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## Reading in the Secondary School

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# READING IN THE SECONDARY SCHOOL

*Kenneth VanderMeulen*

Secondary teachers of vocational subjects frequently have to face the burdensome task of choosing the right text for their courses, but they would not and should not delegate the responsibility to other offices or agencies. In having to deal with choice of texts, teachers feel several factors are operating against the chances of finding the right textbook. Sometimes they express a certain frustration, saying, "As if it is not enough responsibility to try to prepare young people for a role in a technical area, we even have some evidence that students whose verbal backgrounds are poor are advised to take our subjects."

In a time of accelerating technology, teachers of vocational subjects must become expert in judging which textbooks will be best suited to (1) present the latest ideas accurately, (2) explain technical processes clearly, and (3) be highly readable for a wide range of student abilities. These considerations require wide background, great insight, and a real preparation in the area of measuring textbooks by readability standards.

The article which follows was researched and written by Mary L. Harris, a graduate student on leave from Jones Commercial School, Chicago, where she is a member of the English Department faculty. Mrs. Harris has made a unique contribution to all teachers of industrial and business subjects by demonstrating the use and outcomes of text comparisons through readability scales. No member of a vocational department at high school levels should be without this valuable annotated bibliography.

## TEXTBOOKS IN VOCATIONAL COURSES

The purpose of the list below is to compare by publisher, the readability of textbooks in a number of vocational content areas. Three samples of one hundred words each were taken at random from three different sections of each book in the comparison group. These sections dealt with similar information. For example, in the metal-working group, the samples were taken from filing, heat treating, and the shaper. In this way comparison was made with very specific, similar pieces of information.

Edward Fry's *Graph for Estimating Readability* was the measuring instrument.

### **AUTOMOTIVE**

Beeler, Samuel C., *Understanding Your Car*. Bloomington, Ill.: McKnight and McKnight Publishing Co., 1967.

The preface states that this book is written for anyone desiring to understand the basic elements of the automobile and something of the products allied to it. The very technical has been avoided. The author suggests that the book may be used as a class text and job guide, as a manual for simple automobile maintenance or as a supplement and reference in Driver Education classes.

Recommended for *grade 7-12*

Readability *grade 11*

Stockel, Martin W., *Auto Mechanics Fundamentals: How and Why of the Design, Construction and Operation of Automotive Units*. Homewood, Ill.: Goodheart-Willcox Co., Inc., 1969.

This book can be used in a fundamentals course in high school, trade school or college and it can also be used as review for advanced classes. The aim of the book is to provide the student with a thorough understanding of the design, construction and operation of automotive units. Each automotive unit starts with the basic theory involved and as the explanation unfolds, parts are added until the unit is complete. It includes a chapter on job possibilities. There are hundreds of diagrams and illustrations.

Recommended for *grade 10-12*

Readability *grade 8*

Wetzel, Guy F., *Automotive Diagnosis and Tune-Up*. Bloomington, Ill.: McKnight and McKnight Publishing Co., 5th edition, 1969.

The author presents basic theory for understanding the automotive power plant. The book is intended for the automotive service business—mechanics and service managers—but can be used as a text for automotive classes in high school. It is an adult study of “diagnosis and tune-up.”

Recommended for *grade 9-12*

Readability *grade 12*

Each book has a different stated purpose but at the same time each is recommended for use in a high school automotive course. The three topics compared were the engine, the generator, and the cooling system. The Stockel book carried the highest recommended grade of the three, yet the results of the Fry formula showed it to be the easiest one to read. In all three the material on the generator was the most difficult. Stockel managed to explain it in terms that a 9th grade reader could understand; the other two went up to the college level. Perhaps it is a little unfair to include the Wetzel book because

it was written primarily for mechanics in the trade. Yet the other book published by McKnight and McKnight which *was* written for the high school student and which stated in the preface that it had “avoided the very technical” is much more difficult than Stockel’s book.

#### METALWORKING

Feirer, John L., *Machine Tool Metalworking*. New York: McGraw-Hill, 2nd edition, 1973.

This is an introductory text on machining of metals designed to be used in a beginning machine shop class. Primary emphasis is given to benchwork, measurement, drilling and turning. A great deal of space is devoted to *how* machines operate and to the essentials of mechanics.

Recommended for *grade 9-11*

Readability *grade 8*

Giachino, J. W., and Neil L. Schoenhals, *General Metals for Technology*. Milwaukee: The Bruce Publishing Co., 1964.

