DOCUMENT RESUME

ED 239 246 CS 007 501

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TITLE A Comparison of Social Science Textbook Readability and Students' Reading Levels.
PUB DATE Dec 83
NOTE 23p.; Paper presented at the Annual Meeting of the American Reading Forum (4th, Sarasota, FL, December 8-10, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; College Students; Comparative Analysis; *Grades (Scholastic); Higher Education; *Readability; Readability Formulas; *Reading Achievement; *Reading Research; Social Sciences; *Study Habits; Study Skills; *Textbook Content; Textbook Evaluation; Textbook Research

ABSTRACT

The first phase of a study investigating textbook readability and students' reading levels used three traditional formulas to assess the readability levels of 51 primary textbooks from college introductory social science courses in 7 disciplines. The second phase investigated the relationship between the readability levels of students' texts, students' reading levels and study habits, and their final grades. The three-formula readability analysis indicated that, on the average, the 51 social science texts were written at the low-to-mid college level. The Fog Index yielded consistently higher results than the Fry and SMOG formulas. The main reading level was 15.1, with 80% of the students placing at or above the college level and 40% scoring at the top of the reading level scale. Students generally showed a high number of strengths in study habits, which was partly attributed to their having received instruction in how to study. When reading levels were categorized, an overall positive relationship was revealed between reading levels and final grades. No discernible relationship was found between study habits and final grades. (HOD)

A COMPARISON OF SOCIAL SCIENCE TEXTBOOK READABILITY AND STUDENTS' READING LEVELS

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American Reading Forum
December 1983

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Developmental educators work arduously to diagnose and remediate the academic deficiencies of their students. Too often, however, the reference point of our efforts is a national, or some other presumedly valid, standard (e.g., grade "13" reading level), rather than the characteristics of the local general college population. As those responsible for initiating and evaluating programming for our students enrolled in developmental education courses, the researchers sought to learn more about some of the factors that affect success among the non-remedial student -- the student with whom our developmental education students must compete in standard course work. Specifically, we wanted to identify the readability levels of textbooks used in introductory college courses, and the reading levels and typical study habits employed by the general college population. Lastly, we investigated whether these factors correlated with students' final grades.

The study consisted of two phases. Phase I assessed the readability levels of 51 primary textbooks used in introductory social science courses in seven disciplines. Three traditional formulas were used. The second phase investigated the relationship between the readability levels of students' texts, students' reading levels and study habits, and their final grades.

The study was conducted during the 1982-83 academic year at Indiana University of Pennsylvania, a public university located in central-western Pennsylvania. Its undergraduate population is approximately 11,000 students, including the Main campus and the two branch campuses. The average SAT score of entering freshmen at the Main campus is slightly higher than 1000, and the average at the branches is approximately 800.

In order to fulfill the University's general education requirement, all students must complete a minimum of five introductory social science courses. This constitutes approximately 30% of the general education requirement. Courses fulfilling this requirement are offered through the following departments: History, Anthropology/Sociology, Criminology, Economics, Geography, Psychology and Political Science.

Social science courses were selected as the basis for this study for three reasons: they are the largest single group of courses in which the undergraduate population enrolls, they utilize the largest number of different textbooks for introductory course work, and they were most likely to provide the greatest range of students representative of the university in general.

Phase I: Readability

The purpose of this part of the study was to identify the readability levels of primary textbooks used in introductory social science courses, using three traditional formulas. The differences in findings among the formulas is presented.

There is little literature available which reports the readability results of college-level texts. Kurzman (1974) analyzed 23 social science texts using the SMOG formula. He concluded that 60% were written at or above the 15th grade level. A study by McClellan (1971), utilizing the Dale-Chall formula, reported that 40% of the 20 texts from various content areas placed above the 16th grade level. In contrast to these results, Cline (1972-73) found that only nine of the 17 non-technical texts he assessed using the Dale-Chall formula placed at or above the college freshmen level. No literature was located which compared the three formulas used in this study.

Method

Procedure

To identify textbooks commonly used in introductory social science courses, 41 faculty members who were teaching introductory social science classes in the Fall 1982 semester were asked to provide the titles of the primary texts commonly used

for the same or similar courses. Twenty-six of the faculty responded, and provided 53 different titles. Fifty-one of the texts, representing all content areas above, were available for readability analysis.

