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Extant Readability Tools Online for Classroom Utilization

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Abstract: *Online readability tools, largely unknown to language teachers in third-world countries, have been flooding the internet for years. Their usefulness have been regarded with varying degrees of approval. In more than a dozen websites, it has been discovered that there are marked similarities and differences that classroom teachers have to be keen with in making the right choice of an online readability tool. In general, the availability of particular readability tools differs from one site to another. In addition, a glaring difference on the type of statistics or parameters on most sites are observed. Moreover, other sites do not have the needed statistics or parameters that teachers need the most. Using a case study of the readability of the reading texts of a mandated textbook, useful readability tools were browsed. The results are a number of tools to choose from, and tips to benefit from web-based sources.*

Key Words: *grade levels, reading ages, readability indexes, readability sites, text characteristics*

Introduction

Remote language classrooms particularly in third-world countries have been pathetically deprived of vital technological gadgets, electricity, and the internet, rid of access then not only to e-books but also to other enormous online resources for teaching and learning usage. As more and more language teachers from such academic environments are finally accessing online materials, the need for them to know readability tools, among others, is of tremendous importance as teaching aids in the classroom.

Confused oftentimes with legibility, readability is what makes a text easier to read compared to others. It tries to match the reading level of a reading material to the reading-with-comprehension level of readers. Consequently, readability formula predicts readability in an analytical way (Kondru, 2006). The readability level of written materials can be measured by many of these readability formulas, some of them being more popular than the rest based on extensive research, and as Kondru (2006) hinted, "their predictions correlate very well with the results of the actual readability measurements of expert judgments, comprehension tests, and the cloze procedures".

Klare (1963) defined readability as the “ease of understanding or comprehension due to the style of writing.” Such definition takes writing style as detached from issues like coherence, content, and organization. Likewise, Gretchen Hargis (1998) and her IBM colleagues declared that readability is a trait of clarity, it being the “ease of reading words and sentences.” Stressing

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the interaction between a class of readers and the text, G. Harry McLaughlin (1969), creator of the SMOG readability formula, looked at readability as: “the degree to which a given class of people find certain reading matter compelling and comprehensible.”

Readability’s emergence

Pioneering studies of readability were done by simply asking students, teachers, and librarians, what makes a text readable. Part of these beginnings on readability assessment was Thorndike's Teachers' Work Book (1921), which provided some means for gauging the difficulty of words. Thorndike tabulated words based on the frequency of their usage in general literature, assuming that frequently encountered words by readers were less difficult to comprehend than those that rarely appeared. In short, familiarity results in understanding. This book became the first extensive listing of words in English, by frequency.

Later on, other reading lessons and word lists came about to measure word difficulty. Knowledge of words, as Chall and Dale (1995) had it, is a firm gauge of a reader's reading comprehension performance. As Chall and Dale (1995, p.84) "It is no accident that vocabulary is also a strong predictor of text difficulty," they wrote. Reviewing the research about word frequency, Klare (1968) further concluded that humans don’t just tend to use some words more frequently, they also recognize these words rapidly, prefer them, and learn and understand them more readily, hence this variable’s central role in measuring readability.

Besides word factors, sentence variety based on length was likewise subjected to examination in the 1920s as an additional factor to study in readability. Thorndike’s contemporary, the psychologist Kitson (1921), published The Mind of the Buyer, showing how and why readers of various newspapers and magazines differ from one another. He found out that word length and sentence length, as gauged by syllables, made notable readability indicators, confirming his theories by analysing magazines and newspapers. His claim was later confirmed by other experts and researchers. Sentence length, according to experts, is an appropriate measuring device for difficulty as it measures relationships (Catalano, 1990).

Having developed no readability formulas, these initial steps led to the development of what we now call, readability formulas. Since then, the word and sentence length linguistic indicators remained as the main factors of modern-day readability formulas used extensively in classifying reading materials. Readability formulas, according to Kirkwood and Wolfe (1980), "contain a measure of vocabulary load and sentence length."

The first-ever readability formula developed when Lively and Pressey (1923) were choosing science textbooks. The books, meant for junior high school, were loaded with technical

terms that teachers had to spend class periods just to teach vocabulary. The two then argued that it would help to have a way that could measure the vocabulary problem in textbooks by relating the difficulty of words to their frequency and developing a method to measure vocabulary, not only in textbooks, but also in other reading materials used in school. They assumed that the more common a word is, the easier it is understood. Their method was not suitable for measuring readability for its inability to provide a scale to interpret the scores, but their study paved the way for the creation of readability formulas.

A common and the most renowned readability formula is credited to Rudolph Flesch (1948), a leading expert on readability whose formula is used in Microsoft Office Word. Thus, readability evaluation today is performed by the computer. Grammar or editing software nowadays can tell the readability level of written texts. This is made possible by what we now call readability tools which, when applied to the same piece of text, could yield varying scores and reading levels.