This book includes an introduction to metalworking; cutting, shaping, bending, joining, finishing and welding metals; heat treating and testing. In the preface the authors say that the book is “written in a language that is sufficiently demanding to stimulate the student’s potential capacities in terms of current educational requirements.” They feel that for many years writers of industrial education textbooks stressed oversimplification of their reading content. The “how-to-do-it” parts are written in simple language; background material is more difficult.

Recommended for *grade 7-12*

Readability *grade 8*

Ludwig, Oswald A., *Metalwork: Technology and Practice*. Rev. by Willard J. McCarthy. Bloomington, Ill.: McKnight and McKnight Publishing Co., 5th edition, 1969.

Provides a broad introduction to theory and practice of metalworking. It includes bench metalwork, sheet metalwork, forging, heat treatment, foundry work, welding, machine theory and practice, and numerical control machining. The authors emphasize that this most recent edition does more than just present the “doing” or skill aspects of metalwork; it provides shop theory, technology, and technical information. Many

units have been expanded to reflect current industrial and technological practice.

Recommended for *grade 9-12*

Readability *grade 8*

McKnight and McKnight Publishing Co. seems to have done a better job "readabilitywise" in the metalworking text than in the automobiles. McGraw-Hill and The Bruce Publishing Company have done well also.

#### GENERAL BUSINESS

Crabbe, Ernest, S. J. DeBrun and Peter G. Haines, *General Business for Economic Understanding*. Cincinnati: Southwestern Publishing Co., 9th edition, 1966.

The stated purpose of the book is to help students develop a comprehensive understanding of our American business system and its vital role in our total economic society. Business principles and basic economic concepts are explained by relating them to the experiences we have in living and working in America today. It stresses economics and the consumer.

Recommended for *grade 10-11*

Readability *grade 8*

Nanassy, Louis C., and Charles Fancher, *General Business and Economic Understanding*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 4th edition, 1973.

The text explains why and how the worker and consumer are affected by our economy. Its stated purpose is to help young people comprehend and appreciate the basic economic principles of our democratic system of free enterprise. The book is concerned with business and the consumer.

Recommended *grade 9-11*

Readability *grade 9*

Price, Ray, Vernon Musselman, J. Curtis Hall, and Edwin Weeks Jr., *General Business for Everyday Living*. Gregg Division of McGraw-Hill Book Co., 3rd edition, 1966.

The stated purpose of this book is to raise the level of economic understanding among the nation's youth by giving them an overall view of the place and purpose of business in our society. It is concerned with business and the consumer.

Recommended *grade 10*

Readability *grade 8*

All three books are suitable for the recommended grade.

#### RETAIL MERCHANDISING AND SELLING

Richert, G. Henry, Warren G. Meyer, and Peter G. Haines, *Retailing*

*Principles and Practice.* Gregg Division of McGraw-Hill Book Co., 5th edition, 1968.

This is a book on retailing particularly for distributive education students. It can also be used for a high school retailing course, basic instruction for adult education, and for training classes conducted in retail stores. Projects are structured to meet the requirements of cooperative part-time students.

Recommended *grade 10-12*

Readability *grade 10*

Wingate, J. W., and Harland E. Samson, *Retail Merchandising.* Cincinnati: Southwestern Publishing Company, 7th edition, 1968.

The aim of the book is to discuss the activities in the retail distribution of merchandise from the viewpoint of a young person in search of a career field. The 7th edition includes retailing and distribution and economic growth and the contribution made to it by retailing. Emphasis throughout is put on the importance of proper store image.

Recommended *grade 10-12*

Readability *grade 10*

Wingate, John W., and Carroll A. Nolan, *Fundamentals of Selling.* Cincinnati: Southwestern Publishing Company, 9th edition, 1969.

This book was intended as an introductory course in selling for a high school class. It was also recommended by the authors for use in a cooperative program. The 9th edition was upgraded to include chapters on characteristics of the American economy and economic trends. It includes material on printed advertising, broadcast advertising and merchandise display. There are also chapters on sales management and the legal aspects of selling.

Recommended for *grade 10-12*

Readability *grade College*

The two Wingate books have different purposes, nevertheless *Fundamentals of Selling* which is now in its 9th edition is too difficult for the average high school student, especially one in a cooperative program. The Richert book published by the Gregg Division of McGraw-Hill is written at a satisfactory readability level.

