

Use of Readability Formulae in New York State English Language Arts Assessments (Grades 4 and 8)

A variety of readability formulae currently exist that can be used to help determine the readability level of text. The formulae most associated with the K-12 environment are the Dale-Chall, the Fry, and the Spache formulae. Others (such as Flesch-Kincaid) are more associated with general text (such as newspapers and mainstream publications).

Readability formulae provide some useful information about the reading difficulty of a passage or stimulus. However, it should be noted that a readability score is not the most reliable indicator of grade-level-appropriateness and, therefore, should not be the sole determinant of whether a particular passage or stimulus should be included in assessment or instructional materials.

Readability formulae are quantitative measures that assess the surface characteristics of text (e.g., the number of letters or syllables in a word, the number of words in a sentence, the number of sentences in a paragraph, the length of the passage). In order to truly measure the readability of any text, qualitative factors (e.g., density of concepts, organization of text, coherence of ideas, level of student interest, quality of writing) must also be considered.

One basic drawback to the usability of readability formulae is that not all passage or stimulus formats can be processed. To produce a score, the formulae generally require a minimum of 100 words in a sample. (For Flesch Reading Ease and the Flesch-Kincaid, 200-word samples are recommended.) This requirement renders the readability formulae essentially unusable for passages such as poems and many functional documents. Another drawback is evident in passages with specialized vocabulary. For example, if a passage contains scientific terminology, the readability score might appear to be above grade-level, even though the terms might be footnoted or explained within the context of the passage.

In light of the drawbacks that exist in the use of readability formulae, rather than relying solely on readability indices, CTB relies on the expertise of the educators in the State of New York to help determine the suitability of passages and stimuli to be used in statewide assessments. Prospective passages are submitted for review to panels of New York State educators familiar with the abilities of the students to be tested and with the grade-level curricula. The passages are reviewed for readability, appropriateness of content, potential interest level, quality of writing, and other qualitative features that cannot be measured via readability formulae.