A Brief Comparison of Readability Formulas

Figure 2.5 contains Harrison's (1980) analysis of the validity, accuracy, and convenience of four of the five formulas discussed here. The Fry graph and the Flesch–Kincaid Grade Level have similar levels of validity and accuracy but the Fry is easier to apply. The Spache formula is quite valid but not quite as accurate as the Fry and the Flesch–Kincaid at age 8 (grade 3). The Dale–Chall formula trumps all in validity and accuracy at grade 3 and higher but is not as convenient. When convenience is an issue, either the Fry or the Flesch will suffice for upper elementary materials because they are highly correlated. Both the Spache and the Primary Readability formulas work best for materials at grades 1 and 2, but the latter has a more recent word list. Table 2.3 compares formula results for a list of common books. Overall, you can see that readability formulas rarely agree with each other exactly. You will get different results depending on the formula used. Specific results tend to differ most at the primary grades, where readability formulas are inherently limited (see Advantages and Disadvantages sections). These comparisons confirm that formulas only provide estimates.

	Validity	Age level accuracy (8–16 age range)	Ease of application
Flesch formula (Grade score)	••••	•••	••
Fry graph	••••	•••	•••
Powers–Sumner–Kearl formula	••••	•	•••
Mugford formula and chart	••••	••••	••
FOG formula	•••	••	••••
SMOG formula	•••	••	•••••
Dale–Chall formula	•••••	••••	•
Spache formula	••••	••	••
FORCAST formula	••	••	••••

Note. The greater the number of indicators (•), the better the performance of the tool. *The Powers et al., FOG, SMOG, and FORCAST formulas are not reviewed in the book.*

FIGURE 2.5. A comparison of the validity, accuracy, and ease of application for readability formulas. From Harrison (1980). Copyright 1980 by Cambridge University Press. Reprinted by permission.