#### MARKETING

Mason, Ralph E., and Patricia Mink Rath, *Marketing and Distribution.* New York: Gregg Division of McGraw-Hill, 1968.

The objective of the book is to provide a foundation of economic and marketing concepts for everyone. Also the book

can serve as the core of a distributive education program since it emphasizes specific job opportunities that occur as a product moves from its point of origin to its point of use. The student in a cooperative part-time distributive education program will find many specific applications to make his work and his career objective more meaningful.

Recommended *grade 10-12* Readability *grade 11*

Nolan, Carroll A., and Roman Warmke, *Marketing, Sales Promotion and Advertising*. Cincinnati: Southwestern Publishing Company, 7th edition, 1965.

This book was designed to acquaint the reader with a basic understanding of marketing, sales promotion and advertising, to relate marketing to the total economy, to provide an understanding of accepted tools, plans and procedures, to familiarize the reader with marketing principles and give him practice in applying them to real life situations. The 7th edition has been rewritten to serve as the basic instructional tool for marketing and distributive education courses and can be used for standard courses or cooperative programs.

Recommended *grade 10-12* Readability *grade 12+*

Carroll Nolan who co-authored *Marketing, Sales Promotion and Advertising*, the Southwestern Publishing Company book, also co-authored *Fundamentals of Selling* which was reviewed above. The readability in both books is too difficult for the student for whom it was written. *Marketing and Distribution* published by Gregg Division of McGraw-Hill has a readability level midway between the recommended 10-12. This is probably too difficult, too. Readability scores tend to under-estimate reading difficulty and student reading level scores tend to over-estimate the student's reading comprehension ability.<sup>1</sup> Therefore, for practical purposes a textbook should be at least one and possibly two years below the grade level for which it is intended.

**COMPARISON GROUP READABILITY SCORES  
AUTOMOTIVE BOOKS**

<i>Book</i>	<i>Cooling</i>
<i>Beeler</i>	<i>Engine Generator System Average</i>

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<sup>1</sup> Sinclair Wall, "Readability-A Neglected Criterion in Secondary Textbook Selection," *Journal of the Reading Specialist*, October, 1969, pp. 14-15.

<i>Understanding Your Car</i>				
McKnight & McKnight	9	College	10	11
Stockel				
<i>Auto Mechanics Fundamentals</i>				
Goodhart-Willcox	8	9	7	8
Wetzel				
<i>Automotive Diagnosis &amp; Tune-Up</i>				
McKnight & McKnight	12	College	11	12

**METALWORKING BOOKS**

		<i>Heat</i>		
	<i>Filing</i>	<i>Treatment</i>	<i>Shaper</i>	<i>Average</i>
Feirer				
<i>Machine Tool Metalworking</i>				
McGraw-Hill	7	10	8	8
Giachino				
<i>General Metals for Technology</i>				
Bruce Publishing	7	9	8	8
Ludwig				
<i>Metalwork</i>				
McKnight & McKnight	6	10	7	8

**GENERAL BUSINESS BOOKS**

<i>Books</i>	<i>Money</i>	<i>Borrow- ing</i>	<i>Invest- ing</i>	<i>Average</i>
Crabbe				
<i>General Business for Economic Understanding</i>				
Southwestern	7	8	9	8
Nanassy				
<i>General Business and Economic Understandings</i>				
Prentice-Hall	9	10	10	9
Price				
<i>General Business for Everyday Living</i>				
McGraw-Hill	8	8	8	8



## RETAIL MERCHANDISING BOOKS

<i>Book</i>	<i>Retail Distrib.</i>	<i>Customer</i>	<i>Advertis- ing</i>	<i>Average</i>
Richert <i>Retail Principles and Practice</i> McGraw-Hill	9	12	10	10
Wingate & Samson <i>Retail Merchandising</i> Southwestern	12	10	9	10
Wingate & Nolan <i>Fundamentals of Selling</i> Southwestern	College	College	College	College

## MARKETING BOOKS

<i>Book</i>	<i>Physical Distrib.</i>	<i>Customer</i>	<i>Advertis- ing</i>	<i>Average</i>
Mason <i>Marketing and Distribution</i> McGraw-Hill	11	10	12	11
Nolan & Warmke <i>Marketing, Sales Promotion and Advertising</i> Southwestern	College	10	College	12