Readability of Feature Articles in Trade Periodicals

Roger Baur[1] and Allen Zimmerman[1]
Department of Arts, Science, and Business, The Ohio State University, ATI, Wooster Oh 44691-4000

Abstract

Trade periodicals serve as important sources of information for industry personnel and are valuable as supplemental reading in college courses. Therefore, it is critical that college students and graduates have reading skills that match or exceed the readability levels of trade periodicals. This article reports that the average readability of feature articles in major trade periodicals was similar to the readability of first-year level college textbooks and higher than the average reading skill level of many students entering an associate degree college.

Introduction

Trade periodicals are important sources of current and practical technical information for industry personnel. Given the increasing pace of technological change, trade periodicals provide an excellent media for promptly conveying the latest trends, state-of-the-art practices, and new procedures in a concise and practical format to industry personnel. These characteristics also make them valuable sources of information for college students in technology courses and they are often assigned as supplemental reading materials by college faculty. Therefore, it is critical that students, while in college and after they graduate, be able to read and comprehend the feature articles in trade periodicals.

Readability is defined in the context of reading skills. Several standardized tests have been constructed to evaluate the reading skills of individuals. Zimmerman and Houston (1994) summarized information in the literature about reading skill tests and reported on the reading skills of students entering The Ohio State University, Agricultural Technical Institute (OSU-ATI) using the Degrees of Reading Power (DRP) test.

Readability Indices

Many indices have been developed to measure the readability of printed material. These indices are based on empirical formulas that include such factors as: number of words per sentence, syllables per word, and unfamiliar words (those not on an established list). Many formulas yield results expressed as "equivalent" grade levels. It is important to note that these are relative values and should not be interpreted as absolute reading grade levels. The Flesch-Kincaid and Gunning-FOG are two of the most commonly cited indices of this type and were used in this study.

Other indices have formulas that yield results expressed in units on a scale of zero to 100. The Flesch index is commonly cited and was also used in this study. It is important to note that this index uses an inverse scale: textbooks with the easiest readability have the highest values. The DRP index is another example. It is a proprietary index developed by the College Board to be used with the DRP reading skills test. DRP values were not directly measured for the trade periodicals in this study. However, the comparison of DRP values with the other readability indices proved useful as a part of this study.

Zimmerman et al. (1995) summarized information in the literature concerning college textbook readability and evaluated the readability of textbooks required in first-year, first-quarter courses at OSU-ATI using several readability indices.

Studies Involving the Readability of Trade Periodicals

Although there have been many studies conducted on the readability of textbooks, a review of the literature did not reveal any studies on the readability of trade periodicals. The College Board included some periodicals in their analysis of reading difficulty in DRP units. The DRP Handbook (1986) summarized the results of these studies. DRP readability values for articles based on subject matter in various types of periodicals are listed in Table 1.

Purpose and Objectives

The purpose of this study was to find the readability of feature articles in major trade periodicals and to compare the results with the known readability of first-quarter textbooks and the reading skills of entering OSU-ATI students. The assumption was that the readability of feature articles in trade publications was below that of the first-quarter textbooks but above the reading level of many first-year students.

Specific objectives were to:
1. measure the readability of feature articles in major trade periodicals identified by OSU-ATI technology coordinators;
2. compare the readability of feature articles in the trade periodicals with the readability of textbooks required in first-quarter (Autumn 1994) OSU-ATI courses;
3. compare the readability of trade periodical feature articles with the known reading skills of first-year students for the 1990 - 1994 cohorts;

Table 1. Average Readability of Articles in Various Types of Periodicals in DRP Units - *DRP Handbook* (1986).

Type of Periodical	Article Subject Area	Readability
Professional Journal	Experimental	77
	Applied	74
	Descriptive	73
Adult General Interest	International	71
	Business	70
	National	69
	Science	68
	Entertainment	65
	Recreation	63
	Fiction	56

4.   make specific recommendations based on the results.

Methods

During Winter Quarter 1995, a memo was sent to each coordinator of the 17 technology programs at OSU-ATI requesting they identify a major trade periodical for their industry that is also used for supplemental reading assignments. Faculty who did not respond were contacted personally for their recommendations. Titles of the trade periodicals identified by the technology coordinators are listed in Table 2. Titles of three other periodicals also appear in Table 2. One is a research publication, the *Journal of Production Agriculture*, which was the response of the Laboratory Science program coordinator. *Time* and *Newsweek* are listed for comparison purposes.

Three issues of each periodical listed in Table 2 published between November 1994 and February 1995 were obtained from the campus library. Two feature articles were selected from each issue. Authors included industry personnel, academicians, or staff of the publication. Article lengths were in the range of five hundred to two thousand words. Starting at the beginning of each article, passages of a minimum of 450 words (most passages had 500 - 700 words) were selected for evaluation. The rest of the procedure for obtaining the readability results was identical to that reported by Zimmerman et al. (1995).

Results and Discussion

Readability scores obtained for the six samples were averaged to obtain the readability of each periodical. The results are presented in Table 2.

