Thea Readability Technical Code Notes

1. **The Flesch-Kincaid grade level**

was created by Rudolf Flesch as a way to interpret a US grade level from his Reading Ease formula. He originally created it for the US Navy to analyze their technical material. Since then, it's become a widely respected formula suitable for use with many types of text.

<https://readable.com/blog/the-flesch-reading-ease-and-flesch-kincaid-grade-level/>

Codes

"Flesch":

Flesch's Reading Ease Score (Flesch 1948).

*206.835 - (1.015 \* ASL) - (84.6 \* (Nsy / Nw))*

"Flesch.PSK":

The Powers-Sumner-Kearl's Variation of Flesch Reading Ease Score (Powers, Sumner and Kearl, 1958).

*(0.0078 \* ASL) + (4.55 \* Nsy / Nw) - 2.2029*

"Flesch.Kincaid":

Flesch-Kincaid Readability Score (Flesch and Kincaid 1975).

*0.39 \* ASL + 11.8 \* (NSy /Nw) - 15.59*

1. **The Automated Readability Index - ARI –**

was designed for military use. Originally, it was intended for typewriter tabulation. The variables focus on character and word counting and ensured a less laborious calculation method for the time. Now, it's still used widely but is especially useful for technical writing.

<https://readable.com/blog/how-did-the-automated-readability-index-become-an-essential-tool-for-technical-writers/>

Codes

"ARI":

Automated Readability Index (Senter and Smith 1967)

*0.5 ASL + 4.71 AWL - 21.34*

"ARI.Simple":

A simplified version of Senter and Smith's (1967) Automated Readability Index.

*ASL + 9 AWL*

1. **The FORCAST formula**

was the outcome of a study by HumRRO, which originally developed tools for the US army. FORCAST was developed to improve training documentation for new personnel. It doesn't rely on complete sentences for its analysis, so it's particularly useful for surveys, questionnaires, multiple question tests or any document containing lists or bullet points.

<https://readable.com/blog/how-did-the-forcast-readability-formula-help-create-readable-material-for-adults/>

Codes

"FORCAST":

FORCAST (Simplified Version of FORCAST.RGL) (Caylor and Sticht 1973).

*20 - (Nwsy1 \* 150) / (Nw \* 10)*

where *n\_{wsy=1}* = Nwsy1 = the number of one-syllable words. The scaling by 150 arises because the original FORCAST index is based on just a sample of 150 words.

"FORCAST.RGL":

FORCAST.RGL (Caylor and Sticht 1973).

*20.43 - 0.11 \* (Nwsy1 \* 150) / (Nw \* 10)*

where *n\_{wsy=1}* = Nwsy1 = the number of one-syllable words. The scaling by 150 arises because the original FORCAST index is based on just a sample of 150 words.

1. **The Linsear-Write calculation**

was originally created by John O'Hayre, an employee of the Bureau of Land Management in Denver, Colorado. He detailed the formula as a solution to what he called stuffy 'governmentese' or 'officialese'. With an emphasis on writeability, it can help you to write actively and directly. For the average adult reader, aim for a score between 70 and 80.

<https://readable.com/blog/lensear-write-readability-formula/>

"Linsear.Write":

Linsear Write (Klare 1975).

*[(100 - (100 \* Nwless3sy / Nw)) + (3 \* 100 \* Nwmin3sy / Nw)] / (100 \* Nst / Nw)*

where *n\_{wsy<3}* = Nwless3sy = the number of words with less than 3 syllables, and *n\_{wsy>=3}* = Nwmin3sy = the number of words with 3-syllables or more. The scaling by 100 arises because the original Linsear.Write measure is based on just a sample of 100 words)