DEVELOPING AN INDIVIDUALIZED READING PROGRAMME
AT THE COLLEGE OF FISHERIES, NAVIGATION,
MARINE ENGINEERING, AND ELECTRONICS

CENTRE FOR NEWFOUNDLAND STUDIES

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EDGAR CHURCHILL
DEVELOPING AN INDIVIDUALIZED READING PROGRAMME
AT THE COLLEGE OF FISHERIES, NAVIGATION,
MARINE ENGINEERING, AND ELECTRONICS

Presented to
the Department of Curriculum and Instruction,
Faculty of Education,
Memorial University of Newfoundland

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Edgar Churchill
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Chapter 1

INTRODUCTION

This is a report of an internship project conducted in the Reading Laboratory of the College of Fisheries, St. John's, during the fall of 1973. The purpose of the internship was to supplement the four components of the reading programme already in use at the College with five techniques for individualized reading instruction.

This chapter describes the recent growth in reading programmes at the post-secondary level and the development of the reading programme at the College of Fisheries prior to the implementation of the internship. It explains the reasons for introducing individualized reading techniques at the College and why each of the five individualized reading techniques that made up the internship project was selected for implementation.

The Growth of the Reading Laboratory at the Post-Secondary Level

A high attrition rate has long been recognized as a major problem of two-year colleges, yet Brown states that it is only in the past five years that anything significant has been done to alleviate the problem via the implementation of remedial reading, remedial English, and remedial mathematics programmes.


2Ibid.
According to one study, a little over 50 percent of all students in two-year colleges require remedial or compensatory programs. The dropout rate is over 50 percent for all enrollees, and is especially high among the disadvantaged - probably 80 percent. Hardley estimated that 95 percent of college entrants lack adequate study skills. He further noted that a relatively small percentage of college students have speeds and comprehension skills adequate for handling college assignments.

Universities and the business community have also felt the need to improve reading skills and study skills during the past decade. The University of British Columbia, for example, found it necessary to set up eighteen hours of classes, not only for students, but also for the general public.

In 1961, Simon Fraser University Reading and Study Centre completed a survey of Canadian universities and colleges to determine the extent to which reading and study instruction was being provided for post-secondary students.


4 Ibid.


6 Ibid.


8 Margaret F. Hayward, "Reading and Study Instruction in Canadian Universities and Colleges," Journal of Reading, XV (October, 1971), 27-29.
Out of sixty universities polled, nine, fifty-three, or 88 percent, responded. Of these, thirty-two, or 53 percent, offered some form of instruction while twenty-one, or approximately 35 percent, did not. One university indicated a course in the planning stage and three were in their first year of instruction. There was a total of twenty-four full-time faculty in reading and study, and thirty-three part-time reading and study or counseling faculty.

Out of 138 colleges polled, 105, or 76 percent, replied, and of these, fifty-two colleges offered reading and study instruction and fifty-three did not. Four colleges indicated they were in the planning stage and five were in their first year of instruction.

The investigator concluded that:

......it is evident that during the last five years reading and study programs have been developed at universities and colleges across Canada. As only six programs have closed out and the rest are actively going forward, there seems to be a definite need for this kind of instruction for post-secondary school students. As students realize the vast and demanding reading and study skills necessary to deal with the ever-growing mass of printed words with which they must contend, they are eager and grateful for techniques for survival.

The Overall Objectives of the Reading Laboratory at the College of Fisheries

An awareness that a high attrition rate is generally attributable to weaknesses in basic skills, prompted the Academic Department of the College of Fisheries to administer the Davis Reading Test, to all first year technology students in October, 1971. The results of this test indicated that 40 percent

9 A Copy of the questionnaire used for this survey is provided in Appendix A, p. 71.


11 The reasons for selecting the Davis Reading Test are stated in Chapter 2, PRETESTING, pp. 22.
of students were below even the 35th percentile rank in both Speed of Comprehension and Level of Comprehension for college freshmen.

On the basis of these results, regular instruction in oral and written communication was dropped for three periods per week and a Reading Laboratory was established with the overall objectives of improving Speed of Comprehension and Level of Comprehension, as measured by the Davis Reading Test for these students. (The specific objectives of the reading programme are discussed in the section on the programme prior to 1973-74.)

Students Served By the Reading Laboratory at the College of Fisheries

All of the students enrolled in the Reading Laboratory Programme had graduated from Grade XI (academic) with at least a 60 percent average. They were enrolled in three or four-year technology programmes in Electronics, Mechanical Engineering, Naval Architecture, Food Technology or Nautical Science at the College of Fisheries. Their workloads included a minimum of thirty hours per week in classes or laboratories, as well as heavy reading assignments in the pure sciences and their technologies. Upon graduation they would be expected to assume roles in industry as technologists, ships' officers, or naval architects. Reading with good comprehension and speed would be an important factor in their college careers and in the positions they would hold upon graduation.

These students came from their own departments to the Academic Department of the College of Fisheries for instruction in mathematics, pure sciences, and communication skills — including remedial reading in the Reading Laboratory.
The Reading Laboratory Programme Prior to 1973-74

The programme in the Reading Laboratory prior to 1973-74 consisted of four components: Controlled Reading, Series KL; the SRA Reading for Understanding Laboratory; paperback scanning, and individual vocabulary files. Each component and the role it played in developing specific reading skills is discussed below.

Controlled Reading, Series KL. Controlled Reading had been used successfully with upgrading students (grades 9 - 11) at the College of Fisheries for several years, and it was decided to use the Controlled Reading, Series KL as the core of our programme with the first-year technology students.

Some educators have failed to grasp the fact that the machines used in the Controlled Reading, Series KL, as developed by Educational Development Laboratories, are only one component of a comprehensive reading programme. Tinker's very superficial discussion of devices used to improve reading speed is an example of the credibility sometimes given to this misconception. In an article published in the Education Digest, he says "...as long as gadgets and comparable devices are used by those with inadequate understanding of the psychology of reading, we shall continue to have undesirable emphasis on ocular mechanics."12

Such a recognized reading authority as George Spache, however, argued that the use of the Controlled Reader was indeed an intelligent approach to improving a student's ocular behavior:

There are devices such as the Controlled Reader, the Tach-X, and a few others, which do help establish desirable

---

12 M.A. Tinker, "Devices to Improve Speed of Reading," Education Digest, XXXIII (September, 1967), 50.
patterns of visual behavior in reading because they are
specifically designed to stimulate the natural reading act. 13

The research of Gelzer and Santore compared Controlled Reading with
three other methods and found that the only significant improvement
in reading behavior, as measured by eye movement photography,
occurred in the group using the Controlled Reader. 14 They found
that the greatest change occurred in the group using the Controlled
Reader with the guided slot, the procedure prescribed for our
reading programme at the College. 15 Table 1 16 on the following page
states the results obtained by Gelzer and Santore. Nikas noted
no significant differences between reading programmes with a teacher-
oriented approach and those with a machine oriented emphasis. 17

Students completed approximately eighteen sessions of
Controlled Reading. During each session they were taught to pre-
view a selection in their workbooks by looking at illustrations,
reading the first sentence of each paragraph, answering a preview
question, and checking their answers. Students were also required
to scan the reading selection to learn why they had made errors
answering comprehension questions. 18 Besides such study skills,

13 G.D. Spache and E.B. Spache, Reading in the Elementary

14 Austin Gelzer and Nicholas Santore, "A Comparison of
Various Reading Improvement Approaches," Journal of Educational
Research, LXI (February, 1968), 269.


16 Ibid.

17 George B. Nikas, "A Study of Teacher-oriented Versus
Machine-oriented Developmental Reading Classes at the College

18 Stanford E. Taylor and others, Controlled Reader Study
Table 1. - Comparison of Mean Number of Fixations

<table>
<thead>
<tr>
<th></th>
<th>C.R.-Guided</th>
<th>C.R.-Open</th>
<th>Shadowscope</th>
<th>Rateometer</th>
<th>Timed Reading</th>
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<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
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<tr>
<td>Pre-test</td>
<td>115.5</td>
<td>43</td>
<td>20.2</td>
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<td>10.2</td>
<td>8.19</td>
<td>.19</td>
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<td>&quot;t&quot; Value</td>
<td>8.19</td>
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<td>4.87</td>
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students were trained during each session on the Controlled Reader in the use of dictionary skills and word-attack skills; this was accomplished through the use of the programmed-learning section of the study guide which also introduced the students in a systematic way to new vocabulary and new concepts. This emphasis on vocabulary development in the Controlled Reading Programme is important since Davis has determined that accuracy of comprehension is more dependent on the ability to associate word meanings correctly than on any other mental ability.  

A further study by Davis in 1968 confirmed "memory for word meanings" and "reasoning in reading (a combination of weaving ideas together and drawing inferences from them)" as key factors in the comprehension of twelfth grade students in particular.  

During each session with the Controlled Reader, students were required to answer three types of comprehension questions with at least 70 percent accuracy. The three types of questions asked during every session were:

1. Recall of factual information stated in the selection.
2. Inferential judgements based on the selection.
3. Determining the main idea of the selection.

The research study by Gelzer and Santore of five different methods for improving reading showed that the only significant gains in the level of comprehension, as measured by the Davis Reading Test, were made by students using the Controlled Reader (slotted). These results are given in Table 2 on the following page.