Indeed, a number of tools can help us appraise written texts for readability via the application of a standard formula to the chosen text. These tools have been a subject of debate insofar as plain language has it. There are those who credit them with usefulness as starting point when appraising the vividness of information, the rest take them for tools that encourage poor writing. Thus, readability formulae ought to serve only as a guide due to their limitations.

Problem and objective

To help document online readability tools and thereby enhance awareness about them, this study was conceived in the hope, moreover, of disseminating these tools for classroom utilization.

The following questions will help carry out this objective:

1. What are the available readability sites and tools that can be used by classroom teachers?
2. What are the text characteristics means of the reading texts according to the readability site?
3. How much is the percentage and frequency of readability index utilization?

Method

This is a qualitative inquiry that makes use of available documents, mostly sourced online, as objects of descriptions and analysis. Moreover, it is prescriptive of procedures on how language teachers can access readability tools on the web that they can, in turn, utilize for classroom purposes.

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The method of accessing those tools, as exemplified in this inquiry, can itself serve as guide for the language teachers to access the same. Such method is put to use as follows:

- Use different online readability sites.
- Use complementary or statistically compatible readability indexes to determine the readability level of a test.
- Read the comments/conversation section of the readability site for more ideas about it. Proceed to experiencing the site yourself.
- Take advantage of the other features of the sites e.g., inventory of words, like problems in the text, etc.
- Check for updates or developments of the site.
- Be aware that sites can be moved to new addresses.
- Know that some sites have limited number of words allowed for analysis.
- Test the accuracy of the readability sites by using other statistical techniques.
- Analyze data using other groupings for comparison like by chapter, topic, etc.
- Test Flesh Reading Ease index found on different sites.

Results

The following results presented largely in tabular form summarize the findings that answer the questions of this study. Such tables are opted due to the clarity of statistical revelation that they provide. With this kind of presentation, too, results need not be explained and elaborated thoroughly.

It should be noted that numerous studies relative to readability tools have been uploaded through the years on the Internet. And it appears that the flow is endless, that plenty of related studies-in-progress are yet to come. The Table 1 below shows this list, which researchers and scholars can browse to scout for related literature and studies.

These studies, as can be observed, are arranged from the latest to the most previous. Headings per column include the names of authors, the year of publication, the research field or topic, the readability indexes used, and the number of readability indexes used in each study. This list implies that besides being multiple, studies that had been conducted on the topic vary from the simplest to the most complex. They, too, come from various settings and situations, from all over the world.

