesia English teaching context, a study was done by Indrawan (2018) who examined the readability and syntactic complexity in reading texts for senior high school English Textbooks shows that the readability levels of reading texts are not classified to be appropriate for the targeted level. Another study from Indonesia conducted by Yulianto (2019) investigated the readability level of reading passages in a textbook for Eighth Grade Students and discovered that only one texts was classified to be presented for the targeted level.

RESEARCH METHOD

This research used descriptive content analysis as a research method to conduct the study. The researcher used content analysis in this study because the researcher analyzed reading texts in the textbook entitled "English on Target" in which the data are in the quantitative forms. However, descriptions regarding the data should be made to draw conclusions. The type of data in this study is quantitative data that are described into words. The quantitative data in this study are the readability score obtained from calculating the numerical elements on texts.

Those numerical elements were calculated both manually by using readability formulas from Flesch (1949), Dale & Chall (1949), and automatically by using computational linguistic tool, Coh-Metrix. The source of data in this research is a document presented in the form of book. Given (2008) states that “A document is a text-based file that may include primary data (collected by the researcher) or secondary data (collected and archived or published by others). Textbook entitled “English on Target” used Documents used as source in this study is a textbook published by private a publisher entitled “English on Target” for eleventh-grade students. Therefore, this research used document analysis to collect the data. Bowen (2009) states that document analysis as “a systematic procedure for reviewing or evaluating documents both printed and electronic (computer-based and internet-transmitted) material”

The data analysis technique used in this research is the interactive model of data analysis proposed by Miles, Huberman, Saldana (2014). The prior step is data collection that involves the activity done by the researcher to find the early data. In this researcher, the steps of data collection were done by listing the reading texts in the textbook. The next step is data condensation which is also stated as “the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in the full corpus (body) of written-up field notes, interview transcripts, documents, and other empirical materials” (Miles, Huberman & Saldana, 2014).

The data condensation was done in these steps: a) selecting the texts which consist of 200 – 15.000 words, b) giving codes for the classified texts, c) calculating the readability texts in Flesch Reading Ease formula (1949), Dale-Chall formula (1949), and Coh-Metrix formula (2004). Next is data display which is stated as “an organized, compressed assembly of information that allows conclusion drawing and action” (Miles, Huberman, & Saldana, 2014). In this step, the collected data were displayed by using tables. Then, the readability levels were determined base on Flesch Reading Ease (1949), Dale-Chall (1949), and Coh-Metrix (2004). The final steps of the data analysis are drawing conclusion and making verification. The verification of data is aimed to make the research more credible and trustworthy. Miles, Huberman, & Saldaña (2014) argue that the final conclusions could not be drawn until all of the data had been collected.

FINDINGS

The textbook used in this study is an English textbook entitled “English on Target” for Senior High School Students Grade XI published by a private publisher in Indonesia in 2017. It is an English textbook consisting of eight chapters and 94 pages but only 13 texts are chosen to be examined because of the limitations. The readability levels of reading texts will be determined based on Flesch (1949), Dale-Chall (1949), and Coh-Metrix theories.

Based on Flesch Readability Formula (1949), all thirteen texts are classified into three levels which are ‘fairly easy’, ‘standard’, and ‘fairly difficult’. The details of the readability levels can be presented with ‘fairly easy’ consisting of four texts, ‘standard’ consisting of five texts, and ‘fairly difficult’ consisting of four texts. From the results, it can be concluded that only four texts in the textbook are appropriate for students at 11th grade. According to Dale & Chall readability formula, thirteen texts from the textbook are

classified into four estimated grades which are described as 5th to 6th grades (one text), 7th to 8th grades (five texts), 11th to 12th grades (one text). In conclusion, there is only one text in the textbook that matches the readability for eleventh-grade students. Based on Coh-Metrix Readability formula, there are three texts classified for kindergarten to first-grade students, one text classified for grades 2-3, two texts classified for grades 4-5, two texts classified for grades 6-8, two texts classified for grades 9-10, and three texts classified for grades 11-CCR (*College and Career Readiness*).