---

19 Frederick B. Davis, "Fundamental Factors of Comprehension in Reading," Psychometrika, IX (1944), 185-197.

20 Frederick B. Davis, "Research in Comprehension in Reading," Reading Research Quarterly, III (Summer, 1968).
Table 2.—Comparison of Raw Means for Comprehension on DRT²¹

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<th>Pre-testing</th>
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<td>C.R.-Guided</td>
<td>23.39</td>
<td>5.19</td>
<td>31</td>
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<td>C.R.-Open</td>
<td>24.74</td>
<td>5.67</td>
<td>31</td>
<td>24.36</td>
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<td>Shadowscope</td>
<td>24.4</td>
<td>4.71</td>
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<tr>
<td>Rateometer</td>
<td>26.24</td>
<td>5.08</td>
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<tr>
<td>Timed Reading</td>
<td>25.9</td>
<td>5.02</td>
<td>31</td>
<td>23.88</td>
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²¹ Gelser and Santore, op. cit., p. 269.
Research has also shown the usefulness of Controlled Reading in improving the rate of reading. Braam and Berger, in an experiment with college students over a seventeen-week period, found that "significant gains" were made by students using the Controlled Reader. The research of Gelzer and Santore also demonstrated significant, retained gains in rate of comprehension, as measured by the Davis Reading Test, for students using the Controlled Reader. See Table 3 on the following page.

Gelzer and Santore retested students eleven months later and found that, of the five methods of improving speed and comprehension, those students who used the Controlled Reader (Guided-slot) showed the greatest retention of gains.

Four Controlled Readers were used in our reading laboratory so that students could begin to read selections at a speed suitable to them.

The SRA Reading for Understanding Laboratory. Since students completed the Controlled Reading session in about thirty minutes, this activity was supplemented by using the Reading for Understanding Laboratory. This laboratory consists of some 4,000 graded paragraphs selected to emphasize points in "reasoning, inference, interpretation, or meaning." By means of the placement test each student was placed on the laboratory at a level of

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24 Ibid.

Table 3.—Comparison of Raw Means for Rate on DRT

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<th>Post-testing</th>
<th>Retention Testing</th>
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<td>M</td>
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<tr>
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<td>334.3</td>
<td>70</td>
<td>34</td>
<td>388.6</td>
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<td>C.R.—Open</td>
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<td>82.5</td>
<td>31</td>
<td>360.9</td>
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<td>Timed Reading</td>
<td>316.6</td>
<td>74.5</td>
<td>31</td>
<td>386.6</td>
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difficulty between grade three and grade twelve, and progressed at his own rate. The use of this laboratory also gave students the opportunity to study new vocabulary in a meaningful context as well as practice in answering questions requiring both literal and inferential comprehension.

**Paperback Scanning.** The first-year technology student at the College is required to attend classes for a minimum of thirty hours per week and still complete assignments, laboratory reports, required readings, and study. Improving the rate of comprehension thus became a primary objective of the programme. Braam and Berger, in studying the effectiveness of four methods of increasing rate, comprehension, and flexibility noted that the most favorable gains developed with the use of the paperback-scanning method as opposed to the use of the t-scope, Controlled Reader, and the Controlled Pacer.26 The research of Gelzer and Santore also showed the greatest gains in reading speed from a programme of timed reading.27 On the basis of these findings, paperback scanning was introduced to the programme in 1972 on a supplementary basis.

Maxwell,28 in many years of work with students at the College level, found that few of them had developed the ability to scan; my own observations over the past three years have concurred with hers. Yet, as Maxwell explains,29 scanning is a useful tool in the study of technological and science textbooks in that:

---

26 Braam and Berger, op. cit.
27 Gelzer and Santore, op. cit.
29 Ibid.
1. A preliminary scanning provides a conceptual framework for in-depth study.
2. Scanning enables the student to locate relevant sections more rapidly and efficiently.
3. Scanning, as a final review step after a more careful reading, will increase the retention of the concepts presented. Definitions and important points, if previously underlined, will be fixed in the reader's mind so that he won't readily forget them.

Such study skills as those listed by Maxwell, and the research showing improvements in speed of comprehension from paperback scanning, led to the use of this technique in the reading programme. However, there was no justification for dropping the more structured components of the reading programme on the basis of the research already cited which indicated the effectiveness of paperback scanning in improving reading rate. Liddle\(^\text{30}\) conducted a study of paperback scanning with college students and found that although the rate rose significantly, comprehension dropped significantly. Scanning was never confused with "reading."

**Individual Vocabulary Files.** Each student in the reading programme was required to complete a file of new terms which he had encountered in his studies and felt that he needed to learn. The student recorded these terms on file cards along with other relevant data such as: phonetic spelling, use of the word in context, dictionary definition of the term, etc. He was tested on his own file

at the end of the term. Nemeth\textsuperscript{31} presents evidence to indicate
that the personalized vocabulary approach yields the following
results:

1. More meaningful, personalized vocabulary.
2. More meaningful application of context, structure, and dictionary word-meaning skills.
3. Greater independent transfer in using word-meaning skills to other subjects outside the classroom.

Nemeth argues that:

Factor analytic studies of reading have yielded rather conclusive data that variations of the factors of vocabulary, verbal or idea relationships, and reasoning accounts for much of the variation in reading achievement. Of these factors, it seems logical that vocabulary would be the factor most amenable to improvement. Research shows that improvement of vocabulary leads to improved comprehension, which should result in improved content area and semester grades.\textsuperscript{32}

During the past three years, the individual vocabulary file has consistently enabled students to absorb five new terms per week, generally selected directly from textbooks of science or technology. Many students have commented on the effectiveness and convenience of using the file to overcome the major first-year problem of learning technical vocabulary, and have directly transferred vocabulary development skills taught in the reading laboratory to content areas by this method. Such a transfer is important for in the words of one instructor, Mr. John Roddis, who teaches electronics to first-year students, "Teaching electronics to first year students is like teaching them a new language."


\textsuperscript{32} Nemeth, \textit{op. cit.}, p. 125.
The Innovations Proposed for 1973-74

The skill development and guided-reading components of the reading laboratory, as outlined previously, are somewhat repetitive and mechanical in operation. There was a need to supplement this core programme with activities of a more interesting and individualized nature. The intention was not to implement a completely individualized reading programme such as that defined by Sartain:

...individualized reading is a procedure by which each student chooses a library book, a literary reader, or possibly a basal book that he would like to read and reads it at his own pace during most of the daily reading time. Instruction is provided through conferences between learner and teacher, but, rather, to supplement the activities outlined above with ideas to motivate students to do more outside reading of materials which they themselves had selected. It was intended, by using these innovations, to remove the tediousness of the reading laboratory and improve the attitudes of students towards reading by providing them with opportunities to read material of interest to them.

This is not to say that other benefits were not anticipated from introducing these innovations. A survey of the literature on individualized reading found the following claims made for the individualized-reading approach:

1. Fast learners can be challenged. \(^{34}\)

2. Slow learners can also achieve successfully. \(^{35}\)


\(^{35}\)Ibid.
3. The student can work at his own rate regardless of what else is going on. 36
4. The student reads at a level for which he is individually ready to read. 37
5. All reading can be made meaningful for the student. 38
6. An enjoyment of reading and books has an opportunity to develop. 39
7. Individual conferences can permit more thorough diagnosis and confirmation or refutation of information gathered from the other sources. 40
8. The instructor can guide and evaluate reading on an individualized basis. 41
9. The student can see and judge his own progress. 42
10. Students are helped to become self-directive. 43
11. Students are very receptive to the individualized approach. 44

36 Sterling C. Odom, "Individualizing a Reading Program," The Reading Teacher, XXIV (February, 1971), 403.
37 Burton, op. cit.
38 Ibid.
39 Odom, op. cit.
41 Odom, op. cit., p. 408.
42 Burton, op. cit.
43 Ibid.
Spache, Stahile, and Neville\textsuperscript{45} compared three different remedial reading procedures at the college level. All three different procedures, viz., machines, workbooks, and individualization were effective in bringing about improvements, but the individualized self-improvement approach was significantly more effective in producing changes in reading habits and attitudes.

Davis and Lucas\textsuperscript{46} in an experiment involving 267 students on an individualized reading programme and 287 in a control group at the grade seven and eight level, found that:

\begin{itemize}
\item[\ldots] the significant differences in rate and the gains made by the experimental subjects in all subtests lead to the conclusion that individualized reading as defined in this study is definitely superior to more conventional methods of teaching reading to seventh and eighth grade students. The conventional methods included achievement grouping, use of basal readers, small remedial groups, and the use of workbooks.
\end{itemize}

The following five procedures were proposed for implementation in the reading laboratory programme at the College in the fall of 1973:

1. **Thematic Approach.** Kaplan\textsuperscript{47} suggested putting outside reading into a theme to be discussed in class. Oral expression was to be combined with reading simultaneously by selecting panels to discuss a theme. In this way many books and articles with a common theme would be made known to the class. Students would likely be motivated to read other books and articles on themes that they found interesting.

\begin{itemize}
\item[\textsuperscript{45}] George Spache, Lloyd Stahile, and Duvald Neville, "Results of Three College Level Remedial Reading Procedures," *Journal of Developmental Reading*, IV (Autumn, 1960), 12-16.
\item[\textsuperscript{46}] Floyd Davis and James S. Lucas, "An Experiment in Individualized Reading," *The Reading Teacher*, XXIV (May, 1971), 740.
\item[\textsuperscript{47}] Milton Kaplan, "Outside Reading Belongs Inside," *The Education Digest*, XXXVII (September, 1971), 41.
\end{itemize}
Rauch\textsuperscript{48} spent twenty minutes of each reading session at the college level in review or analysis of a current film, play, TV programme, novel, magazine, article, etc. Topics were selected one week in advance and students were encouraged to bring reviews to class. Students selected those words and phrases which made the critic's view more effective. Rauch found this to be the most successful approach to vocabulary improvement:

Results from this approach have been most successful of all three. Perhaps it was my interest in this area, but the class sessions, for the most part, had some excitement to them. Students were reading, analyzing, and discussing.\textsuperscript{49}

Class discussion of individually selected readings on a common theme was to be the first innovation in this area for the fall semester of 1973.