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Table 1

List of Readability Related Studies

Readability Related Studies				
Author/s	**Year**	**Research Field/Topic**	**Readability Index/es Used**	**Number of Readability Index/es Used**
Dhabhai, D., Dua, A.K., & Saroliya, A.	2015	Code Readability Software Metric	Machine-driven Readability Index, SMOG, Gunning's Fog Index	3
Fakhfakh, M.	2015	Auditor's Report	Flesch Reading Ease, Gunning Fog Index	2
King, D., & Burge, B.	2015	PISA 2012 Mathematics, Science and Reading Assessment Stimuli	Flesch-Kincaid, New Dale-Chall, New Fog Count, SMOG, Spache Revised	5
Mummadi, M.K., Kusneniwar, G.N., & Chappa, S.N.	2015	Health Website	Gunning Fog Index, Coleman-Liau Index, Flesch-Kincaid Grade Level, Automated Readability Index, SMOG, Flesch Reading Ease	6
Al-Tamimi, A.K., Jaradat, M., Aljarrah, N., & Ghanim, S.	2014	Automatic Readability Index for Arabic Language	Automatic Arabic Readability Index	1
Atcherson, S.R., DeLaune A.E., Hadden, K., Zraick, R.I., Kelly-Campbell, R.J., & Minaya, C.P.	2014	Consumer Materials on the Website of ASHA	Flesch Reading Ease, Flesch-Kincaid, Gunning FOG, FORCAST	4
Begeny, J.C., and Greene, D.J.	2014	Grade and Difficulty Levels: Reading Performance	Dale-Chall, Flesch-Kincaid, FOG, Forcast, Fry, Lexile, PSK, SMOG, Spache	9
Berry-Caban, C.S., Portee, C.L., Beaman, L.A., & Hoedebecke, K.L.	2014	Research Consent Forms at a Military Hospital	Flesch-Kincaid Readability Formula, Fry Readability Graph, SMOG Readability Formula	3
Boztas, N., Ozbilgin, S., Ocmen, E., Altuntas, G., Ozkardesler, S., Hanci, V., & Guneri, A.	2014	Informed Consent Forms before Anaesthesia	Gunning Fog, Flesch-Kincaid, Atesman	3
Broda, B., Ogrodniczuk, M., Niton, B., & Gruszczynski, W.	2014	Polish Texts	Gunning FOG Index, Flesch-based Pisarek Method, Automated Taylor Test, Lexical Similarity	4
Daud, N.M., & Ab Hamid, A.R.	2014	Hospital Websites	SMOG, FOG	2
Grover, V.K.	2014	Language Usage by Elementary School Teachers	Flesch Reading Ease Scale, Flesch Kincaid Grade Level, Gunning Fog Index	3
Keith, B., Sloas, S.B., Mooney, M., & Norris, T.	2014	PTA Textbooks and Students' Reading Comprehension Rates	Flesch Reading Ease, Gunning Fog, Flesch-Kincaid Grade, Coleman-Liau Index, SMOG, Automated Readability Index, Linsear Write Formula	7
Lenzner, T.	2014	Survey Question Difficulty	Flesch Reading Ease Formula, Flesh-Kincaid Grade Level Index, Gunning Fog Index, Dale-Chall Formula	4
Loughran, T., & McDonald, B.	2014	Financial Disclosures	Fog Index	1
Owu-Ewie, C.	2014	Junior High EnglishTextbook Comprehension Passages	Gunning Fog Readability Test, Flesch Reading Ease Formula, Flesch-Kincaid Grade Level, SMOG Index, Coleman-Liau, Automated Readability Index	6
Saini, J.R.	2014	Policy Guides of Matrimonial Websites	Gunning Fog, Coleman-Liau, Automated Readability Index	3
Cole, J.S.	2013	Verbal Ability and Text Readability	Flesch-Kincaid (MS Word), Flesch-Kincaid (Online Calulator), Gunning Fog Index, Automated Reading Index	4
Gyasi, W.K.	2013	Academic Communication – Undergraduate Students and Ghanian University Handbook	Flesch Reading Ease, Gunning Fog Index, Flesch-Kincaid Grade Level, Coleman-Liau Index, SMOG Index, Automated Readability Index, Lisear Write Formula	7
Humpreys, A.H., & Humpreys, J.T.	2013	Music Education Journal Articles	Flesch Ease, Flesch-Kincaid, Fog, SMOG, Dale-Chall	5
Kolahi, S., Khanmohammad, H., & Shirvani, E.	2013	English Translation Textbooks and Persian Translation	Gunning Fog Index, Flesch New Reading Ease	2
Okur, A., & Ari, G.	2013	Turkish Textbooks: Grades 6, 7, 8	Atesman, Uzun-Cetinkaya	2
Prasad, A., Green., P., & Heales, J.	2013	Practices of Organization in Developing Economies	Flesch Index, Fog Index, Lix Index	3
Rosenberg, J., Burcharth, J., Pommergaard, H.C., & Danielsen, A.K.	2013	Scientific Writing	LIX number, Flesch Reading Ease Scale, Gunning Fog	3
Tabatabaei, E., & Bagheri, M.S.	2013	Senior High Reading Comprehension Texts: Student Background Knowledge and Interest	Flesch Reading Ease Readability	1
Wang, L.W., Miller, M.J., Schmitt, M.R., & Wen, F.K.	2013	Written Health Information Materials	Dale-Chall, Flesch Reading Ease, Flesch-Kincaid, Fog, SMOG, Fry	6
Gray, C.J.	2012	Websites and Library Databases	Microsoft Word Flesch-Kincaid Reading Grade Level, Microsoft Word Flesch Reading Ease	2
Hampton, J.	2012	Data Mining and Text Analytics	New Dale-Chall, SMOG, Gunning Fog, Coleman-Liau, Laesbarhedsindex (LIX), Rate Index (RIX), Fry, Raygor Estimate	8
Izgi, U., & Seker, B.S.	2012	Science-Technology and Social Science Textbooks	Fog Index, Flesch-Kincaid Formula, Atesman, Sonmez	4
Kolahi, S., & Shirvani, E.	2012	English Textbooks of Translation and Persian Translation	Gunning Fog Index	1
Nakamura, Y., & Murray, A.	2012	Second Language Vocabulary Assessment and Placement Test	Fog	1
Stajner, S., Evans, R., Orasan, C., & Mitkov, R.	2012	Text Complexity	Flesch Reading Ease Score, Flesch-Kincaid Readability Formula, Fog Index, SMOG Grading	4
Yasseri,T., Kornia, A., & Kertész, J.	2012	Language Complexity and Wikipedia	Gunning Fog Index	1
Zamanian, M., & Heydari, P.	2012	Common Readability Formulas and its Pros and Cons	Flesch Reading Ease, Dale-Chall, Gunning's Fog-Index, Fry Readability Graph, SMOG, Flesch-Kincaid, Coh-Metrix, Brown's EFL Readability Index, Miyazaki EFL Readability Index	9