Three readability formulas, the Fry (1977), SMOG (1969) and Fog Index (1972) were used. Each is a two-factor formula based on a semantic variable (number of syllables or number of polysyllabic words) and a syntactic variable (sentence length). These formulas were selected because of their popularity of use and their ease of application. With reference to formulas such as these, Klare (1974-75) has stated that two-variable formulas are sufficient for most purposes, and that added variables generally add little predictive value in comparison to the application time involved.

While the authors' directions for each formula indicate that a sample of three passages per book is minimally sufficient for analysis, five passages from each text were included for the Fry and Fog analyses, and three passages per book were included for the SMOG. In each case, the same passages were selected for inclusion; however, those used for SMOG were longer, containing ten sentences each, rather than the 100-word passages needed for Fry and Fog. The passages were selected by dividing the texts into fifths, and selecting samples which contained essentially prose material with little or no numerical references, graphs or other textual aides as part of the body of the material.

Results

The results of the readability assessment for each formula are reported in Table 1 (Appendix). The content areas and number of texts assessed for each include: Criminology (5); Economics (6); Geography (5); History (11); Sociology (13); Political Science (3), and Psychology (8).

Overall

The highest readability estimates were obtained using the Fog Index, which yielded a mean readability level of 15.5 for the 51 texts. The Fry and the SMOG yielded approximately equal means of 13.3 (Fry) and 13.4 (SMOG). Both the Fry

and the Fog had ranges of 8+ grade levels, while the SMOG had a considerably more restricted range of 5 grade levels.

Content Areas

The Fog Index yielded a mean readability estimate of at least one grade level higher than those of the Fry and SMOG in six of the seven content areas, with Geography being the exception. In contrast, the Fry and SMOG produced approximately equal means (i.e., within one grade level) in all seven content areas. In computing a mean ranking for the three formulas for each content area, the economics texts had the lowest readability estimate overall, and the political science and sociology texts had the highest. Average sentence length appears to account for the higher grade level findings in these content areas.

Individual Texts

With reference to individual texts (rf: Table II), the Fog Index resulted in an average score of 2-2½ grade levels higher than the Fry and the SMOG. The Fog Index yielded results of more than one grade level higher than the Fry and the SMOG in approximately 75% of the cases. Geography was the only content area in which the Fog results were not consistently higher than the Fry and the SMOG.

The Fry and SMOG results were equal (within one grade level) for 55% of the individual texts. Fry resulted in higher scores than the SMOG in 25% of the cases, and SMOG resulted in higher scores than Fry in 20% of the texts. In comparing the Fry and the SMOG, equal scores were found more frequently in the criminology, economics, geography and history texts, and least frequently in the sociology, political science and psychology texts. There was no discernible pattern of ranking on the SMOG/Fry for the last three content areas.

Table 2

Comparison of Ranking of Readability Estimates

by Content Area

Formula Ranking	Number of Cases	Percent	CRIM (5)	ECON (6)	GEOG (5)	HIST (11)	SOC (13)	PSCI (3)	PSYCH (8)
Fry = SMOG*	28/51	55%	60%	67%	60%	82%	31%	33%	50%
Fry > SMOG	13/51	25%	40%	17%	20%	0%	46%	33%	25%
SMOG > Fry	10/51	20%	0%	17%	20%	18%	23%	33%	25%
Fog = Fry*	10/51	20%	0%	0%	40%	0%	38%	0%	38%
Fog > Fry	39/51	76%	100%	100%	40%	100%	62%	100%	50%
Fry > Fog	2/51	4%	0%	0%	20%	0%	0%	0%	13%
Fog = SMOG*	12/51	23%	20%	0%	60%	9%	31%	33%	25%
Fog > SMOG	38/51	.75%	80%	100%	20%	91%	69%	67%	75%
SMOG > Fog	1/51	2%	0%	0%	20%	0%	0%	0%	0%

*EQUALS is defined as a difference of one grade level or less

Phase II: A Comparison of Readability, Reading Ability, Study Habits and Final Grades

The second phase of this study was to compare the reading levels of the students enrolled in introductory social science classes with the readability levels of the primary texts used in those classes. An assessment of the relationship between students' study habits and reading levels, and their final grades, is also investigated.