2. \textbf{Free Reading Unit}. Donelson\textsuperscript{50} advocated the setting aside of three-to-five week units using reading ladders. The instructor was to develop a hierarchy of books for each interest and to plug the student into the ladder at a point which he deemed appropriate. For example:

\begin{itemize}
\item \textsuperscript{48} Sidney J. Rauch, "Improving Vocabulary Skills at the College Level," \textit{Reading World}, XI (December, 1971), 120-129.
\item \textsuperscript{49} \textit{Ibid.}, pp.-122-123.
\item \textsuperscript{50} Kenneth L. Donelson, "Free Reading: Another View," \textit{Journal of Reading}, XII (April, 1969) 545-48.
\end{itemize}
LOVE AND ROMANCE

Leo Tolstoy  Anna Karenina
Emily Bronte  Wuthering Heights
Jane Austen  Persuasion, Pride and Prejudice
Charlotte Bronte  Jane Eyre
Margaret Mitchell  Gone With the Wind
Daphne du Maurier  Rebecca
Mary Stolz  Pray Love Remember
James Summers  Ready or Not
Betty Cavannon  To Tell Your Love
Anne Emery  Ring on His Finger
Paintbox Summer
Sorority Girl
Marriage on Wednesday

Because the Reading Laboratory programme for technology students is of such short duration, a single semester, it was proposed that only two weeks be set aside as a free reading unit. A hierarchy of books was to be developed in the area of science fiction, as it was assumed that this area would prove to be a popular one with the type of person who selects a technical career.

3. The Saturated Environment. Johnson, Odom, and Garofalo have all described this approach in detail and have

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52 Sterling C. Odom, op. cit.
recommended its use with students who might be described as reluctant readers. It was proposed that students be required to spend several periods in the College library; hundreds of paperback novels, magazines on almost every topic, newspapers, technical journals, and books were to entice students into the reading experience. Reading materials, other than those which students would be required to work on, were to be scattered around the laboratory; students would be encouraged to bring their favorite recordings to class so that the lyrics could be printed, distributed, and discussed in class.

4. Newspapers. Odom\(^{54}\) found that the newspaper could be used to teach reading to young adults because it is relevant and up-to-date. Rauch\(^{55}\) recommended that teachers "make frequent use of daily newspapers and magazines in the classroom. I have made greater impact upon the vocabulary development of my students through use of newspapers and magazines than by the assignment of any single vocabulary text ..."  

It was proposed to develop assignments based on the newspaper which would vary from critical reading to outlining. Reading and writing assignments would be combined by asking students to summarize news articles and editorials or by having students write editorials based on news stories. At all times,

\(^{54}\) Norman G. Odom, "A Dozen Assignments From the Newspaper," Journal of Reading, XIV (April, 1971), 475-76.

\(^{55}\) Rauch, op.cit.
the individual student was to be given the freedom to select the particular articles with which he wished to work.

5. **Student Bookclub.** Algra and Fillbrandt⁵⁶ found that approximately twenty percent of students will be motivated to purchase a paper-back book by this method. It was proposed that a book-club be organized in the Reading Laboratory through the cooperation of the Campus Book Club (See Appendix B, p.74) so that students would be given the opportunity at regular intervals to purchase books at reduced prices from a selection chosen for their interests and age levels.

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Chapter 2

PRETESTING

The Davis Reading Test was administered to all freshmen technology students to determine those most in need of remedial instruction in reading. The Estes' Scale to Measure Attitudes Toward Reading and the Survey of Study Habits and Attitudes (SSHA) were administered at a later date to students selected for remedial reading instruction. A description of each of the instruments used, the reasons for its selection, and the results obtained from the pretest are discussed below.

LEVEL OF COMPREHENSION AND SPEED OF COMPREHENSION

The Instrument

The **Davis Reading Test**, Series 1, was selected as the instrument to measure Level of Comprehension and Speed of Comprehension in the initial screening of all first-year technology students for several reasons:

1. **Validity and Reliability.** Both the validity and the reliability of the **Davis Reading Test** are well established. In 1941, Davis reviewed the literature on the operational skills needed for effective reading and grouped the several hundred

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1. Davis and Davis, *op.cit*

skills identified into nine measurable clusters. The skills necessary for comprehension were grouped into five categories and it is these basic skills that the Davis Reading Test measures:

1. Finding the answers to questions answered explicitly or in paraphrase in a passage.
2. Weaving together ideas in a passage and grasping its central thought.
3. Making inferences about the content of a passage and about the purpose or point-of-view of the author.
4. Recognizing the tone or mood of a passage and the literary devices used by its author.
5. Following the structure of a passage.

The skills measured by the Davis Reading Test are the skills which he determined to be necessary for successful comprehension of textbooks and other first-year college reading material such as our technology students are required to read. Thus, the Davis Reading Test was judged to be valid in our situation.

2. Measurement of Both Speed and Level of Comprehension. The Davis Reading Test yields a Speed of Comprehension score as well as a Level of Comprehension Score. Since our students are...
in class approximately thirty-two hours per week and must do all assignments and required reading after 5 p.m., Speed of Comprehension is an important consideration. The Davis Reading Test enabled us to simultaneously evaluate both the speed and the accuracy with which our students could comprehend material.6

3. Ease of Administration. The Davis Reading Test is administerable by any instructor during one regular class period of fifty minutes duration. The students' timetables do not have to be disrupted in order to administer the test. The scores are easily corrected by using the key to answers which are recorded on IBM multiple-choice score sheets.

4. Percentiles. The scores are easily translated into Grade XI or Grade XII percentiles by using the manual. This feature facilitates reasonable evaluation and comparison of test results over different semesters.

5. Equivalent Forms. Four equivalent forms of the Davis Reading Test, Series One, are available. This permits us to re-administer the test to students for the purpose of measuring growth of students and the over-all effectiveness of our programme.

6 Scores measuring Speed of Comprehension should be viewed with a certain degree of caution. For a discussion of this problem compare Buros, op. cit., pp. 786-87.
The Results of the Pretest

The Davis Reading Test, Form 1A, was administered to the 114 freshmen who enrolled in Diploma of Technology Programmes at the College during the fall semester, 1973. Of this number thirty-two students, or 35.6 percent of those tested, scored lower than the thirty-fifth percentile rank (using Grade Twelve norms as provided in the DRT Manual) in Speed of Comprehension, Level of Comprehension, or both. These thirty-two students were selected on the basis of the Davis Reading Test results for remedial instruction in reading. However, only twenty-three of these students were scheduled for work in the reading laboratory during classes when the writer was assigned as instructor. It is with these twenty-three students that the internship was completed, and their results on the DRT pretest are discussed in detail below.

Level of Comprehension. On the DRT, Form 1A, for the group of twenty-three students involved in the internship, the mean for Level of Comprehension scores (using Grade Twelve norms) was 22.3, and the median was twenty-five. The distribution of scores is indicated by the histogram on the following page.

Speed of Comprehension. The mean for Speed of Comprehension scores was 19.78, just three points lower than that for Level of Comprehension. The median was nineteen. The distribution of these scores is indicated in Figure 2, p. 27.
Histogram of Level of Comprehension Scores on the Davis Reading Test, 1A.

Figure 1
Histogram of the Speed of Comprehension Scores on the Davis Reading Test, 1A
ATTITUDE TOWARD READING

Concern that the mechanical, repetitive and somewhat impersonal nature of the reading programme prior to 1973 was adversely affecting students' attitudes toward reading, was one of the primary reasons for proposing innovations in the area of individualized reading for 1974. Booth, Odom, and Rauch, all reported positive effects on students' attitudes due to individualized reading techniques, and it was anticipated that the five innovations proposed in the reading programme for 1974 would result in a similar positive response from our students.

Such consideration of the affective impact of the reading programme, besides being humane, is important in that Estes and Johnstone, Cook and Sellitz, have come to view attitude toward reading as an underlying predisposition which in part determines reading behaviour.

7 Booth, op.cit.
8 Odom, op.cit.
9 Rauch, op.cit.
So it was that an instrument to measure the affective, as well as the cognitive, factors involved in the reading of our students was included in the pretest and posttest design.

The Instrument.

The instrument selected for this purpose was the Estes' Scale to Measure Attitudes Toward Reading. There are a number of reasons for selecting this attitude scale:

1. Content and Construct Validity. The content and construct validity of the Estes' Scale to Measure Attitudes Toward Reading are now established. In a multitrait-multimethod matrix analysis comparing the Attitude Scale with Self-Rating, Peer Rating, Extracurricular Activities, and Paper-Pencil Testing, the Attitude Scale proved to be superior both in validity of data obtained and in practicality.

2. Ease of Administration. The Estes' Scale to Measure Attitudes Toward Reading is administerable by any instructor in ten minutes of a class period. Scoring is easily accomplished.


13 Ibid., op.cit.

14 Ibid., p.6
completed by use of the key (See Appendix D, p. 84).

3. Scores are Numerical. Although the Estes' Scale to Measure Attitudes Toward Reading consists of twenty separate rating scales for individual questions, all these scores are quickly convertible to one percentage which can be used for establishing percentiles for our college students over several semesters, and for statistical analysis of pretest and posttest results.

Results of the Pretest.

The mean of the students completing the Estes' Scale to Measure Attitudes Toward Reading was 67 and the median was 73.9. The distribution of scores is shown in Figure 3 on the following pages.
It must be remembered that the Estes' Scale to Measure Attitudes Toward Reading is an attitude scale only and not a standardized test. Until now, no norms have been established for average and below-average readers; this research should be completed in the next few years. For the present, the scale is used to determine those students who are particularly negative in their attitude toward reading and to indicate any group or individual shifts in attitude over a semester's work.

STUDY HABITS AND ATTITUDES

The Instrument.

As a basis for aiding students in improving study skills through individual counseling and remedial instruction, the Survey of Study Habits and Attitudes (SSHA)\(^{15}\) was completed by all students in the reading programme. There are a number of reasons why this particular survey was selected.