Agrawal, R., Gollapudi, S., Kannan, A., & Kenthapadi, K.	2011	Enrichment Candidates in Textbooks	Flesch Reading Ease Score, Flesch-Kincaid Grade Level, Dale-Chall Grade Level, Gunning Fog Index, SMOG Index, Coleman-Liau Index, Automated Readability Index	7
Crossley, S.A., Allen, D.B., & McNamara, D.S.	2011	Text Level and Intuitive Simplification	Flesch-Kincaid Grade Level, Flesch Reading Ease Score, Coh-Metrix L2 Reading Index	3
Gottron, T., & Martin, L.	2011	Web Document Readability	Flesch Reading Ease, SMOG	2
Kasesnik, K., & Kline, M.	2011	Medicines Information Material	Flesch Readability Ease Score, Flesch and Kincaid Readability Grade Level	2
O'Leary, S.	2011	Commercially-available and Universally-designed Worksheets on Student Engagement and On-task Behavior on Two Mixed-ability Science Classrooms	Flesch-Kincaid, Gunning FOG, McLaughlin SMOG	3
Plucinski, K.J.	2011	Cost Accounting Textbooks	Flesch-Kincaid Grade Level	1
Remus, R.	2011	Sentence-Level Subjectivity Classification	Devereux Readability Index, Easy Listening Formula, Fog Index, FORCAST, New Reading Ease Index, SMOG, An Own Formula (W)	7
Rezaee, A.A., & Norouzi, M.H.	2011	Cohesive Markers and Reading Comprehension	Flesch (Grade Level), Fog Index	2
Schneider, D.E.	2011	College Textbook in Public Speaking and Entry Level Instruction	SMOG	1
Trentanni, G.	2011	Automated Analysis of Natural Language	Flesch-Kincaid Readability Grade Level, Automated Readability Index, Coleman-Liau Readability Grade Level, Flesch Reading Ease Readability Index, Gunning's Fog Readability Index, Laesbarhedsindex Readability Index (LIX), SMOG-Grading Readability Grade Level	7
Beaglehole, V.J., & Yates, G.C.R.	2010	Young Writers and Full Stop Effect	Flesch Reading Ease, Flesch-Kincaid Grade Level	2
Bennett, D.M., & Gilchrist, A.	2010	Standard Appointment Letters	Flesch Reading Ease, Flesch-Kincaid, SMOG	3
Burke, V., & Greenberg, D.	2010	Difficulty of Adult Literacy Materials	Flesch Reading Ease, Flesch-Kincaid, SMOG, Dale-Chall, Spache, FORCAST, Fry, Rate Index (RIX), Lexile Framework for Reading	9
Kunz, M.B., & Osborne, P.	2010	Consumer Pharmaceutical Web Pages	Flesch-Kincaid Grade Level, Flesch Reading Ease, Coleman-Liau, Gunning Fog, SMOG	5
Wu, H.Y., & Chen, K.H.	2010	Online Encyclopedias – Wikipedia and Knol	Gunning-Fog Score, Flesch Kincaid Reading Ease, Flesch Kincaid Grade Level, SMOG Index, Coleman Liau Index, Automated Readability Index	6
Elia, A.	2009	Web Encyclopedias – Wikipedia and Britannica	Gunning-Fog Index	1
Jafar, M.J., & Abdullat, A.	2009	Information Privacy Statement on Primary Social Networks	Flesch-Kincaid, Gunning Fog, SMOG	3
Owen, J.E., Kohne, J., Douglas, L., Hewitson, T.D., & Baldwin, R.	2009	Education Materials and Literacy Level of Dialysis Patients	Gunning FOG Index, Fry Graph, Suitability Assessment of Materials	3
Wolf, M.S., Shekelle, P., Choudhry, N.K., Agnew-Blais, J., Parker, R.M., & Shrank, W.H.	2009	Interpretations of Physicians Prescriptions	Gunning Fog Index, Lexile Analysis	2
Chiang, W.C., Englebrecht, T.D., Philips, T.J. Jr., & Wang, Y.	2008	Financial Accounting Principles Textbooks	Flesch Reading Ease, Flesch-Kincaid Grade Level Index, Gunning's Fog Index, SMOG	4
Korfiatis, N., Rodriguez, D., & Sicilia, M.A.	2008	Online Product Reviews of an Online Bookstore	Gunning-Fog Index, Flesch Reading Ease Index	2
Leroy, G., Miller, T., Rosemblat, G., & Browne, A.	2008	Online Health Information Evaluation and Vocabulary	Revised Fry Readability Graph, Flesch Reading Ease, Flesch-Kincaid, Gunning FOG, New Dale-Chall Formula	5
Walsh, T.M., & Volsko, T.A.	2008	Internet-Based Consumer Health Information	SMOG, Gunning FOG, Flesch-Kincaid Grade Level	3
Williamson, G.L.	2008	Text Readability Continuum for Secondary Readiness	Lexile Framework for Reading	1
Friedman, D.B., & Hoffman-Goetz, L.	2007	Comprehension of Printed Cancer Information	SMOG	1
Reck, R. P., & Reck, R. A.	2007	Project Gutenberg Texts	Automated Readability Index, Coleman-Liau Formula, Flesch Reading Ease Score, Gunning Fog Index, Flesch-Kincaid Grade Score, Laesbarhedsindex (Lix) Score, SMOG Score	7
Weir, G.R.S., & Doherty, G.	2006	School Textbook Analysis	Flesch Reading Ease Score, Flesch-Kincaid Grade Level, Coleman-Liau Grade Level, Gunning Fog Index	4
Hubbard, H.	2005	Law Study Guides	Flesch Reading Ease Score	1
Greenfield, J.	2004	Readability Formulas for EFL	Flesch, Flesch-Kincaid, Coleman-Liau, Bormuth, Dale-Chall, Original Brown, Miyazaki EFL Readability Index	7
Meyer, B.J.F.	2003	Text Coherence	New Dale-Chall Readability Formula	1
Sellers, D.B., Thompson-Robinson, M., Parra-Medina, D., Wilcox, S., Thompson, N.L., & Will, J.C.	2003	Health Education Materials	SMOG Grade Formula	1
Leong, E.K.F., Ewing, M.T. & Pitt, L.F.	2002	E-comprehension: Business-to-Business Websites	Dale-Chall Formula, FOG Index, Flesch Grade Level Formula, Flesch Reading Ease Formula	4
Hubbard, E.H.	2001	Corpus Linguistic Analysis and Writing	FOG, Flesh Reading Ease	2
Shelley, M.C. II, & Schuh, J.H.	2001	Higher Education Journals: Meta-Analysis of Writing	Fry Reading Level, Flesch Ease of Reading Scale, Flesch-Kincaid Grade Index	3
Partow-Navid, P., & Otto, J.	2000	Management Information Systems Journals	Flesch-Kincaid Formula	1

