

Tables to accompany CHANCE article submission

Nicholas A. Lines

2022-02-08

1 Tables

Table 2: Correlation of seven popular readability formulae across the Blog Authorship Corpus.

	Dale-Chall	ARI	Coleman-Liau	Spache	Lensear Write	Flesch	Flesch-Kincaid
Dale-Chall	1.00	0.93	0.13	0.95	0.93	-0.94	0.93
ARI	0.93	1.00	0.11	1.00	1.00	-0.99	1.00
Coleman-Liau	0.13	0.11	1.00	0.09	0.09	-0.20	0.11
Spache	0.95	1.00	0.09	1.00	0.99	-0.99	1.00
Lensear Write	0.93	1.00	0.09	0.99	1.00	-0.99	1.00
Flesch	-0.94	-0.99	-0.20	-0.99	-0.99	1.00	-0.99
Flesch-Kincaid	0.93	1.00	0.11	1.00	1.00	-0.99	1.00

Table 3: An example of grading inconsistencies between popular readability formulae. Three sample texts are provided, beginning with the All the World’s a Stage monologue uttered by Jacques in As You Like It, Act II Scene VII. The second and third texts are the encyclopedia entries on William Shakespeare taken from the Simplified English and standard Wikipedia, respectively. The grades shown are the maximum grade predicted for each text by each formula. Grade 13 is considered college-level, and Grade 17 graduate level, etc.

Text Sample	Dale-Chall	ARI	Coleman-Liau	Spache	Linsear Write	Flesch	Flesch-Kincaid
Shakespeare	12	14	10	8	17	9	12
Wiki Simple	13	11	11	7	11	12	9
Wiki Standard	14	14	13	8	17	13	13

Table 4: Correlation of author age and sex with readability formulae values in the Blog Authorship Corpus. The Sex row represents point-biserial correlation, and the Age row represents Pearson correlation.

	Dale-Chall	ARI	Coleman-Liau	Spache	Lensear Write	Flesch	Flesch-Kincaid
Sex	0.03	0.01	0.21	0.01	0.01	-0.03	0.01
Age	-0.08	-0.04	0.26	-0.06	-0.05	0.02	-0.04

Table 5: Point-biserial correlation of sex to blog readability scores for three self-declared vocation groups in the BAC. Rather than explaining away the relationship between sex and readability, grouping bloggers by vocation shows some professions exhibit more extreme sex bias in readability than others. Similar results are found for Pearson correlation of age to readability in these groups.

	Dale-Chall	ARI	Coleman-Liau	Spache	Lensear Write	Flesch	Flesch-Kincaid
Accounting	0.03	-0.01	0.40	-0.01	-0.01	-0.04	-0.00
Investment Banking	0.17	-0.07	0.64	-0.05	-0.10	-0.08	-0.07
Maritime	0.33	0.31	0.52	0.30	0.25	-0.41	0.31