1. Validity. Wren and Lewis\(^{16}\) stated that, "The development procedure for this test was extremely well conceived. Items were chosen on the basis of interviews with students and each item was then empirically validated as to its applicability to the problem." Deese\(^{17}\) concluded a review of the data on


\(^{17}\) Ibid., p. 782
validation of the seventy-five items selected for use on the Survey of Study Habits and Attitudes (SSHA) by saying that "It is more suited for uncovering attitudinal and motivational difficulties than any other published study inventory ... its value for research on counseling and remedial teaching must not be overlooked."

2. **Reliability.** The coefficients for reliability seem to be satisfactory, ranging from .79 to .95 for different groups and different methods.\(^{18}\)

3. **Percentiles.** Scores are convertible to percentiles which were determined by standardization of scores of high school and college freshmen. Form C, which was used in our pretest is for students in Grades 12-14.\(^{19}\) Specific norms are provided for first-year college students.

4. **Diagnostic Student Profiles.** The percentile scores of each student are plotted on the reverse side of his score sheet so that he can see at a glance his strengths and weaknesses under the following sub-topics:

1. Delay Avoidance
2. Work Methods
3. Study Habits
4. Teacher Approval
5. Educational Acceptance
6. Study Attitudes
7. Study Orientation.

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\(^{18}\) Ibid., p. 783
\(^{19}\) Ibid.
An example of the diagnostic profile is found in Figure 4, p. 36.

5. Counseling Key. The test comes with a special counseling key which permits identification of items to which the response given is different from that most frequently given by students of high scholastic achievement. This key enables the instructor to deal with particularly important items on the Survey of Study Habits and Attitudes and to examine individual student responses rapidly.

6. Ease of Administration. Because the Survey of Study Habits and Attitudes is not a test, it can be completed during class time, or on the student's own time. Most students can complete the survey in one class period. Scores are recorded on IBM multiple-choice sheets for ease in grading. The Survey of Study Habits and Attitudes has a very complete manual for use by the administrator and scoring keys are available.

RESULTS.

The Survey of Study Habits and Attitudes is a survey and not a test. There is no way to assure that students will respond to the items honestly. However, in most cases students will benefit from completing the survey merely by being made more aware of their own study attitudes and habits. The diagnostic profile is useful in diagnosing individual and

20 Ibid.

21 Ibid., pp. 782-783
group weaknesses and focusing remedial counseling and teaching on areas where there appears to be the greatest need. This is particularly important in a reading programme of only one semester's duration.

By completing a general profile for a group of students such as that shown in Figure 4, group shifts in attitude over a semester or more could be detected and characteristics of the group diagnosed prior to planning group instruction.

The norms for the group involved in our reading programme, expressed as percentiles for students entering college are as follows:

- Delay Avoidance: 34.5
- Work Methods: 41.2
- Study Habits: 36.8
- Teacher Approval: 35.6
- Educational Acceptance: 33.8
- Study Attitudes: 32.2
- Study Orientation: 32.9

A group diagnostic profile, the limitations of which have already been discussed, is shown in Figure 4, on the following page.
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Figure 4
Group Profile of the Survey of Study Habits and Attitudes
Percentile Scores.
It is important to note that on every subheading of the diagnostic profile for the Survey of Study Habits and Attitudes, the group involved in the reading programme had norms considerably below even the 50th percentile rank, using norms for students entering college. This indicates a serious, over-all weakness in the area of study habits and attitudes for this group.
Chapter 3

IMPLEMENTATION OF THE INNOVATIONS

This chapter describes the procedures which were followed in implementing each of the five techniques for individualized reading instruction as well as the sessions on study skills. General observations of the writer regarding the implementation of each innovation are also included here.

1. The Thematic Approach

Kaplan¹ and Rauch² recommended centering outside reading around a general theme to be discussed in class. Students would be free to read whatever materials they wished as long as it centered on the topic chosen.

From previous experience with first-year technology students, it was known that the topic of drug-use was of much interest and also controversial. The short story, "Marijuana and a Pistol," by Chester B. Himes³ was read to the students as a listening exercise and questions were asked

¹ Kaplan, op.cit.
² Rauch, op.cit.
from the Study Guide provided. Then students were asked if they thought it possible for a person under the influence of marijuana to commit the crimes mentioned in the story. The expected controversy arose. At this point, students were asked to do some outside reading on the question of drugs and prepare for a class discussion on the subject in two weeks time. Two panels were selected to begin the proposed discussion in each time slot slated for the Reading Laboratory.

Two weeks later a period was set aside for the panel discussion which was followed by general class discussion. It turned out that the students were incapable of conducting a coherent panel discussion without prior coaching and help in preparing questions. Despite this, an interesting class discussion followed in which each student was asked to tell what he had read and then to encourage general discussion. It was discovered, at this stage, that students had much difficulty in summarizing the main points of an article or book; and, in some cases, much difficulty in differentiating fact from opinion. Yet, the discussions were generally intelligent, interesting, and lively.

Following the discussion on the theme of "Marijuana", a survey was taken to determine student response to the activity. The results of this survey were as follows:

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1. Do you think the discussion on marijuana was worthwhile? 
   - Yes 92.3%
   - No 7.7%

2. Would you like to see the class discuss another topic in this manner? 
   - Yes 100%
   - No 0%

Based on the success of the first thematic reading assignment and the results of the survey, it was decided to have another one. Students were asked to submit topics which they would like to have discussed in class. The following topics were suggested:

1. Religion (Three times)
2. Sex
3. Should Sex Education be Introduced in the Lower Grades?
4. Trial Marriages
5. Abortion
6. The Use of Reading for the Mechanical Engineer
7. Drugs
8. Cigarette Smoking
9. The Difference in Methods of Teaching Students,
10. Vandalism
11. Student Power

It is interesting to note that Religion was suggested more often than any other topic, although there were four suggestions which in some way introduced the question of sex. These topics were read to the two groups concerned and the themes of "Sex" and "Student Power" were finally selected by taking a vote.

Based on observations of the first thematic discussion, the second assignment was modified so as to require a written summary of the main points of reading. This gave every student in the Reading Laboratory practice
in selecting main points and in writing summaries. Students were required to have the written summaries with them during the second discussion and this helped in enriching the input into these discussions so that everyone benefited more fully from what had been read.

The students themselves volunteered some interesting comments on the benefits of such thematic reading and discussion:

"It was worthwhile because it helped me to talk freely among the group."

"It gives students a chance to bring out thoughts and discuss them to find out whether they are right or wrong."

"I found out more about drugs than I would normally get from books." "It was interesting to see the different views of the class." "... It gave us all a chance to exchange knowledge on the subject."

"Interesting, Fun."

From the point of view of the reading teacher, the thematic discussions proved to be a motivational device that encouraged students to read with a purpose. Students learned from their discussions that different writers have different points of view, that fact and opinion should be differentiated, that they can learn from one another by discussing what they have read, and that it is worthwhile to summarize the main points of an article or chapter. New
vocabulary was introduced in a meaningful context and a richer experiential background for further readings in these areas resulted from the discussions. Students enjoyed the opportunity of sharing ideas together; they got to know one another better; they benefited from the experience in group discussion. Finally, pleasurable experiences related to reading were provided in the Reading Laboratory itself; this was, perhaps, the greatest benefit of all.

2. Free Reading Unit

Only five periods of the thirty scheduled for the Reading Laboratory were allotted to a free reading unit. Students were encouraged to use the College library for recreational reading during these periods and were asked to keep a log of all outside reading.

A total of sixty-six articles from magazines were reported as having been read by the twenty-three students involved in the internship, for an average of three articles per student. The magazines and their frequency are as follows:

- Time (4 students)
- Sports Illustrated (3 students)
- National Geographic (2 students)
- Newsweek (1 student)
- Sports Canada (1 student)
- Reader's Digest (1 student)
- Hot Rod (1 student)
- Popular Mechanics (1 student)
- Weekend Magazine (1 student)
- Canadian Photography (1 student)
- Baseball Digest (1 student)

Seventeen novels and five works of non-fiction, for
a total of twenty-two books, were read by the students involved in the reading programme. This is an average of one book per student. The titles of the books read are listed below.

**Fiction**

- Lord of the Flies (2 students)
- The Old Man and the Sea (2 students)
- Shane
- Lost Horizon
- The Pearl
- The Godfather
- Catcher in the Rye
- Dream Quest of the Unknown
- Go to the Window
- Lost in Apache Country
- Lone Riders

**Non-Fiction**

- The Valachi Papers
- Applied Mechanics
- Mollies
- Encyclopedia of Tropical Fishes
- I was Hitler’s Prisoner
- Man and Woman
- Baseball Tactics and Diagrams
- Soccer Coaching the Modern Way

In addition to the magazines and books listed above, twelve students - or fifty percent of those involved in the reading programme - reported that they had been reading the newspaper. One student reported that he enjoyed reading comics during recreational reading time.

It is debatable whether much more than an average of one book and three magazine articles per student should be expected of these students in one semester's recreational reading; especially when we consider that they are generally
slow readers with heavy workloads of required readings and assignments to complete anyway.

Donelson\(5\) had advocated the setting aside of three-to-five week units for free reading using ladders. It was proposed to develop a hierarchy of books in the area of science fiction during the course of the reading programme and to plug each student into the ladder at a point deemed appropriate by the instructor. The following hierarchy of books in the area of science fiction was developed on the assumption that this area would prove to be of interest to technology students generally:

- The Crysalids - John Wyndham
- I, Robot - Isaac Asimov
- Stranger in a Strange Land - Robert Heinlein
- Dream Quest of the Unknown - H.D. Lovecraft
- The Santaroga Barrier - Frank Herbert
- Fahrenheit 451 - Ray Bradbury
- 2001 Space Odessey - Arthur C. Clarke

Generally, these books are representative of the work of authors who are well-known for science fiction. It was thought that students might be encouraged to read more than one book by an author which they particularly enjoyed.