McClellan (1971) investigated the reading ability of junior college students and the readability of assigned texts. Of the 358 students tested with the Nelson-Denny Reading Test, approximately one-third of the subjects scored in each of three grade ranges: below 10th grade, 10-12th grade, and 13+ grade. The readability of the texts used in the four social science courses in which the students were enrolled was determined by the Dale-Chall formula. In all cases the read-

ability level of the texts was significantly higher than the mean reading levels of the students. She concluded that none of the texts used in the social science courses was appropriate for the students.

Cline (1972-73) conducted a similar study with 279 community college students. Using the Dale-Chall formula the mean readability level of 17 non-technical texts was found to be 13.0. The mean reading level of the students was 12.6, as measured by the Nelson-Denny Reading Test. Fifty-two percent of the students in all seventeen classes were found to have reading levels below the texts being used.

A study by Kurzman (1974) also found the readability of college textbooks to be higher, on the average, than the reading levels of the freshmen. The mean reading level of the 81 freshmen tested with the Nelson-Denny Reading Test was found to be 10.4, while the mean readability level of the 23 social science texts was found to be on the 14th grade level. The SMOG formula was used to determine readability level. Two reading specialists were asked to estimate the readability level of these texts using the following criteria: a number of polysyllabic words, sentence complexity, style, density, typography, and organization for learning. The reading levels assigned to these texts by the reading specialists correlated with the finding of the SMOG formula ($r = .69$). The researcher concluded that the readability level of social science texts in most cases was many grade levels above the reading levels of the students who were to use them.

Method

Subjects

The subjects were 158 students enrolled in eight sections of four introductory social science couses at Indiana University of Pennsylvania. The courses included World Geography (GE 101), History of US & PA II (HI 104), General Administration of Justice (CR 101), and General Psychology (PC 101). Student participation was voluntary. About 50% of those students enrolled in the specific sections used took part in the study. The majority of the other students did not refuse to

participate in the study -- they were not present in class the day the research took place. With the exception of one class section, students did not have knowledge of their potential participation in the study until they arrived in class the day the testing took place.

The majority of the subjects were freshmen (55%). Thirty-four percent were upperclassmen and 11% were not classified in these traditional categories. Seventy-five percent of the students attended the Main campus and 25% attended the Armstrong County branch campus.

Materials

The comprehension section of the Nelson-Denny Reading Test, Form E (1981) was used to assess the reading levels of the subjects.

Students also completed a study habits questionnaire taken from Bragstad and Strumpt (1982). This 50-item questionnaire includes seven categories of study habits: concentration, remembering, organizing time, studying a text, listening and notetaking, test-taking and motivation.

The instructors submitted the final grades earned by the subjects at the conclusion of the Spring semester.

Procedures

Six of the social science faculty members who responded to the first phase of this study agreed to provide class time for the administration of the materials used in this study. A total of 8 class sections was used. These instructors used a primary text as required reading for the course.

In each class section the same procedure was followed. An explanation of the purposes (requirements and procedures) of the study was presented to each class. The students who volunteered to participate could receive their results and an interpretation of the same upon request.

The comprehension section of the Nelson-Denny Reading Test, Form E was administered and scored according to the test directions. Students then completed the Study Habits Questionnaire by answering yes or no to each item as

an indication of whether the statements reflected their study habits for the courses they were in at the time of administration.

Results

Reading Levels

The mean reading level of all participants was 15.1. When year in school is taken into consideration, the upperclassmen averaged 16.2, the freshmen averaged 15.1, and those students with an unclassified status averaged 14.2.

The reading levels ranged from 4.9 (2 students) to 16.5+ (63 students) for all students tested. Eighty percent of the total group scored at or above the college level (13-16.5+). This figure represents 77% of the freshmen, 89% of the upperclassmen, and 72% of the unclassified students. There was 11% of the total group who scored below the 11.0 reading level and 5% who scored below the 8.0 reading level.

Readability and Reading Levels

In most cases the mean reading level of each class section approximated or exceeded the readability level of the primary textbook as identified by the three formulas used in this study.

In terms of the Fry estimate, students' reading levels exceeded the textbook readability level in 48% of the cases and approximated the readability level in 16% of the cases. Thirty-seven percent of the students are reading below the textbook readability level identified by the Fry estimate.