The Flesch, Flesch-Kincaid, and Gunning-FOG averages for articles in the 16 trade publications were found

to be 45, 11.6, and 15, respectively. The averages for these three indices for the first-quarter textbooks as reported by Zimmerman et al. (1995) were 48, 11.1, and 15 respectively, which the authors stated were appropriate levels for first-year college texts. Based on these results, the average reading difficulty of the feature articles in the trade periodicals is approximately the same as the readability of first-year level college textbooks. Therefore, the assumption that the readability of feature articles in trade publications is below that of the first-quarter textbooks used at OSU-ATI is not substantiated.

Since *The Journal of Production Agriculture* is a research journal, it is not surprising to find the readability indices were 29, 14.7, and 19, respectively. The average readability of the *Time* and *Newsweek* feature articles was 48, 11.5, and 15, respectively. These results suggest that the readability of feature articles in both general interest and trade periodicals are at the same level. Even periodicals with the lowest readability had scores that are typical for entry level college textbooks.

Although it is impossible to convert the results of the three readability indices directly to DRP readability index scores, indirect comparisons can be made. Using a technique described by Zimmerman et al. (1995), it was found that the average trade periodical readability scores for each of the three indices would yield a DRP score of approximately 70. An average DRP readability score of 70 for feature articles in trade periodicals is consistent with values typically listed for college textbooks and provides additional evidence that these articles are written at the college level.

The average readability values of the three indices would yield approximate DRP readability scores of 74 for the *Journal of Production Agriculture* and 70 for *Time* and

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Table 2. Readability of Periodicals (Ranked by Flesch-Kincaid Score Within Categories)

Periodical	Technology	Flesch	Flesch-Kincaid	Gunning-Fog
TRADE				
Biocycle	Environ. Resources	33	13.8	18
Equs	Horse Production	37	13.5	17
American Nurseryman	Nursery Production	38	13.1	17
Farm Chemical	Agric. Commerce	37	12.8	17
Golf Course Mgt.	Turfgrass Prod.	42	12.6	16
Hydr-Pneumatics	Fluid Power	41	12.3	16
Progressive Grocer	Food Marketing	41	12.2	16
Grower Talk	Greenhouse Prod.	47	11.5	15
Journal Light Construction	Construction	49	11.2	14
National Hog Farmer	Swine Production	45	11.0	15
Equipment Dealer	Power Equipment	49	11.0	14
Beef	Livestock Prod.	52	10.5	14
Hoards Dairyman	Dairy Prod.	50	10.5	14
Grounds Maintenance	Landscape	51	10.4	14
Farm Journal	Crop Production	54	10.2	13
Florist Review	Floriculture	58	9.1	13
	AVERAGE	45	11.6	15
RESEARCH JOURNAL				
Journal Prod. Agric.	Laboratory Science	29	14.7	19
GENERAL INTEREST				
Time	N/A	48	12.1	16
Newsweek	N/A	48	10.8	14
	AVERAGE	48	11.5	15

Newsweek. These scores compare closely with values for articles in similar types of periodicals reported for a previous study and listed in Table 1.

Students need a DRP independent reading skill level of approximately 70 to independently read and comprehend feature articles found in the trade periodicals used in technology courses at OSU-ATI. Students would need DRP independent reading skill level scores in the upper 60's to be able to read and comprehend even those trade periodicals with the lowest readability levels. Zimmerman and Houston (1994) found the median reading skill level of entering OSU-ATI students was 66. Therefore, the assumption that the readability of feature articles in trade periodicals is above the reading level of many first-year students has been verified. In fact, the results of this study suggest that more than half of all entering OSU-ATI students cannot independently read and comprehend the average feature article in the trade periodicals evaluated or even the feature articles in those periodicals with the lowest readability.

Common sense, good educational practice, and ethical considerations would dictate that entering students with deficient reading skills should not enroll in technology courses which required reading assignments in trade periodicals until they have strengthened their reading skills.

Summary

This study has shown that the readability of feature articles in trade periodicals is much higher than many college educators realize, and in fact, is typically at a level comparable to freshman level college textbooks. Therefore, it is critical that all students develop sufficient reading skills so that they can independently read and comprehend feature articles in their industry trade periodicals. If students do not have the appropriate reading skills, how will they be able to use trade periodicals to assist in the practice of lifelong learning and staying current in their technical careers?

Recommendations

1.   Given that the readability of feature articles of trade periodicals used at OSU-ATI is above the reading skill level of many first-year students, it is recommended that a reading course be mandatory for all first-quarter students whose DRP independent reading skill level is below 70.
2.   An appropriate score on the reading test should be a prerequisite for most technology courses at OSU-ATI.
3.   Readability should be an important criteria in selecting supplemental reading assignments from periodicals.
4.   Colleges with a high population of students with low reading skills should devote resources to reading improvement programs.
5.   Future research should measure the readability of written materials that graduates commonly encounter when employed in their professions.

Literature Cited

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