Note. The main research fields or topics are identified for classification purpose. There can be other minor subjects of the studies not reflected in the table. The names of the readability indexes are copied as how the authors wrote them in their paper.

he table below, Table 2 to be exact, shows the different, available readability sites and tools that language teachers can use in the classroom. Each readability site on the left is matched with the various tools above to get the necessary total. This now is the answer to question number one in this paper's problem, which tries to find out what readability sites and tools are available in the Internet.

These readability sites include the Edit Central, Gunning Fog Index, Joe's Web Tools, Language and Translation Technology Team, Mancko, Readability Analysis Tool, Readability-Score.com, Readability Scores, Readability Statistics for Your Text, Road to Grammar, The Readability Test Tool, The Writer, Test Document Readability, Textalyzer, Text Content Analysis Tool, Text Readability Consensus Calculator, Text Statisitcs and Readability Analyzer, WordsCount, and Writing Sample Readability Analyzer.

Online readability tools comprise the following: Flesch Reading Ease, Automated Readability Index, Flesch-Kincaid Grade Level, Coleman-Liau Index, Gunning Fog Index, Simple Measure of Gobbledygook Index, Leesindex A Brouwer, Flesh-Douma, Cito Leesindex Technisch Lezen, Cito Leesbaarheidindex voor het Basisonderwijs, Lasbarhetsindex Bjornsson, Dale-Chall Reading Grade Score, Powers-Summer-Kearl Readability Formula, Average Grade Level, Fernandez Huerta Reading Text, Linsear Write, Text Rating, Common European Framework of Reference Level, International English Language Testing System Level, Lexical Density, Readability (Alternative) beta, Spache Index, and Dale-Chall Index.

Table 2

Online Readability Tools Per Site

Readability Site Name	Online Readability Tools																							
	Flesch Reading Ease	Automated Readability Index	Flesch-Kincaid Grade Level	Coleman-Liau Index	Gunning Fog Index	Simple Measure of Gobbledygook Index	Leesindex A Brouwer	Flesh-Douma	Cito Leesindex Technisch Lezen	Cito Leesbaarheidindex voor het Basisonderwijs	Lasbarhetsindex Bjornsson	Dale-Chall Reading Grade Score	Powers-Summer-Kearl Readability Formula	Average Grade Level	Fernandez Huerta Reading Test	Linsear Write	Text Rating	Common European Framework of Reference Level	International English Language Testing System Level	Lexical Density	Readability (Alternative) beta	Spache Index	Dale-Chall Index	TOTAL
Edit Central	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*6*
Gunning Fog Index	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*1*
Joe's Web Tools	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*6*
Language and Translation Technology Team	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	*12*
Mancko	X	X	X	X	X	X	-	-	-	-	X	X	X	X	X	-	-	-	-	-	-	-	-	*11*
Readability Analysis Tool	X	X	X	X	X	X	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	*8*
Readability-Score.com	X	X	X	X	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	*7*
Readability Scores	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	*2*
Readability Statistics for Your Text	X	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*3*
Road to Grammar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	*3*
The Readability Test Tool	X	X	X	X	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	*7*
The Writer	X	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*3*
Test Document Readability	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*6*
Textalyzer	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	*3*
Text Content Analysis Tool	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	*2*
Text Readability Consensus Calculator	X	X	X	X	X	X	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	*8*
Text Statistics and Readability Analyzer	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*6*
WordsCount	X	X	X	X	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	*9*
Writing Sample Readability Analyzer	X	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*3*
Total	*15*	*11*	*13*	*11*	*17*	*12*	*1*	*1*	*1*	*1*	*2*	*3*	*1*	*6*	*1*	*2*	*1*	*1*	*1*	*2*	*1*	*1*	*1*	*106*

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Table 3 below shows the selected readability sites and their text characteristics, answering the problem's question number 2. The statistical data per column provide each juxtaposition with a necessary total.