With respect to the SMOG formula, 63% of the students are reading above the readability level of the textbook, 8% are reading at about the same level as the readability, and 28% are reading below the readability level indicated by this formula.

Results based on the Fog Index are less clearly reported on a parallel basis becasue for three of the five textbooks the readability level approximates the maximum reading level obtainable on the reading test. Thus, whether some students' reading levels exceed the readability levels of those specific textbooks cannot

be determined. The results do show that 48% of the students have reading scores that are equal to or above the readability level of the textbook used in their class. Fifty-two percent of the students received scores below the readability level as assessed by the Fog Index.

Correlations were computed for each of the three formulas for reading level and readability level of the five texts used. None of the three correlations, which ranged from -0.10 to +0.14, was significant at the .05 level.

Study Habits and Reading Levels

The results of the study habits questionnaire were reported in terms of strengths (six or seven statements in agreement with predetermined answers), neutrals (three to five statements in agreement), and weaknesses (zero to two statements in agreement). The answers were based on efficient study habits recommended in texts on study habits and techniques (Pauk, 1974; Shepherd, 1979).

The total sample showed a mean number of strengths as 3.77, neutrals as 2.92, and weaknesses as .32, based on a total of seven categories. This pattern of the mean was repeated in all but one class section, where the number of categories designated as neutral exceeded those indicated as strengths.

The rank order of the study habits categories by the number of strengths were: motivation, listening/notetaking, remembering, test-taking, organizing time, concentration, and studying a chapter. In the four classes comprised of 33-50% freshmen, there was not a significant variation between the number of strengths, neutrals or weaknesses indicated by freshmen versus the upperclassmen. For example, in one section of Geography, 40% of the students were freshmen and 43% of the total number of strengths were reported by freshmen. Other class sections were predominately freshmen or upperclassmen, but did not represent a a proportional mix of responses according to student classification.

The correlations of reading levels with the number of strengths, neutrals and weaknesses of study habits, respectively, ranged from -0.49 to +0.61 for the individual classes. Generally, there was a higher correlation between the number

of strengths and reading levels, except for two class sections where the neutral categories showed a higher correlation. For the total group significant correlations at the .01 level were found for the number of strength categories and reading levels (0.25) and the number of neutral categories and reading levels ((-0.32).

Final Grades

The final grade distribution of the 158 participants is as follows: A-30 (19.0%); B-39 (24.7%); C-59 (37.3%); D-16 (10.1%); F-9 (5.7%); W/I-4 (2.5%). With the exception of one class, the grades are representative of the final grade distribution of the total student enrollment in these classes, according to the instructors.

Reading Levels/Final Grades: Determination of the correlation between reading levels and final grades was based on the number correct on the comprehension section of the Nelson-Denny Reading Test, Form E. For the purposes of analysis, courses taught by the same instructor are grouped together.

A moderate overall correlation of +0.48 was obtained; however, the correlations for the separate instructor's classes show a considerable range. For two of the five course groupings, there is little relationship between students' reading levels and their final grades -- HI 104 (+0.15) and GE 101-A (+0.22). Moderate correlations of +0.40 and +0.44 were obtained for the PC 101 B,C and the PC 101-A classes respectively, and a relatively strong correlation of +0.71 was obtained for the GE 101-B class. (Note: CR 101 was excluded from this analysis because there was no variation in the students' final grades. This class included 10 subjects.)

Table III, which presents the final grade distribution by reading level groupings, shows the general trend that students with higher reading levels received higher grades, and that students with lower reading levels received lower grades. The difference between the mean GPA's of those in the highest reading level category (16.5+) and those in the lowest reading level category (below 10.0) is nearly

two grade levels on a four-point scale (i.e., 2.95 versus 1.38). Intermediate reading levels show a corresponding increase in mean grades as the reading levels increase.