However, it proved impossible to implement the hierarchical approach to individual reading for two reasons:

1. Donelson's\(6\) approach requires that students

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Donelson, \textit{op.cit.}

6
Donelson, \textit{op.cit.}
be encouraged to read through a hierarchy of books corresponding to individual interests. This meant that the instructor must ascertain the area of interest for each student individually before suggesting a book. It took approximately half the semester to hold an individual conference with each student. It was discovered that of all twenty-three students involved in the reading programme, not even one was interested in science-fiction!

What students were most interested in, as reported in individual conferences, is listed below:

Sports (7 students)
Westerns (5 students)
Mysteries (3 students)
Biology (1 student)
How To Do Things (1 student)
Nautical Books (1 student)
Psychology - Human Relations (1 student)

2. Since the total duration of the entire remedial programme was only thirty periods, it was not considered advisable to take nine-to-fifteen periods, as advocated by Donelson for free reading along a hierarchy of interest. Even if the time had been available, no hierarchies were prepared in those areas selected by the students and the library would have been unable to acquire the proposed books in time to be of benefit to the reading programme.

For the two reasons stated above, the proposal to implement a free-reading unit based on a hierarchy of books in the area of science fiction was not implemented in 1973.

Donelson, op.cit.
Despite this, a free reading unit of five periods was implemented (with the results described previously) and student response was very favorable indeed.

3. The Saturated Environment.

Rather than attempt to create a saturated reading environment, as described by Johnson, Odom, and Garofalo, in the Reading Laboratory itself, it was decided to give students a free reading unit of five periods in the library. There were a number of reasons for making this decision:

1. The Reading Laboratory is used by several different instructors for different purposes. The room must be left unlocked between classes. From past experience it has been found that any reading materials of a recreational nature left in the Laboratory are taken by students using the room.

2. The Reading Laboratory is only the size of an ordinary classroom and is not physically adaptable to the display of large quantities of reading material. Even if such materials were provided it would be impossible to keep them organized with so many different classes using the room; students would not be able to get access to the materials without disturbing other students working in the Laboratory.

8 Johnson, op.cit.
9 Odom, op.cit.
10 Garofalo, op.cit.
3. The provision of large quantities of recreational reading material in the Reading Laboratory would probably have distracted students from the Controlled Reading activities and from the SRA Reading for Understanding Laboratory. On the other hand, the five periods in the library provided a change of environment and activity from the more structured aspects of the reading programme which refreshed the students and kept up their motivation.

4. Garofalo argued that a College should only create a saturated reading environment where one does not already exist. It seemed more reasonable to use the facilities already available in the library than to expend the energy and the finances involved in attempting to duplicate such facilities.

The decision to use the College library as the saturated reading environment proved to be a good one. The library had a large selection of approximately 225 novels, of which 125 were new acquisitions in an attractive permabound format. Small displays of novels were scattered throughout the reading area in order to attract students and a peg board display was used to draw the attention of students to interesting books.

In addition to the novels, there was an attractive display and reading area for periodicals where students were observed to spend a good deal of their free reading time.

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Garofalo, op.cit., p.109
Besides being introduced to professional journals relating to their own technology programmes, students could choose from a long list of popular magazines — especially in the area of sports which was their favourite choice.

Local newspapers, also popular reading material, were provided in the library along with national and international newspapers. These materials were also drawn upon for newspaper assignments which was an integral part of the individualized reading programme.

Perhaps the greatest asset of the library as a saturated reading environment was the co-operative and creative librarian, Mrs. Farmer, who is also enthusiastic about motivating students to read. The significance of this human factor in a library on the attitudes of students toward reading ought not to be underestimated.

The extent to which the use of the library as a saturated reading environment for five periods was successful in encouraging students to read has already been discussed in the previous section of this chapter.

4. The Newspaper

The ideas of Odom and Johnson were adapted to develop twelve assignments based on the newspaper. The greatest difficulty in adapting the ideas of Odom and Johnson for use in the reading programme was that of rewriting their general suggestions in
behavioral terms which could be followed by students. The twelve assignments developed are listed below along with a brief comment on the particular purpose for which each assignment appears to be particularly useful.

1. Read a newspaper article and list all the facts contained in it; then read it again and list all the opinions.

This assignment requires the student to distinguish fact from opinion and is useful in teaching critical comprehension skills.

2. Compare two newspaper editorials on the same subject from different newspapers and explain how their approaches and conclusions differ.

Critical comprehension skills are also being stressed in this assignment.

3. Analyze three headlines and their articles to determine whether the headlines are justified or simply sensational.

This assignment requires the reading of an article to determine the main idea and the use of critical comprehension skills in judging whether or not the headlines used are justified in terms of the article.

4. Analyze an editorial to see whether facts and opinions are presented as such, whether or not sources are given for facts, and what use has been made of propaganda techniques, if any.
The fourth assignment requires the use of critical comprehension skills in determining fact from opinion; literal comprehension is required to determine if sources are given for facts; and the critical comprehension skill of identifying the use of particular propaganda devices is stressed.

5. Compare the manner in which two newspapers report the same news event; note differences in appeal and presentation of facts. Note the amount of space that each newspaper devotes to the story.

This assignment requires the student to analyze the overall outline of each article. He uses critical comprehension skills to select the facts and determine differences in the methods of presentation. Critical comprehension skills would also be required to discuss the appeal that each article would likely have for the reader.

6. Prepare a listening exercise by taping a news article from the daily newspaper. Record the article and prepare a quick comprehension quiz to accompany it.

This assignment would require the use of literal comprehension skills and possibly inferential and critical comprehension skills as well, depending on the student and the article he selected. There is also a very close tie-in with oral expression and listening skills.

7. Write an editorial based upon a news article.
Here the student is required to react critically to a news article and formulate an opinion. All levels of comprehension are likely to be involved. The assignment is also useful in teaching point-of-view, objectivity vs. subjectivity, and other writing skills.

8. Compile a list of fifteen key words and meanings from several news articles. Use each word in an original sentence.

This assignment requires the use of critical reasoning to determine key words, dictionary skill in selecting a denotation to suit the context, and application of the skill in writing an original sentence containing each word. The assignment is useful for developing vocabulary and teaching dictionary skills in a meaningful context.

9. Write original headlines for ten news stories.

This assignment gives students an opportunity to practice the skill of determining the main idea of a selection.

10. Summarize two news articles and one editorial.

Students are required to select the most important information in each article and to
distinguish between essential and non-essential data.

11. Make up an outline for an article contained in a newspaper.
   This assignment gives students practice in analyzing the structure of a selection.

   This assignment gives students practice in reading for a particular purpose.

The twelve assignments discussed above were developed during the semester, typed on a single sheet (See Appendix E, p. 86) and distributed to students. Each student was required to complete one of the assignments during the reading programme. No restrictions were placed on which assignment was to be selected or which articles or newspapers were to be used in completing the requirement.

There was a favorable response from students toward the assignment and no one had difficulty completing this requirement. Several students arranged individual conferences to obtain guidance in completing the assignment which they had selected.

Because of time restrictions on both instructor and students, the full potential of these assignments in helping students with diagnosed weaknesses in particular types of comprehension skills was not exploited. Some
modification of this assignment to meet individual needs would strengthen it considerably.

5. **Student Bookclub**

This was the most disappointing of all the innovations which were implemented in 1973. Algra and Fillbrandt\(^1\) found that approximately 20 percent of the students in their survey were motivated to buy paperback books by this method.

Students in our reading programme were given the "Campus"\(^2\) Scholastic Book Club Newsletter for senior students for October, November, and December. Each newsletter carried thirty-six selections which were judged to be of high interest to senior students. (See Appendix B, p. 74).

Yet only one student of the twenty-three involved in the internship study bought a book in October, and no one bought a book in November or December! Instead of 20 percent, as had been anticipated, it was found that only 4.3 percent of students involved in the reading programme purchased a book.

The performance of the book club in the College

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1. Algra and Fillbrandt, *op. cit.*

2. "Campus" newsletters are published by Scholastic-Tab Publications, 123 Newkirk Road, Richmond Hill, Ontario, L4C 3G5. (See Appendix B, p. 74).
as a whole, however, was much more encouraging:

October  12 Books Purchased
November  8 Books Purchased
December  30 Books Purchased

Perhaps the reason for the low response of students to the Campus Book Club in the reading programme was that they had been already exposed to reading materials in the Reading Laboratory and in the library. They had also been given reading assignments and had heavy workloads from assignments and readings in the technology programmes.

6. Study Skills

In conjunction with the Guidance Department at the College, the following innovations in the area of teaching study skills were implemented in the Reading Laboratory during 1973:

A. Introductory Motivational Lecture and Discussion

Students were given a brief lecture on the following topics:

i) Attitudes Toward Study
ii) Getting Down to Work
iii) Sticking With It
iv) Delay Avoidance
v) Organization
vi) Research

This was followed by a general discussion on work-loads and study problems. The Survey of Study Habits and Attitudes was explained to students and they were asked if they would like to take the survey as an initial step in
improving study skills and attitudes. The response was positive.

B. Administration of the Survey of Study Habits and Attitudes.

It took approximately thirty-five minutes of class time to administer the SSHA (The Survey of Study Habits and Attitudes was discussed in detail in Chapter Two). It was found that students had much difficulty in discriminating among the terms:

S - Sometimes
F - Frequently
G - Generally
A - Almost Always

when indicating a positive response. Although these terms are explained as follows in the Directions in each test booklet:

S - Sometimes = 0 to 15 percent of the time
F - Frequently = 16 to 35 percent of the time
G - Generally = 36 to 65 percent of the time
A - Almost Always = 66 to 100 percent of the time

in real terms, it was difficult for students to distinguish terms with such similarity in denotation.