Table 3

Text Characteristics of Selected Readability Sites

Selected Readability Site Name	Text Characteristics																	
	Number of Syllables	Average Syllables per Word	Number of Words	Average Word Length	Number of Complex/Hard Words	Number of Unique Words	Percent Complex/Long Words	Ratio of Long Words	Word Frequency	Number of Sentences	Average Words per Sentence	Number of Letters/Numbers	Number of Characters	Number of Characters without Spaces	Average Number of Characters per Word	Number of Spaces	List of Sentences to Improve Readability	Total
Edit Central	X	X	X	-	X	-	-	-	-	X	X	X	X	X	X	-	-	*10*
Joes Web Tools	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*0*
Language and Translation Technology Team	X	X	X	X	-	X	-	X	-	X	X	-	-	X	-	-	-	*9*
Mancko	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*0*
Readability-Score.com	X	X	X	-	-	-	-	-	-	X	X	-	-	X	X	-	-	*7*
The Readability Test Tool	-	X	X	-	X	-	X	-	-	X	X	-	-	-	-	-	-	*6*
Test Document Readability	-	X	X	-	-	-	-	-	-	X	X	-	-	X	X	-	X	*7*
Text Statistics and Readability Analyzer	X	-	X	X	X	-	-	-	-	X	X	-	X	X	-	X	-	*9*
WordsCount	X	-	X	-	X	-	-	-	X	X	-	-	-	-	-	-	-	*5*
Total	*5*	*5*	*7*	*2*	*4*	*1*	*1*	*1*	*1*	*7*	*6*	*1*	*2*	*5*	*3*	*1*	*1*	*53*

The Table 4 below shows the text characteristics means and standard deviations per reading text. At the bottom of it are the summaries of statistical data.

Table 4

Text Characteristics Means and Standard Deviations Per Reading Text

Reading Text	Text Characteristics																											
	Number of Syllables			Average Syllables per Word			Number of Words			Average Word Length			Number of Complex /Hard Words			Number of Sentences			Average Words per Sentence			Number of Characters			Number of Characters without Spaces			Average Number of Characters per Word		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
A	5	1458.6000	119.5023	5	1.4720	0.0522	7	970.5714	7.7858	2	4.9000	0.1414	4	102.2500	45.7703	7	86.4286	2.9358	6	11.2533	0.4511	2	5960.0000	0.0000	5	4662.2000	88.3074	3	4.70000	0.0917
B	5	1187.8000	119.1499	5	1.5000	0.0636	7	762.1429	7.8194	2	4.9250	0.1061	4	71.2500	34.4129	7	70.5714	2.5728	6	10.7017	0.2758	2	4647.5000	2.1213	5	3647.6000	90.2458	3	4.6600	0.1442
C	5	1525.2000	111.6678	5	1.6200	0.0515	7	914.8571	5.1455	2	5.0050	0.0071	4	133.7500	42.9137	7	51.0000	3.5119	6	17.7900	1.0511	2	5715.5000	4.9497	5	4599.8000	68.8709	3	4.9533	0.0503
D	5	1465.6000	112.0906	5	1.6200	0.0552	7	878.4286	5.5635	2	5.0000	0.0000	4	118.000	44.8107	7	46.2857	2.8115	6	18.8500	1.0079	2	5397.5000	0.7071	5	4412.4000	62.6482	3	4.9467	0.0451
E	5	1309.0000	105.5912	5	1.3860	0.0631	7	924.2857	8.6162	2	4.2850	0.4031	4	77.5000	32.6854	7	64.2857	3.6384	6	14.3417	0.7991	2	5289.0000	1.4142	5	4226.2000	98.9808	3	4.4933	0.0833
F	5	1408.0000	109.6563	5	1.4980	0.0550	7	918.5714	9.6065	2	4.9200	0.1131	4	106.2500	37.6950	7	59.1429	7.2899	6	15.5917	2.0079	2	5590.0000	0.0000	5	4425.2000	97.0654	3	4.7200	0.1044
G	5	1394.6000	127.7196	5	1.5900	0.0447	7	854.1429	10.8386	2	4.9850	0.0212	4	108.2500	28.8834	7	48.5714	2.3705	6	17.4600	0.9195	2	5170.5000	0.7071	5	4209.6000	80.5158	3	4.8700	0.0755
H	5	1256.6000	107.9296	5	1.5720	0.0597	7	781.0000	3.9581	2	4.9900	0.0141	4	84.0000	20.1990	7	42.2857	1.9760	6	18.3083	0.8356	2	4915.5000	2.1213	5	3900.4000	57.7650	3	4.9367	0.0321
I	5	1151.8000	91.3247	5	1.5780	0.0672	7	712.7143	5.7652	2	4.9150	0.1202	4	96.7500	41.5722	7	41.5714	2.8785	6	16.9150	0.9004	2	4277.0000	0.0000	5	3465.6000	68.6243	3	4.7800	0.0721
J	5	845.2000	63.7589	5	1.6720	0.0497	7	494.0000	2.0000	2	5.0000	0.0000	4	73.5000	25.1727	7	28.2857	2.3604	6	17.3650	1.5378	2	3064.0000	0.0000	5	2498.0000	48.9592	3	5.0000	0.0000
K	5	808.8000	79.2887	5	1.2140	0.0532	7	642.5714	5.8269	2	4.0000	0.0707	4	26.5000	5.6862	7	45.8571	2.3401	6	14.0283	0.7222	2	3388.0000	0.0000	5	2634.6000	56.5447	3	4.0033	0.1050
L	5	1160.0000	93.7097	5	1.4340	0.0586	7	782.4286	5.9402	2	4.2450	0.3465	4	59.2500	19.1377	7	53.2857	0.7559	6	14.6600	0.1846	2	4378.0000	0.0000	5	3513.4000	59.2393	3	4.4367	0.0321