Table 3

Composite Final Grade Distribution
by Reading Level Category

Final Grade	Reading Level Category				
	16.5+	16.5-15.1	14.7-13.1	12.4-10.1	below 10.0
A	23	5	1	1	0
B	16	9	9	2	3
C	18	18	14	7	3
D	4	2	3	4	3
F	0	1	1	3	4
W/I	1	1	1	1	0
N	62	36	29	18	13
Mean QPA	2.95	2.51	2.21	1.65	1.38

Study Habits/Final Grades: Correlations were computed per class for each study habits category (Strengths/Neutrals/Weaknesses) and final grades. Only two moderately high correlations were obtained, and these were for the same class, GE 101-A. These were statistically significant correlations ($p < .01$) of +0.63 between study habits-strengths/final grades and -0.71 between study habits-weaknesses/final grades. This indicates that, for this particular class, students with the highest number of reported study habits strengths received the highest grades, while those with the highest number of study habits weaknesses received the lowest grades. This finding was not true of the other classes. For these, a mixed pattern was found between the number of study habits strengths and the final grades

students received. The correlations in the remaining classes ranged from -0.26 to +0.28, indicating little relationship between the number of positive study habits utilized and the final grades received.

DISCUSSION AND CONCLUSIONS

Readability

The three-formula readability analysis indicated that, on the average, the 51 social science texts are written at the low-to-mid college level. The Fog Index yielded consistently higher results than the Fry and the SMOG formulas. The differences averaged 2 - 2½ grade levels for all content areas except Geography.

The Fry and SMOG formulas yielded essentially equal results, within one grade level, for 55% of the texts, particularly within the content areas of geography, economics, history and criminology. These two formulas yielded unequal results for many of the political science, psychology and sociology texts; however, there was no consistent pattern of rankings between the two formulas for these texts.

Reading Level/Readability

The mean reading level was 15.1, with 80% of the students placing at or above the college level. Forty percent of the participants scored at the top of the reading level scale. The upperclassmen placed one grade level above the freshmen, and two grade levels above students in the unclassified category.

While the mean reading level of the participants is relatively high, and while the overall readability levels of all texts surveyed (51) was in the low-to-mid college level, those texts actually used by the participants in the study have readability levels which are above as many as one-third of the students. According to the Fry formula, approximately 33% of the students have reading levels two or more grade levels below the readability levels of their social science texts. With respect to the SMOG formula, 20% of the students' reading levels are two or more grade levels below their texts. In contrast, nearly 50% of the students'

reading levels are at least two grade levels below the textbook readability levels assessed by the Fog Index.

Study Habits

Students generally showed a high number of strengths in regard to study habits -- 3.8/7.0. This could be attributed to the information gathered from the instructors, since all had indicated that they provide instruction on how to study for their courses. The data taken from the study habits questionnaire is self-report data; however, the fact that participation in the study was completely voluntary, with results being reported only the student, should have considerably deterred the reporting of false data. Even if the validity of the data about actual study habits were questioned, the information still signifies the amount of knowledge that the students possess about efficient study habits. Interestingly, though, there was no significant difference between the study habits reported by the freshmen and those reported by the upperclassmen.

Final Grades

The researchers expected to find significant correlations between students' final grades and their reading levels and study habits. A moderate correlation of +0.48 ($p < .01$) was found between reading levels and final grades; however, the analysis per class resulted in a considerable range of results -- +0.15 to +0.71. This indicates that students' reading levels and their final grades are strongly related in some classes and not strongly related in others. There was a general trend, evident when reading levels were categorized, that showed an overall positive relationship between reading levels and final grades.

In general, there was no discernible relationship found between study habits and final grades. The high number of strengths reported in comparison to the low number of weaknesses most likely contributed to the low correlational finding.

Several factors may have affected the results of this study. There was a disproportionate number of students who placed at the top of the reading level scale, thus affecting the variance. Second, the fact that study habits is self-report data may have resulted in some biased data. Third, the generalizability of results is limited due to participation by only 50% of the potential sample population, even though the instructors indicated that the participants and the non-participants were similar in academic performance.

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Shepherd, J.F. College study skills. Boston: Houghton-Mifflin, 1979.