1. The readability levels of Flesch Reading Ease, Dale-Chall, and Coh-Metrix L2 Readability formula

Code	Flesch Reading Ease Score (FRES)	Description	Dale-Chall Score	Description	Coh-Metrix L2 Readability (RDL2)	Description
T1	70.424	Grades 8 or 9	6.7	Grades 7-8	17.705	Grades 4-5
T2	62.692	Grades 8 or 9	7.6	Grades 9-10	12.704	Grades 9-10
T3	75.245	Grade 7	6.9	Grades 7-8	15.096	Grades 6-8
T4	73.359	Grade 7	7.3	Grades 9-10	22.488	Grades 2-3
T5	73.804	Grade 7	5.9	Grades 5-6	24.082	Grades K-1
T6	69.016	Grades 8 or 9	7.3	Grades 9-10	15.589	Grades 6-8
T7	67.531	Grades 8 or 9	6.9	Grades 7-8	9.094	Grades 11-CCR
T8	67.416	Grades 8 or 9	6.2	Grades 7-8	25.861	Grades K-1
T9	57.708	Grades 10-12	6.4	Grades 7-8	18.321	Grades 4-5
T10	80.030	Grade 7	6.7	Grades 7-8	26.515	Grades K-1
T11	53.507	Grades 10-12	8	Grades 11-12	12.359	Grades 9-10
T12	51.615	Grades 10-12	7.8	Grades 9-10	8.425	Grades 11-CCR
T13	59.647	Grades 10-12	7.6	Grades 9-10	9.155	Grades 11-CCR

Table 1. The readability levels of reading texts

2. The score of each indicator from fairly difficult level texts (T11-T13).

No	Indicator	Score for 11 th grade texts	T11	T12	T13
1.	Average Sentence Length (ASL)	21	19.286	16.316	15.071
2.	Average Syllables Per Words (ASW)	1.55	1.581 ✓	1.639 ✓	1.559 ✓
3.	Percentage of hard words	>18%	22% ✓	21% ✓	19% ✓
4.	Content Word Overlap Value (CRFCWO1)	0.087	0.116	0.106	0.092
5.	Sentence Syntax Similar Value (SYNSTRUTa)	0.087	0.102	0.086 ✓	0.078 ✓
6.	CELEX Frequency Value (WRDFRQmc)	0.930	0.068 ✓	0.852 ✓	1.101

Table 2. Indicators checklist

Table 1, Table 2, and Table 3 are presented with the checklist that has description, as follows:

✓ : The score has met the criteria of readability indicator score for grade 11.

From the three readability formulas used in this study, namely: Flesch Readability formula, Dale & Chall readability formula, and Coh Metrix, there are some indicators used to examine the readability of text which are average sentence length, average sentence syllables, percentage of hard words, content word overlap, syntactic similarity, and word frequency. Therefore, to find out the specific readability factors from the textbook entitled "English on Target", analyses from each text are done.

From the analyses done in Table 2 and Table 3, the factors affecting readability in the textbook can be identified. Average Syllables per Words (ASW), percentage of hard words, Syntax Similar Value (SYNSTRUTa), and CELEX Frequency Value (WRDFRQmc), are claimed to be the factors affecting readability because both of the factors are found in the texts that are qualified for eleventh-grade students. The causes of the readability results are found as, the higher the score of average syllables per words, the more difficult the text according to Flesch (1949), the higher the percentage of words, the more difficult the text based on Dale-Chall formula, the lower the score of Sentence Syntax Similar Value (SYNSTRUTa), and CELEX Frequency Value (WRDFRQmc), the more difficult the text according to Coh-Metrix. However, Average Sentence Length (ASL) is determined to not affect the readability in this textbook because the factor is not found in the analyses that have been done both in Table 2. Another finding is also found in this study that readability levels from each formula show different results. Table 3 is presented to show the texts that have different readability results from the formulas used in this study.