Note. A = Big Talkers; B = Koalas; C = The Power of Advertising; D = International Marketing No Va; E = Race to the End of the Earth; F = Lance Armstrong; G = Fortune-Telling; H = The Fortune Sellers; I = Seattle; J = The Best Cities in the United States; K = Why the Sea Is Salty; L = Why Is the Ocean Salty? N = total number of cases; SD = Standard deviation

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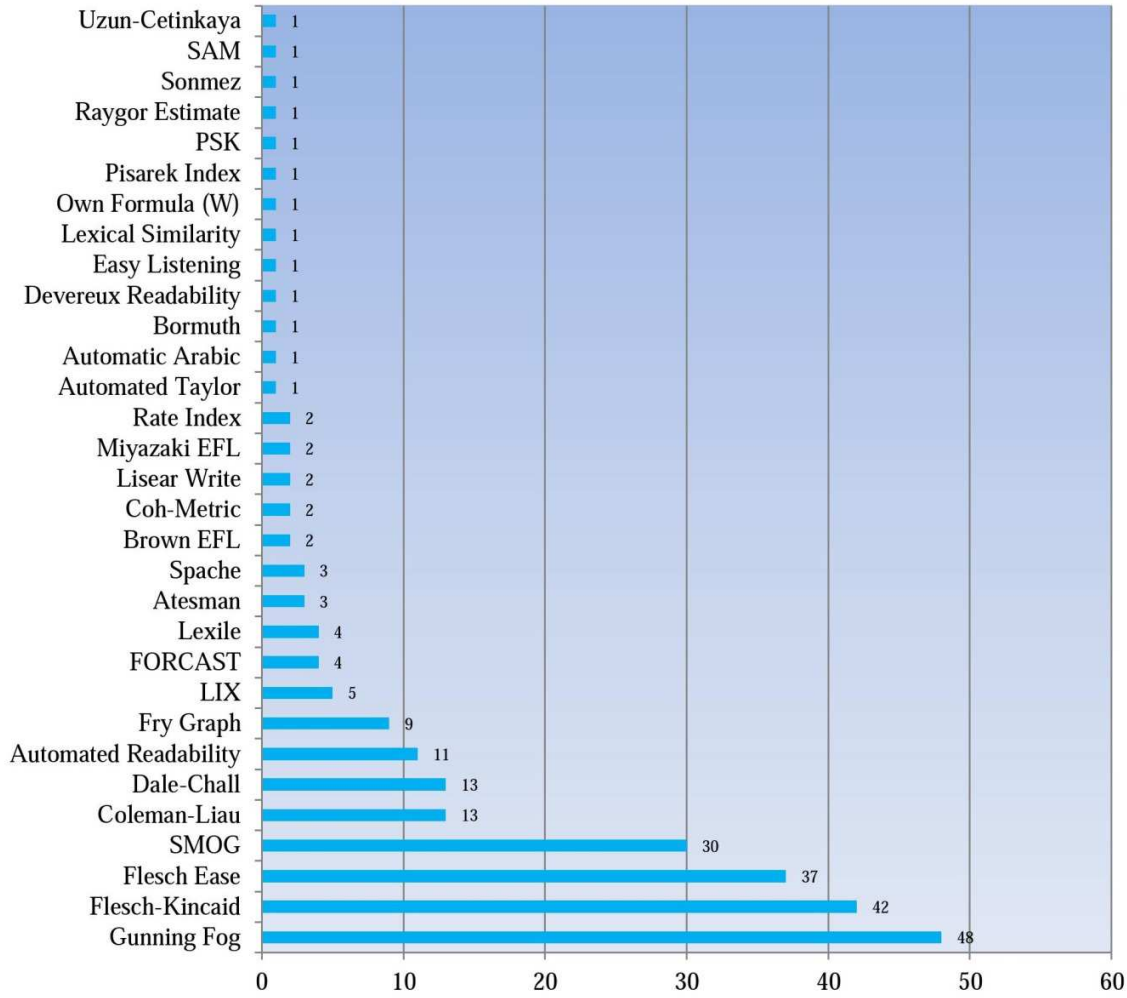
The figure below shows the percentage and frequency of readability index utilization, partly answering question number 3. It starts from the lowest down to the highest frequency, the lowest being one (1) and the highest, forty-eight (48).