C. Interpretation of The Survey of Study Habits and Attitudes Percentiles.

As was explained in Chapter Two, the percentile scores of each student were plotted on the reverse side of his score sheet to form a graph known as a diagnostic

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16. Chapter Two, p. 22.
student profile. This enabled each student to see at a glance his strengths and weaknesses under the following sub-topics of the survey:

1. Delay Avoidance
2. Work Methods
3. Study Habits
4. Teacher Approval
5. Educational Acceptance
6. Study Attitudes
7. Study Orientation

So that there would be no confusion among students, the term percentile was explained as well as each of the terms on the profile. Students were helped to identify their strengths and weaknesses and encouraged to ask questions.

D. Options to Help Solve Problems. Students were offered three alternatives to help improve their study skills:

1. Individual conferences by appointment.
2. Class lectures on common problems with a question-and-answer session.
3. Small-group seminars to deal with particular problems.

Students generally elected to have small-group seminars on specific problems. The counseling key provided with the Survey of Study Habits and Attitudes manual proved to be important here in that it helped to center discussion around student responses which indicated a problem. The problems which students brought up most frequently in these
seminars were the following:

1. What can be done to change instructors' procedures, attitudes, etc.?
2. How can I write reports, answers for examinations, etc.?
3. How can I best budget my time when writing examinations?

One large-group lecture was arranged just before examinations were scheduled on the subject of "Writing Examinations".

Student response to the sessions on study skills was generally favorable; they especially seemed to benefit from group discussion of common problems.
Chapter 4

POSTTESTING

The Davis Reading Test, Form 1B, and the Estes' Scale for Measuring Attitudes Toward Reading were re-administered to twenty-two\(^1\) of the students who had been involved in the internship reading programme. The results were tabulated and tested for significance with those of the pretest. The scores on the posttest and an analysis of the results are given below.

LEVEL OF COMPREHENSION AND SPEED OF COMPREHENSION

Level of Comprehension

At the end of the fall semester the Davis Reading Test, Form 1B, was administered to twenty-two of the twenty-three students who had been involved in the internship programme. The mean for Level of Comprehension scores (using Grade Twelve norms) was 37.1, compared with a mean of 22.3 on the pretest. The median was thirty-five, as compared with a median of twenty-five on the pretest. The distribution of scores is indicated by Figure 5.

\(^1\) One student missed the posttest due to illness.
Figure 5

Histogram of Level of Comprehension Scores on the David Reading Test.
The difference between the means on the pretest and the posttest was tested using the *t* statistic, and the resulting value of \( t = -3.86 \) compared with the critical value of \( t = -2.326 \) showed that the difference was significant at the .01 level.

Therefore, the posttest indicated that there was an increase in the Level of Comprehension, and that this increase was significant at the .01 level of significance.

**Speed of Comprehension**

The mean for Speed of Comprehension scores of the twenty-two students writing the posttest was 33.91, compared with a mean of 19.78 on the pretest. The median was 27.5, as compared with a median of nineteen on the pretest. The distribution of scores is indicated by Figure 6 on the following page.

The difference between the means on the pretest and the posttest was tested using the *t* statistic, and the resulting value of \( t = -2.83 \) compared with the critical value of \( t = -2.42 \) showed the results to be significant at the .01 level.

Therefore, it is safe to say that there had been improvement in the Speed of Comprehension measured by the posttest and the improvement is significant at the .01 level.

**Attitude Toward Reading**

The Estes' Scale to Measure Attitudes Toward Reading
LEGEND

☐ = Pretest, Form IA
☐ = Posttest, Form IB

Histogram of Speed of Comprehension Scores on the Davis Reading Test.

Figure 6
was readministered during the posttest in order to determine if any significant shift had occurred in students' attitudes.

Even if increases significant to the 99 percent level of confidence in Level of Comprehension and Speed of Comprehension did occur, it was felt that such increases would be of questionable value in the long-run if students' attitudes toward reading had deteriorated due to the experiences in the reading programme.

The mean for the scores of the students writing the Estes' Scale to Measure Attitudes Toward Reading on the posttest was 76.24, as compared with a mean of 73.9 on the pretest.

The median was 77.5, as compared with 73.0 on the pretest.

The difference between the means was tested and the resulting t-statistic of \( t = -1.12 \) compared with the critical value of \( t = -1.645 \) showed that, although there had been a slight increase in the mean on the posttest, it was not significant at the .05 level.

Therefore, the attitudes of students toward reading did not vary significantly during the semester, although the slight increase in the mean from 73.9 to 76.24 may indicate that attitudes were beginning to change in a positive way even though the shift was not statistically significant over the ten week period.

Study Habits and Attitudes

The Survey of Study Habits and Attitudes had not been administered until October 22, 1973, just prior to the
beginning of the seminars on study skills.

It had been used primarily as a diagnostic tool to determine individual characteristics prior to discussion.

It was felt that insufficient time had elapsed between October 22nd and the first week in December, when the posttests were administered, to expect any meaningful shift in study habits or attitudes. Rather than use the students' time to readminister the Survey of Study Habits and Attitudes after only six weeks had elapsed, it was decided to have a final group lecture titled "Writing Examinations".
Chapter 5

RECOMMENDATIONS FOR THE READING PROGRAMME IN 1974-75

With increases in both Level of Comprehension and Speed of Comprehension significant at the .01 level being achieved by present procedures as outlined in this report, it is recommended that there should be no radical alterations in the programme. However, there are several areas where modifications may prove to be beneficial, and these are listed below:

Recommendations Concerning Evaluation

1. It is recommended that norms for the Davis Reading Test, and Estes' Scale to Measure Attitudes be developed for all first year technology students entering the College. The correlation, if any, between scores on these instruments and success in first-year technology programmes should be determined. This would enable the establishment of more meaningful criteria for selection of students for remedial instruction in reading. It would also aid in determining when individual students were reading with sufficient proficiency to safely discontinue such remedial instruction.

2. Because so many students had difficulty understanding
items 1, 7, 8, and 13 on the Estes' Scale to Measure Attitudes Toward Reading, it is recommended that these items be reworded, as follows:

Item 1: Reading helps people to learn, but it doesn't help anyone to do a job better.

Item 7: Reading is exciting for me.

Item 8: Reading is only for bookworms who want to get higher grades.

Item 13: Reading that I do on my own without being required to do it by an instructor doesn't teach me anything.

3. It is recommended that the Survey of Study Habits and Attitudes be administered at the same time as the other instruments in the pretest and posttest battery.

4. Instead of telling students that the responses on the Survey of Study Habits and Attitudes are:

   R = Rarely
   S = Sometimes
   F = Frequently
   G = Generally
   A = Almost Always

more emphasis should be placed upon having students respond according to the percentage of time involved, as indicated in the Directions:

   R = 0 to 15 percent of the time
   S = 16 to 35 percent of the time
   F = 36 to 65 percent of the time
   G = 66 to 85 percent of the time
   A = 86 to 100 percent of the time

This recommendation is necessary because so many students experienced difficulty in distinguishing among Sometimes, Frequently, Generally, and Almost Always because of the similarities in denotation.
5. It is recommended that greater use be made of diagnostic instruments and techniques, such as the student-teacher conference, to determine specific individual weaknesses.

6. A questionnaire should be developed and used early in the first semester to determine student reading interests and habits, etc.

7. A questionnaire should be developed for use at the end of the reading programme to determine student opinion on the various methods, materials, etc., employed in the programme. This would be helpful in determining the affective impact of particular elements within the programme.

Recommendation Concerning Duration of the Programme

It is recommended that students be permitted to continue in the reading programme until their reading skills have developed to a level at which they can be expected to function effectively in their technology programmes. The single semester now being allotted to remedial reading has proven to be inadequate for some students, as might well be expected.

Recommendations Concerning the Library

1. The library should arrange displays of books on themes which have proven to be of interest to students, such as sports, westerns, and mysteries.

2. The library should purchase at least one copy of every book listed on hierarchies given to students, and
should purchase multiple copies of books on the lower end of the hierarchy. These books should be reserved for students enrolled in the reading programme.

3. The library should loan books to reading instructors for use in paperback scanning sessions in the hope that students will become interested in these books and borrow them.

4. It is recommended that all back issues of popular magazines other than back issues for the current year, be given to the reading programme for use in the Laboratory.

Recommendation Concerning In-Service Training

It is recommended that in-service training sessions in the teaching of reading in subject areas be required for all instructors. These sessions would be provided with the cooperation of the faculty of the Department of Curriculum and Instruction of Memorial University of Newfoundland and would have a three-fold purpose:

1. To familiarize instructors with procedures for teaching reading skills in content areas.

2. To help instructors develop criteria for the selection of textbooks and to judge the readability of textbooks presently in use.

3. To familiarize instructors with the basic objectives and procedures of the reading programme in the hope of encouraging re-inforcement and transfer of reading skills.
Recommendations Concerning Hierarchies of Books

1. It is recommended that hierarchies of books be developed in the area of sports, westerns, and mysteries, as well as in any other areas that prove to be of interest to students.

2. These hierarchies should be distributed to students who indicate an interest in particular areas, with the instructor determining the point at which the student will begin reading.

3. Reading ladders of a quasi-recreational nature should be developed along themes which relate to particular technologies taught at the College. This would allow students to read materials that had been graded for difficulty, while at the same time having the guidance and instruction of individual conferences; experiential background and vocabulary in particular content areas would simultaneously be increased. A sample of such a reading ladder in the area of Nautical Science is given below:

   Typhoon - Joseph Conrad
   The Caine Mutiny - Herman Wouk
   Moby Dick - Herman Melville
   The Boat Who Wouldn't Float - Farley Mowat
   Captains Courageous - Rudyard Kipling
   The Young Hornblower - C.S. Forester
   (The Mascot of the Melroy)

4. It is recommended that readability studies be done on materials selected for the hierarchies to ensure that the level of difficulty is sequential from easiest to most difficult.
Recommendations Concerning Newspaper Assignments

1. It is recommended that this approach to teaching reading, especially the particular skills listed in the assignments given in Chapter 3, be exploited more fully.

