

Literacy Readability

Literacy Readability and Cancer Education

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Workshop Objectives: By the end of the session, the participant will be able to:

1. Identify how to use “literacy” formulas within “Word®”.
2. Identify common mistakes using the Flesch-Kincaid literacy formulas within “Word®”.



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Literacy Readability



Health Literacy

Available within “Word®”, but several other literacy programs work just as well, if not better

Literacy

- 📖 The ability to read and write
- 📖 **QUESTION:** What does, “health literacy” mean?
- 📖 The ability to obtain, read, understand, and use health care information

Thank you, Barry Weiss, M.D., for the slides

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Literacy Readability

Overlooked because they don't fit the stereotype

- ☞ Many NALS-1 (functionally illiterate) readers
 - ☞ Are born in the U.S.A. (75%)
 - ☞ Are white (50%)
 - ☞ Hold full or part-time job (40%)
 - ☞ Finished high school (25%)

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National Adult Literacy Survey (NALS) 1992

[JAMA: 1999; 281:6: 552-557]

NALS Level 1 (20% population) Barry Weiss, M.D.

CAN

- o Sign name
- o Find expiration date on food container
- o Total bank deposit entry

CANNOT

- o Use bus schedule
- o Enter background info on SS appl
- o Find Intersection on street map



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Literacy Readability

National Adult Literacy Survey (NALS) 1992

- Almost 50% were **functionally illiterate** (NALS 1) or **marginally illiterate** (NALS 2)

NALS 1 (20%)

- o Sign name
- o Find expiration date on food container
- o Total bank deposit entry

NALS 2 (27%)

- o Use bus schedule
- o Enter background info on SS application
- o Find Intersection on street map



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NALS Levels 3-5

Level 3: write brief letter explaining error on credit card bill

Level 4: State in writing an argument made in lengthy newspaper article

Level 5: Use information in table to complete graph including labeled axes



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Literacy Readability

Easier-to-understand

- Short sentences
- Limited use of words that have multi-syllables (like “mammogram”)
- Avoid jargon and abbreviations

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Ways to enhance understanding

Use 1 or 2 syllable words when possible

“test” rather than “examination”

Use common language and phrasing

“throw away” rather than “discard”



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Ways to enhance understanding

Use common words rather than jargon

“number of deaths” rather than “mortality”

Use full words rather than abbreviations

“operating room” rather than “O.R.”



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Flesch-Kincaid Grade Level

Available within “Word®”, but several other literacy programs work just as well, if not better



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Flesch-Kincaid Grade Level

- ☞ This formula rates text on a U.S. grade-school level.
 - ⊕ a score of 8.0 means that an eighth grader can understand the document
- ☞ For most standard documents, aim for a score of approximately 5.0 to 7.0 grade level



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Literacy – NACR's modifications

- ☞ Average reading level for all US (i.e., not limited to AIANs) is grade 7.
- ☞ Typically, the reading level is 2 years under highest grade of completion, so high school graduate SHOULD be able to read 9th grade.



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Literacy Readability

Literacy – NACR's modifications

- ☪ Conversely, some people with only 9th grade education have self-taught themselves and may read at much higher level (like grade 14)
- ☪ Thus, NACR aims for grade reading levels 5, 6, and 7 for our materials unless we know it is technical or professional audience.



Literacy – NACR's modifications

- ☪ In Word, go to “tools”
 - ☪ scroll down to “options”
 - ☪ click on tab for “spelling and grammar”
 - ☪ Last option on that pull-down screen is “show readability statistics”. Check the box
 - ☪ Block the paragraph in Word that you want to check.



Literacy Readability

Literacy – NACR's modifications

- 🥁 In Word, click on “Tools”
- 🥁 Click on “Spelling and Grammar”. Once the program checks the paragraph, a box comes up asking if you want to check the rest of the document. Click “no” and then the readability scale will be displayed. The bottom 3 items are the important ones.



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Literacy – NACR's modifications

- 🥁 Passive sentences – you want this to be as close to 0% as possible. Higher percentages (like 40% and higher) of passive sentences makes comprehension more difficult, particularly for elders.
- 🥁 Flesch Reading Ease – you want this to be as close to 100% as possible



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Literacy Readability

Literacy – NACR’s modifications

- 📖 Flesch-Kincaid Grade Level – you want this to be 7.0 and lower.
 - 🌐 When this item shows “0” it means that insufficient amount of text was blocked (like if you blocked a single bullet phrase) ...
 - 🌐 so you have to check more than this amount of text to get an estimate of literacy.



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Readability Scales

Readability Statistics	
Counts	
Words	88
Characters	419
Paragraphs	1
Sentences	8
Averages	
Sentences per Paragraph	8.0
Words per Sentence	11.0
Characters per Word	4.6
Readability	
Passive Sentences	12%
Flesch Reading Ease	60.1
Flesch-Kincaid Grade Level	7.6

OK

What do you want this percentage to be?

What do you want this number to be?

What do you want this number to be?



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Literacy Readability

Things to keep in mind ...

- 📄 Technical terms potentially decrease comprehension even further.
 - ➡ BUT, the terms themselves do NOT affect the formula because the number of syllables within a sentence is the primary matter.



Things to keep in mind ...

- 📄 This complexity is independent of the number of syllables
- 📄 For example, “elephant” and “placebo” have the same number of syllables, yet most people understand “elephant” but not “placebo”



Literacy Readability

Weaknesses in Readability Calculations

1. I like seeing elephants at the zoo.

Flesch Reading Ease = 78.8
Flesch-Kincaid Grade Level = 3.9

2. The nurse will not dispense the placebo.

Flesch Reading Ease = 78.8
Flesch-Kincaid Grade Level = 3.9

The formulas do not account for common usage of words i.e. dispense and placebo are not commonly understood, yet they score the same.



Weaknesses in Readability Calculations

1. The nurse will not dispense the placebo.

Flesch Reading Ease = 78.8
Flesch-Kincaid Grade Level = 3.9

2. The nurses will not dispense the placebo.

Flesch Reading Ease = 66.7
Flesch-Kincaid Grade Level = 5.6

Just by making "nurse" plural ...



Literacy Readability

Weaknesses in Readability Calculations

Factors such as punctuation can have a disproportionate impact on scores.

1. Please call Sharon Han, **RN** for more information.





Flesch Reading Ease = 71.8
Flesch-Kincaid Grade Level = 5.2


2. Please call Sharon Han, **R.N.** for more information.

Flesch Reading Ease = 63.4
Flesch-Kincaid Grade Level = 6.7



Factors with no effect on scores

-  Bullets
-  Number lists
-  Parentheses
-  Quotation marks

-  Hyphens inconsistently affected scores