APPENDIX

Table 1

Social Science Textbook Readability Levels According to Three Formulas

Content Area and Textbook	Readability Level according to: FRY	SMOG	FOG
Criminology			
Cole, G. F. The American System of Criminal Justice (2nd ed.). North Scituate, Mass.: Duxbury Press, 1979.	14	10.9	16.1
Holten, N. G. and Jones, M. E. The System of Criminal Justice. Boston: Little, Brown and Company, 1978.	14	10.7	16.7
Johnston, N. and Savitz, L. D. Legal Process and Corrections. New York: John Wiley and Sons, 1982.	13	13.1	15.7
Pursley, R. D. Introduction to Criminal Justice (2nd ed.). Encino, California: Glenco Publishing Company, 1980.	12	12.9	14.9
Savitz, L. D. and Johnston, N. Contemporary Criminology. New York: John Wiley and Sons, 1982.	15	15.6	16.7
Economics			
Heyne, P. Economic Way of Thinking (4th ed.). Palo Alto, California: Science Research Associates, 1982.	11	12.8	14.3
Miller, R. L. Economics Today (4th ed.). New York: Harper and Row, 1982.	14	14.1	16.0
Samuelson, P. A. Economics (11th ed.). New York: McGraw-Hill, 1980.	12	13.4	14.5
Weidenaar, D. J. and Weiler, E. T. Economics: An Introduction to the World Around You (2nd ed.). Reading, Massachusetts: Addison-Wesley, 1979.	11	12.1	13.6
Weiss, L. W. Economics and Society (2nd ed.). New York: Jon Wiley and Sons, 1981.	12	11.8	13.5
Heilbruner, R. L. and Thurow, L. C. Five Economic Challenges. Englewood Cliffs, New Jersey: Prentice-Hall, 1981.	15	13.3	16.5
Geography			
Doerr, A. H. and Guernsey, J. L. Principles of Physical Geography (2nd ed.). Woodbury, New York: Barron's Educational Series, 1976.	16	13.6	14.8

Table 1 (cont.)

Content Area and Textbook	Readability Level according to: FRY	SMOG	FOG
Geography (continued)			
Getis, A., Getis, J., and Fellman, J. Geography. New York: MacMillan, 1981.	15	15.8	16.8
Haggett, P. Geography: A Modern Synthesis (3rd ed.). New York: Harper and Row, 1979.	11	12.7	10.6
Kendall, H. M., Glendinning, R. M., MacFadden, C. H., Logan, R. F., and MacFadden, H. C. Introduction to Geography (5th ed.). New York: Harcourt Brace Jovanovich, 1976.	13	13.4	16.3
White, C. L., Foscue, E. J., and McKnight, T. L. Regional Geography of Anglo-America (5th ed.). Englewood Cliffs, New Jersey: Prentice-Hall, 1979.	14	13.7	15.0
History			
Bailey, T. A. The American Pagent, Vol. II, (5th ed.). Lexington, Massachusetts: D. C. Heath, 1975.	13	13.3	16.2
Blum, J. M., Morgan, E. S., Rose, W. L., Schlesinger, A. M., Stampp, K. M., and Woodward, C. V. The National Experience (4th ed.). New York: Harcourt Brace Jovanovich, 1977.	12	11.6	13.3
Burns, E. M., Ralph, P. L., Lerner, R. E., and Meacham, S. World Civilizations: Their History and Culture, Vol. I, (6th ed.). New York: W. W. Norton, 1982.	12	12.9	15.8
Current, R. N., Williams, T. H., and Freidil, F. American History: A Survey, Vol. II, (5th ed.). New York: Alfred A. Knopf, 1979.	10	11.7	13.2
Garraty, J. A. The American Nation: A History of the United States Since 1865, Vol. II, (4th ed.). New York: Harper and Row, 1979.	14	14.1	16.0
Grob, G. N. and Billias, G. A. Interpretations of American History: Patterns and Perspectives, Vol. II, (3rd ed.). New York: The Free Press, 1978.	14	14.6	17.9
Kagan, D., Ozment, S., and Turner, F. M. The Western Heritage to 1715. New York: MacMillan, 1979.	13	12.6	15.8

Table 1 (cont.)