3. The score of each indicator from texts below fairly level (T1-T10).

No	Indicator	Score for 11 th grade texts	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
1.	Average Sentence Length (ASL)	21	15.462	9.320	13.706	12.813	10.125	13.091	13.471	12.222	13.647	8.741
2.	Average Syllables Per Words (ASW)	1.55	1.428	1.592 ✓	1.391	1.424	1.451	1.472	1.485	1.495	1.599 ✓	1.394
3.	Percentage of hard words	>18%	14%	21% ✓	16%	19% ✓	10%	19% ✓	16%	12%	13%	16%
4.	Content Word Overlap Value (CRFCWO1)	0.087	0.093	0.041 ✓	0.130	0.091	0.092	0.124	0.058 ✓	0.175	0.097	0.120
5.	Sentence Syntax Similar Value (SYNSTRUTa)	0.087	0.081 ✓	0.151	0.099	0.150	0.110	0.159	0.097	0.192	0.130	0.189
6.	CELEX Frequency Value (WRDFRQmc)	0.930	1.234	1.294	0.911 ✓	1.488	1.475	0.094	1.099	1.209	0.903 ✓	1.613

DICUSSION

This section discusses the research findings and justifies them with relevant theories and relevant studies. This discussion explains about the readability of reading texts in the textbook entitled “English on Target” for eleventh-grade students. The findings show that only few reading texts in the textbook have suitable readability level for eleventh-grade students. Based on each readability formula, there are four texts (Flesch Reading Ease Formula), one text (Dale-Chall formula), three texts (Coh-Metrix Readability formula) that are qualified to be presented for eleventh-grade students. It also means that most of the reading texts in the textbook are not suggested to be given to students at grade eleven.

Reading texts that do not achieve targeted readability level are not suggested to be given to the students because texts that are too easy can cause low performance of the students’ reading skill. In line with the statement, Chall & Conard, (1991) states that low level reading text is claimed to be less challenging that can inhibit students’ improvement in their reading skill, while high difficulty level of text can also cause confusion to the students (Gambrell, Wilson, & Gantt, 1981). However, reading texts that exceed the targeted readability level can result in the reading texts to be not challenging for the targeted students.

Finally, after knowing the readability level of the textbook, the factors affecting the readability can be investigated. Based on the analyses, the dominant factors that influence the readability in the textbook entitled “English on Target” are the average syllables per words and the percentage of hard words. Based on the analysis, it shows that vocabulary plays an important role to the readability level of text. Dubay (2004) states that textual difficulty is predicted by *semantic content* (e.g. vocabulary) and *syntactic structure* (e.g. sentence length). According to Zipf’s (1935), word length has a relationship with frequency. As a result, shorter words arise with higher frequency in text which also means words with higher frequency are more familiar than words with low frequency because the students are more familiar with higher frequency of words. The indicator of the average syllables per words are used to determine word length in this study. However, there are cases that low frequency words are easy and high frequency words are difficult (Adams, 2001), and there are also several short words that are difficult and long words that are easy.

From those studies, it shows that many of EFL textbooks given to students do not provide suggested readability level for the targeted students. However, most of the studies done to investigate the readability level of reading texts above only use readability formulas which only measure the textual factor of the text. As a result, others factors that may affect readability are not explored enough while the activity of reading is actually viewed as an interactive process which include aspects, such as, text-based, reader-based, and author-based (Kasule, 2010).

CONCLUSION

From this study, it can be concluded that the textbook for eleventh-grade students have four texts (Flesch Reading Ease Formula), one text (Dale-Chall formula), three texts (Coh-Metrix Readability formula) that are qualified to be presented for eleventh-grade students. In addition, factors affecting readability levels of texts in this study can be found. Average syllables per words, percentage of hard words, Sentence Syntax Similar Value (SYNSTRUTA), and CELEX Frequency Value (WRDFRQmc), are determined as the dominant factors in Flesch Reading Ease formula and Dale-Chall formula because those two indicators are meant to measure the vocabulary factor in text.

According to the researcher, the reading texts in this textbook are not suitable to be presented for students at grade 11 because only three reading texts that meet the suggested readability score. Therefore, some suggestions are made. This research can be a reference for further researchers to not combine the three readability formulas in this study (FRE, Dale-Chall, Coh-Metrix) since it can cause different readability results. Besides, Teachers must consider to choose readable reading texts based on targeted level in teaching reading from various sources because not all textbooks provide suitable readability levels for targeted students.