2. A more prescriptive approach should be taken to assigning exercises so that particular skills can be re-inforced. This should be done, however, without restricting individual choice in the selection of articles and newspapers.
APPENDIX A

Questionnaire Used in the Hayward Survey

Does your university offer Reading and Study Skills instruction to students?  Yes ___  No ___

1. Is it a course?
   Yes ___  No ___
   If "yes" give number of credit hours or units of credit.

2. Is it a referral service?
   If "yes" is it self referral?
   Yes ___  No ___
   Faculty referral?
   Yes ___  No ___
   Counseling referral?
   Yes ___  No ___
   Other __________________________

3. Do you charge a fee?
   Yes ___  No ___
   If "yes" what amount? __________

4. Is Reading and Study under the auspices of:
   Education? ___  English? ___  Psychology? ___
   Counseling? ___  Other ___

5. Length of course in weeks? ____
   Number of hours, per week? ____
6. Approximate number of students assisted in one calendar year? 

7. Staffing - Number of full-time faculty? 
Part-time Faculty? Teaching Assistants? 
Graduate Students?

8. Comments
31. JONATHAN LIVINGSTON SEAGULL

Richard Bach

"I want to find me. Alive. Alone. Soaring with the wind. But because he's different and a loner, Jonathan is banished from the group. Set free to find his destiny he soars across the skies. Then he crashes through a blinding wall of wind into the astonishing meaning of life. Breathtaking photos set off this phenomenal best-seller. 128 pp.

32. MY DARLING, MY HAMBURGER

Paul Zindel

What's the scene in high school really like? You know. But how often do you read a book that rings true? This one does. Maggie and Dennis find school a drag. Sean and Liz are bugged at home. Each of them has private dreams and hopes. Soon all four of them will be plunged into a strange, cold adult world. 128 pp.

33. SOME CANADIAN GHOSTS

Sheila Hervey

Travers Allan likes to doze in the sun on the banks of the St. Lawrence. Why is this unusual? Because Travers Allan has been dead since 1923. From Hetty who haunts in Chilliwack B.C. to the Maritimes' Dungarven Whooper each Canadian spirit tells a spine-chilling tale. You may have one in your neighbourhood! 204 pp.

34. THE RED PONY

John Steinbeck

The unforgettable story of a boy who dreamed great dreams - of the sorrel colt he raised and lost - of the man who fought for him both. On a night of fear, only one life can be saved — but must another be sacrificed? A beautifully written tale of ranch life by a Nobel Prize winning author. 117 pp.

35. THE LIFE AND WORDS OF ST. FRANCES OF ASSISI

Ira Peck

He's young, handsome, rich. He loves fame, adventure and women. But his life is empty. So he rejects his life of luxury, turns away from family and friends - to lead a simple life of love and peace in the beauty of nature. An inspiring true story — now a new movie. Brother Sun, Sister Moon. 128 pp.

36. THE COMPLETE BOOK OF STOCK-BODIED DRAG RACING

Lyle Kenyon Engel

Supercharged engines, howling super stock cars bomb off the starting line and scream up the track in wheel-to-wheel action. Read all about the story behind the nitro-burning FXers, the sizzling personal feats in the superfast gas coupe ranks, plus technical tips from winning pro racers. Over 50 thrilling photos! 176 pp.

37. MINI-MYSTERIES

Julia R. Pigg

Match wits with super sleuth Sara Hull. In 59 brain-twisting mysteries you can solve. Uncover the clues and nab murderers, thwart assassins, save kidnapped, solve jewel thieves. Can you discover the weapon? Was it murder or suicide? Find out the surprising answers. 144 pp.

38. NIGHT WATCH

Lucille Fletcher

A bloody corpse that vanishes, a beautiful heroine clinging to the ragged edge of sanity, a ghostly night filled with terror and revenge. Is Ellie insane? Or is she the victim of a sinister plot - a horror designed to drive her mad? Chilling drama of a woman twisted by love - now a smash-hit movie. 128 pp.
41. TEENSPELL
ed. Betty M. Owen
Rick and Alicia share a secret world of sunsets — until a tragic shadow darkens their love. Matt is expelled from school on a drug charge — and confronts grim hostility at home. Over 30 award-winning stories and poems — all by young people — and all about life, loneliness, love, death — and the world of you. 212 pp.

42. NEVER CRY WOLF
Farley Mowat
"The big bad wolf."
"Keeping the wolf from the door."
Farley Mowat explodes all the centuries-old myths about wolves in this account of a summer spent in Keewatin living with a wolf family. Is the wolf really a menace to our deer and caribou population? Should there be a bounty on wolves? Find out in this bitter, funny, outrageous book. 176 pp.

43. HOMBRE
Elmore Leonard
"Take a good look at Russell. You'll never see another like him as long as you live." Five people's lives depend on Russell — they hate and fear him. He talks tough, kills without any show of feeling, plays a lone hand. And he's their one chance of survival against desperate outlaws. Paul Newman was Hombre in the film version of this book. 190 pp.

44. A TEACUP FULL OF ROSES
Sharon Bell Mathis
"When you're down and feeling bad, think of me and know how much I love you." Joe and Ellie dream of a bright future. They'll escape the dark prison of the ghetto, flee his mother's fierce anger and the bitter despair of his drug-racked brother. Powerful, deeply moving novel of a family's fight for survival. 126 pp.

45. THE LAST DAYS OF HITLER
H.R. Trevor-Roper
He was a madman with a violent mission. He had unleashed terror, torture, and death on millions — had plunged the Western world into the nightmare of war. Then his spell was broken. Doomed to defeat, he hid from his enemies, a terrified coward escaping a world he had destroyed. Now a movie, Hitler: The Last Ten Days. 318 pp.

46. THE GOLDEN EVENINGS OF SUMMER
Will Stanton
They're definitely a wild family. Mother wins the cigar-smoking feud. Will buys a car for two cents — and gets mixed up with the mob. Charlene elopes after a two-week courtship. Then Leonora, the terror, arrives home — and the fireworks really begin. Sunny, heartwarming story — now a popular, new movie, Charley and the Angels. 154 pp.

47. FLOWERS FOR ALGERNON
Daniel Keyes
Scientists transform Charlie Gordon from a moron into a genius. The result? His new superhuman intelligence makes him a celebrity overnight — and brings him new love. The cost: Charlie loses his happiness, and gains the chilling ability to foresee his own doom. Great book and movie. 216 pp.

48. GREAT EXPECTATIONS
Charles Dickens
An escaped convict, a pretty, haughty girl trained to break hearts, a bitter old lady, scorned on her wedding day — a foolish orphaned boy with "great expectations." All play their part in this dramatic novel by England's master storyteller. A novel rich in excitement, humour, suspense — with characters that will live in your memory forever. 544 pp.
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Attention Club Members: Fill in coupon. Clip and hand in with payment to Club Secretary on deadline day. DO NOT MAIL THIS COUPON TO CAMPUS HEADQUARTERS.

**NOVEMBER TITLES:**

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Secretary Deadline

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1. **THE GREY CUP STORY**
   - Author: Jack Sullivan
   - Description: The complete story of the biggest football event in Canada. Over 60 years of Grey Cup history, game statistics, analyses of great Grey Cup games. 207 pp.

2. **ANNA KARENINA**
   - Author: Leo Tolstoy
   - Description: Elegant! Anna is the toast of glittering St. Petersburg society. But then she forsakes it all for a passionate, forbidden love. Abandoned. 447 pp.

3. **THE BEARS AND I**
   - Author: Robert Franklin Leslie
   - Description: The incredible true account of a man and his adventures with five adopted bear cubs in Canada's remotest regions. 198 pp.

4. **THE APRIL FOOLS**
   - Author: William Johnston
   - Description: Read about the amazing change in Howard from loser to jet-set swinger: A laugh riot and a touching love story. Now a movie. 144 pp.

5. **CHILDHOOD'S END**
   - Author: Arthur C. Clarke
   - Description: Geniuses from outer space come to Earth. They bring peace to mankind ... at an impossible price. They demand an end to the human race. 217 pp.

6. **ALL THE KING'S MEN**
   - Author: Robert Penn Warren
   - Description: Governor Willie Stark, a cynical politician, calculates power, tyrant. In his lust for power he destroys the lives of countless men. 438 pp.

7. **ROCK AND ROLL SONGWRITER'S HANDBOOK**
   - Author: Larry Hutchinson
   - Description: Top rock composers and lyricists fill you in on how to style and arrange a song. 144 pp.

8. **HEY, I'M ALIVE**
   - Author: Helen Klaben
   - Description: An amazing true story about survival under impossible circumstances. Helen and her pilot were rescued after 49 days in the Yukon. 185 pp.

9. **RUN, INDIAN RUN**
   - Author: Thomas R. Kelley
   - Description: The incredible story of a B.C. Indian's 13 years in the wilds and of the manhunt organized to bring him back for crimes he did not commit. 144 pp.

10. **EASY MOTORCYCLE RIDING**
    - Author: Theresa Wallach
    - Description: Get some wheels and move into the scene. Where to buy, what to wear. Fully illustrated. 144 pp.

11. **TO TELL YOUR LOVE**
    - Author: Mary Stolz
    - Description: During her seventeenth summer Ann meets her first heartbeat. Then these two teens that love wears many faces especially for herself. 244 pp.

12. **THE MEPHISTO WALTZ**
    - Author: F.M. Stewart
    - Description: Paula discovers the secret of Duncan death, and her husband's strange behaviour. A salacious secret that can only be broken by witchcraft. 192 pp.