Figure 1. *Frequency of Readability Index Utilization*



Note. SMOG = Simple Measure of Gobbledygook; LIX = Lasbarhetsindex; EFL = English as a Foreign Language; PSK = Powers-Sumner-Kearl ; SAM = Suitability Assessment of Materials; N = 69 related studies

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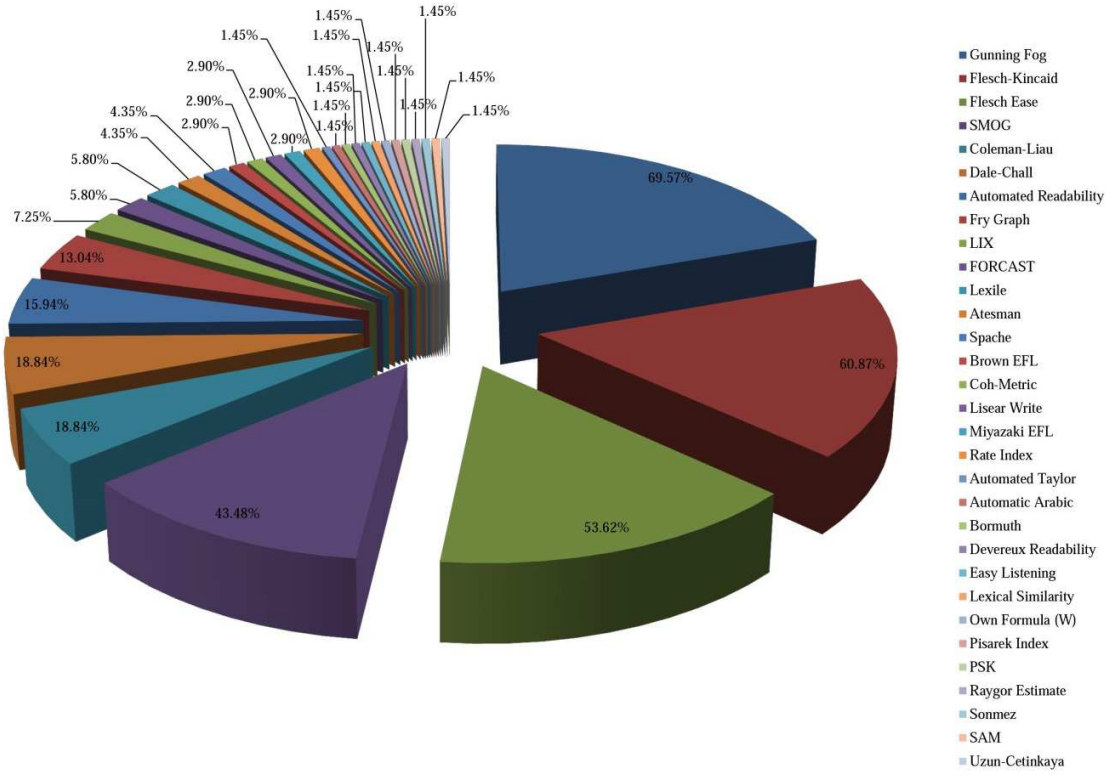
The figure below gives the overall percentage of readability index utilization, the highest being 69.57% and the lowest, 1.45%.

Figure 2. *Overall Percentage of Readability Index Utilization*



Note. SMOG = Simple Measure of Gobbledygook; LIX = Lasbarhetsindex; EFL = English as a Foreign Language; PSK = Powers-Sumner-Kearl ; SAM = Suitability Assessment of Materials; N = 245 readability indexes clustered into 31 types from 69 studies

Conclusion

This paper concludes that readability tools have been extant online and should be introduced to language teachers for classroom utilization. These teachers, who hail mostly from the remote regions of third-world countries, should not just be aware of said readability tools in various sites, but they should likewise learn to choose which ones perfectly suit their writing needs partly via discovering those tools' frequency of readability index utilization.

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