Content Area and Textbook	Readability Level according to: FRY	SMOG	FOG
History (continued)			
Leuchtenburg, W. E. A Troubled Feast: American Society Since 1945. Boston: Little, Brown and Company, 1983.	12	13.7	15.0
Norton, M. B., Katzman, D. M., Escott, P. D., Chudacoff, H. P., Paterson, T. G., and Tuttle, W. M. A People and A Nation: A History of the United States, Vol. I, Boston: Houghton Mifflin, 1982.	14	12.7	15.9
Norton, M. B., Katzman, D. M., Escott, P. D. Chudacoff, H. P., Paterson, T. G., and Tuttle, W. M. A People and A Nation: A History of the United States, Vol II, Boston: Houghton Mifflin, 1982.	12	11.3	14.3
Wallbank, T. W., Taylor, A. M., and Bailey, N. M. Civilization: Past and Present, Vol. I, (7th ed.). Glenview, Illinois: Scott, Foresman, 1976.	13	14.1	15.6
Sociology			
Anderson, C. H. Toward A New Sociology. Homewood, Illinois: The Dorsey Press, 1974.	17+	15.2	18.1
Babbie, E. Understanding Sociology: A Context for Action. Belmont, California: Wadsworth, 1982.	15	12.6	16.2
Broom, L. and Selznick, P. Sociology: A Text With Adapted Readings (5th ed.). New York: Harper and Row, 1973.	16	14.5	17.2
Denisoff, R. S. and Wahrman, R. An Introduction To Sociology (2nd ed.). New York: MacMillan, 1975.	14	13.8	17.7
Hess, B. B., Markson, E. W., and Stein, P. J. Sociology. New York: MacMillan, 1982.	16	15.1	17.1
Horton, P. B. and Hunt, C. L. Sociology (4th ed.). New York: McGraw-Hill, 1976.	15	13.8	15.0
Kenkel, W. F. Society in Action: Introduction to Sociology (2nd ed.). New York: Harper and Row, 1980.	9	11.5	13.0
Lenski, G. and Lenski, J. Human Societies: An Introduction to Macrosociology (3rd ed.). New York: McGraw-Hill, 1978.	17+	15.6	18.6

Table 1 (cont.)

Content Area and Textbook	Readability Level according to: FRY	SMOG	FOG
Sociology (continued)			
Light, D. and Keller, S. Sociology (3rd ed.) New York: Alfred A. Knopf, 1982.	14	14.0	15.2
Luhman, R. The Sociological Outlook: A Text With Readings. Belmont, California: Wadsworth, 1982.	10	13.3	13.3
Robertson, I. Sociology (2nd ed.). New York: Worth Publishers, 1981.	16	14.0	16.1
Scherer, J. (Ed.) Sociology, Guilford, Connecticut: Dushkin Publishing Group, 1981.	11	15.6	16.0
Zanden, V. and Wilfrid, J. Sociology. New York: John Wiley and Sons, 1979.	16	14.3	16.6
Political Science			
Burkhart, J. A., Krislov, S., and Lee, R. L. The Clash of Issues: Readings and Problems in American Government (5th ed.). Englewood Cliffs, New Jersey: Prentice-Hall, 1976.	13	16.0	16.5
Burns, J. M., Peltason, J. W., and Cronin, T. E. Government by the People: National Edition (10th ed.). Englewood Cliffs, New Jersey: Prentice-Hall, 1978	16	14.2	17.8
Rosen, S. J. and Jones, W. S. The Logic of International Relations (3rd ed.). Cambridge, Massachusetts: Winthrop Publishers, 1980.	14	12.5	15.4
Psychology			
Baron, R. A., Byrne, D. E., and Kantowitz, B. H. Psychology: Understanding Behavior (2nd ed.). New York: Holt, Rinehart, and Winston, 1980.	13	12.2	14.0
Coon, D. Introduction to Psychology: Exploration and Application (2nd ed.). St. Paul: West Publishing, 1980.	12	11.8	12.7
Kagan, J. and Havemann, E. Psychology: An Introduction (4th ed.). New York: Harcourt Brace Jovanovich, 1980.	11	13.1	15.2
McConnell, J. V. Understanding Human Behavior: An Introduction to Psychology (3rd ed.). New York: Holt, Rinehart, and Winston, 1980.	10	13.2	14.2

Table 1 (cont.)

Content Area and Textbook	Readability Level according to: FRY	SMOG	FOG
Psychology (continued)			
Price, R. H., Glickstein, M., Horton, D. L., Bailey, R. H. Principles of Psychology. New York: Holt, Rinehart, and Winston, 1982.	17+	13.8	16.1
Rubin, Z. and NcNeil, E. B. The Psychology of Being Human. New York: Harper and Row, 1981.	15	13.6	16.4
Wortman, C. B., Loftus, E. F., and Marshall, M. Psychology. New York: Alfred Knopf, 1981.	17+	14.6	16.4
Zimbardo, P. G. Essentials of Psychology and Life (10th ed.). New York: Scott, Foresman, 1980.	15	13.6	16.4