REFERENCES

- Adams, M. J. (2001). On the Lexile framework. In National Center for Education Statistics (Ed.) *Assessing the Lexile framework: Results of a panel meeting*, NCES 2001-08 (pp. 15-21). Washington, DC: Author
- Anderson, M., & Anderson, K. (1997). *Text Types in English*. Australia: Millan Education Australia PTY LTD.
- Bailin, A., & Grafstein, A. (2016). *Readability: Text and context*. New York, US: Palgrave Macmillan.
- [Bowen, G.A.](#) (2009), "Document Analysis as a Qualitative Research Method", *Qualitative Research Journal*, Vol. 9 No. 2, pp. 27-40. <https://doi.org/10.3316/QRJ0902027>
- Cárcamo Morales, B. (2020). Readability and types of questions in Chilean EFL highschool textbooks. *Tesol Journal*, 11(2), e498. doi: 10.1002/tesj.498
- Cortazzi, M., & Jin, L. (1999). *Cultural mirrors: Materials and methods in the EFL classroom*. Cambridge: Cambridge University Press.
- Chall, J. S., Conard, S. S., & Harris-Sharples, S. (1991). *Should textbooks challenge students? The case for easier or harder textbooks*. Washington, DC: Teachers College Press.
- Cunningsworth, A., & Tomlinson, B. (1984). *Evaluating and selecting EFL teaching materials*. London: Heinemann Educational.
- Cunningsworth, A. (1995). *Choosing your coursebook*. Oxford, UK: Macmillan Education.
- DuBay, W. H. (2004). *The Principles of Readability*. Costa Mesa, CA: Impact Information.
- Dubay, W.H. (2006). *The Classic Readability Studies*. Costa Mesa, CA: Impact Information.

- Gambrell, L. B., Wilson, R. M., & Gantt, W. N. (1981). Classroom observations of task-attending behaviors of good and poor readers. *Journal of Educational Research*, 74, 400-404.
- Given, L. M. (Ed.). (2008). *The Sage encyclopedia of qualitative research methods*. London, UK: SAGE publications.
- Gyasi, W. K., & Slippe, D. P. (2019). Readability of English language textbooks for Diploma students of the University of Cape Coast. *International Journal of Research Studies in Learning*, 8(1), 107-115.
- Hidayat, R. (2016, June). The readability of reading texts on the English textbook.
- Ismail, A., Yusof, N., & Yunus, K. (2016). The readability of Malaysian English children books: A multilevel analysis. *International Journal of Applied Linguistics and English Literature*, 5(6), 214-220.
- INDRAWAN, F. (2018). *Text Readability and Syntactic Complexity in the Reading Texts of Indonesian Senior High School English Textbooks* (Doctoral dissertation, Universitas Airlangga).
- Kasule, D. (2011). Textbook readability and ESL learners. *Reading & Writing-Journal of the Reading Association of South Africa*, 2(1), 63-76.
- Kusuma, E. (2019). THE READABILITY LEVEL OF READING PASSAGES ON ENGLISH TEXTBOOK FOR GRADE NINE IN INDONESIA. *Journal of Research on Applied Linguistics, Language, and Language Teaching*, 2(2), 132-139.
- McLaughlin, G. H. 1968. *Proposals for British readability measures*. London: Cassell. Brown and Downing.
- McNamara, D. S., Graesser, A. C., McCarthy, P. M., & Cai, Z. (2014). *Automated evaluation of text and discourse with Coh-Metrix*. Cambridge: Cambridge University Press.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. 3rd.
- Neuendorf, K. A. (2017). *The content analysis guidebook*. London, UK: SAGE Publications, Inc.
- Rohmatillah, R. (2015). Readability Level of Reading Texts in the English Textbook Entitled English Alive for Senior High School Grade X Published by Yudhistira. *English Education: Jurnal Tadris Bahasa Inggris*, 7(1), 81-101.
- Srisunakrua, T., & Chumworatayee, T. (2019). Readability of reading passages in english textbooks and the thai national education English test: A comparative study. *Arab World English Journal (AWEJ) Volume*, 10.
- Thurmond, V. A. (2001). The point of triangulation. *Journal of nursing scholarship*, 33(3), 253-258.
- Tomlinson, B. (Ed.). (1998). *Comments on part A*. The Edinburgh Building, Cambridge: Cambridge University Press.
- 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.

- Zakaluk, B. L., & Samuels, S. J. (1988). *Readability: Its Past, Present, and Future*. Newark, Del: International Reading Association.
- Zipf, G. K. 1949. *Human behavior and the principle of least effort: An introduction to human ecology*. New York: Addison-Wesley (revised 1965).