13. **EVIDENCE OF THINGS SEEN**
    - Author: Elizabeth Daly
    - Description: Clara ignores the story that someone has been poisoned in the room with the sealed door. A super chiller. 244 pp.

14. **BLACK LIKE ME**
    - Author: John Howard Griffin
    - Description: What is it really like to be black in the American South? White author John Griffin darkened his skin and set out to find the answer for himself. 158 pp.

15. **CARMILLA**
    - Author: Joseph Sheridan Le Fanu
    - Description: Who is Carmilla? Is she possessed by sinister power? The answer lies in an abandoned tomb of a ruined castle. 200 pp.

16. **THE CAINE MUTINY**
    - Author: Herman Wouk
    - Description: Brutal Captain Queeg has lost his sanity. If officer Maryk takes command it's mutiny. If he doesn't the Caine will be lost at sea. 270 pp.

17. **THREE TRAGEDIES**
    - Author: William Shakespeare
    - Description: In these three great dramatic works Shakespeare portrays madness and murder -- and reveals the dark and violent side of man's mind. 364 pp.

18. **ALL THIS AND SNOPPY TOO**
    - Author: Charles M. Schulz
    - Description: What more can you say about Snoopy? Pages and pages of fun and laughter from the world's most lovable dog. 128 pp.
Assessing Attitudes Toward Reading: A Validation Study

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Designs for evaluation of educational programs generally incorporate assessment of affective as well as cognitive factors. More specifically, the requirement is for measures of pupil attitudes toward one or more school subjects. Despite this, the development of such measures has lagged behind the demand. This in part may account for the widespread interest generated by the Estes Scale to Measure Attitudes Toward Reading, first published in the Journal of Reading (1971). Various agencies at local, state and national levels have adopted this scale into their assessment packages with a minimum of supporting data behind it. Perhaps most significantly, U.S.O.E.'s Right To Read project includes it in the program assessment package provided to every Right To Read site.

The first question to raise of the Scale concerned the degree to which it actually does measure students' attitudes toward reading. To assess the validity of this and several other scales of similar nature became the focus of a rather involved research undertaking. Data were collected from 641
seventh through twelfth grade students in the Fairfax County, Virginia schools. In the interest of parsimony, the present paper will report results only for the reading scale.

In general use, the Estes Scale is employed as a part of summative rather than formative evaluation. This suggested, therefore, an assessment of concurrent validity. Within this framework, content and construct validity were considered.

**Content Validity**

Judgments regarding content validity are made through consideration of the procedures by which a scale is constructed. Two aspects of test development are usually considered: the operational definition of the trait in question and the procedures for composing and sampling items to represent the universe defined.

In the present instance, attitude toward reading was viewed, after Cook and Sellitz (1964), as an underlying predisposition which in part determines reading behavior, including verbal statements and approach-avoidance behaviors. Discussions with teachers and students, together with a rather exhaustive literature search, indicated that students with positive attitudes toward reading tend to read widely in their spare time, feel confidence in their ability to read, feel that they have had good teachers, and value their reading ability. Students with unfavorable attitudes toward reading, conversely, tend to avoid reading and express anxiety and fear in regard to the activity, especially where it is demanded of them.

Initially, a large pool of Likert-type items thought to encompass this range of affect was composed. Following this, items were chosen for trial administration. Choices were based on each item's apparent uniqueness and fair representation of the universe of items from which it was selected. Discrimi-
nation analyses were then conducted to select items which would discriminate between two kinds of respondents, presumably those with positive and those with negative attitudes toward reading. That presumption, however, remained to be tested, and the question of construct validity was posed.

Construct Validity

Establishing construct validity involves testing hypotheses generated from interpretation of a construct. With regard to an attitude scale, these hypotheses concern criterion measures of attitude toward an object and criterion measures of constructs other than that attitude. Theoretically, scores on the attitude scale should be more highly correlated with the former than the latter.

To facilitate interpretation of such data, Campbell and Fiske (1959) proposed a multitrait-multimethod matrix. Requiring that more than one trait be measured and that more than one method be used to assess each trait, this matrix presents intercorrelations among the several traits and methods involved in a design. In effect, the relative validity of each method employed is assessed through this design.

In this study, attitudes toward reading were assessed by four methods: score on the Attitude Scale, number of extracurricular activities each student listed which were judged to pertain to reading, nominations by peers on a "Do They?" type questionnaire, and self-ratings of attitudes on a 1–5 scale.

Traits used in the design, in addition to attitude toward reading, were attitude toward English, attitude toward mathematics, attitude toward science, attitude toward social studies, verbal and quantitative abilities, and reading achievement. Attitudes toward the content areas were measured by the four methods described for measuring attitude. Ability measures were scaled scores of the Cooperative School and College Ability Tests: Series I.
and nominations by peers on a "Who Are They?" questionnaire. Reading achievement was measured by the Sequential Tests of Educational Progress, Series I.

Table 1 presents intercorrelations among all traits and methods employed in the design.

--- Insert Table 1 About Here ---

Figures lying in diagonals enclosed by broken lines represent correlations between two methods of measuring a single trait, and are called "validity values." Validity values for the reading Attitude Scale are: (a) Scale and extracurricular activities, \( r = 0.26 \), (b) Scale and peer rating, \( r = 0.35 \), and (c) Scale and self-rating, \( r = 0.67 \). Each of these validity values is significantly different from zero.

Because there is always an imperfect relationship between attitude and behavior, attitudinal indicators are never perfectly correlated. Hence, correlations between two criteria of a construct must be interpreted in relation to correlations between each of the criteria and measures of other constructs. Interpretation of the Attitude Scale validity values thus must begin with a comparison of them to correlations between reading scale scores and measures of alternate traits. These are represented by figures in the validity values' vertical column. Validity values for the reading Attitude Scale are clearly higher than correlations between the reading Scale and measures of other traits. The one non-significant difference is the correlation between the reading Scale and extracurricular activities related to English, a relationship which might well be expected.

Similar information regarding the validity of alternative measurement methods is provided in the matrix. Thus it is possible to compare the validity of the Estes Scale relative to other measures of attitude.
Validity values for attitude measurement by extracurricular activities related to reading are: (a) extracurricular activities and scale, $r = .28$; (b) extracurricular activities and peer rating, $r = .27$; and (c) extracurricular activities and self-rating, $r = .19$. While these values are significantly different from zero they are not higher than correlations between number of extracurricular activities in reading and corresponding measures of alternate traits. Differences between pairs of correlations are not significant for English and social studies. Attitude Scales, reading achievement scores, peer ratings of attitude toward English and math, and self-ratings of attitude toward English, math, and social studies. It must be concluded that attitude measurement through listing extracurricular activities is not particularly valid.

Validity values of peer rating of attitude toward reading are: (a) peer rating and Scale, $r = .35$; (b) peer rating and extracurricular activities, $r = .27$; and (c) peer rating and self-rating, $r = .28$. Again, all validity values are significantly different from zero. Differences between validity values and corresponding measures of alternate traits are significant except with regard to reading and achievement test scores and ratings of extracurricular activities related to English and social studies.

Validity values of self-ratings of attitude toward reading are: (a) self-rating and Scale, $r = .67$. (b) self-rating and extracurricular activities, $r = .19$; (c) self-rating and peer ratings, $r = .23$. Differences between these validity values and corresponding measures of other traits are significant except with regard to extracurricular activities related to English and social studies and peer ratings of reading ability.

Examination of validity values of Table 1 reveals somewhat consistent patterns of intercorrelations among methods. Each alternate method of assessing attitude toward reading correlates more highly with the reading Attitude Scale
than with any other measurement method. Correlations between extracurricular activities and alternative measures provide the lowest validity values.

The high correlation between self-ratings and Attitude Scale scores probably occurred because both methods employ self-report. Correlations between self-ratings and alternative measures, however, were significantly lower than correlations between the Attitude Scale and those measures. In addition, self-ratings are limited by their inability to establish degrees of favorableness or unfavorableness of attitude. Their use is restricted to measurement problems in which a crude classification scheme is sufficient (Edwards, 1957).

Using peer ratings of attitude with secondary school students appeared to have some disadvantages. Many students expressed inability to respond to the questionnaire because of unfamiliarity with class members. Some questioned the ethics of providing such information regarding their classmates.

Both validity data and practical considerations establish the superiority of the Attitude Scale as a measure of student attitudes toward reading. Following this establishment of concurrent validity, the function of the Scale as a measure of change and as a predictive instrument may properly be undertaken.
### Table 1

Multitrait-Multimethod Matrix for Reading

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<th>PAPER- PENCIL TEST</th>
<th>EXTRACURRICULAR ACTIVITIES</th>
<th>PEER RATING</th>
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* p<.05
References


APPENDIX D
APPENDIX D

ESTES' ATTITUDE SCALE AND VALUE KEY

Attitude Scale
A = strongly agree
B = agree
C = undecided
D = disagree
E = strongly disagree

1. Reading is for learning but not for enjoyment.
2. Money spent on books is well spent.
3. There is nothing to be gained from reading books.
4. Books are a bore.
5. Reading is a good way to spend spare time.
6. Sharing books in class is a waste of time.
7. Reading turns me on.
8. Reading is only for grade grubbers.
9. Books aren't usually good enough to finish.
10. Reading is rewarding to me.
11. Reading become boring after about an hour.
12. Most books are too long and dull.
13. Free reading doesn't teach anything.
14. There should be more time for free reading during the school day.
15. There are many books which I hope to read.
16. Books should not be read except for class requirements.
17. Reading is something I can do without.
18. A certain amount of summer vacation should be set aside for reading.
20. Reading is dull.

<table>
<thead>
<tr>
<th>Items</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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Table 2: Response values to assign to each possible response to each item.
APPENDIX E
APPENDIX-E

THE NEWSPAPER ASSIGNMENT

1. Read a newspaper article and list all the facts contained in it; then read it again and list all the opinions.

2. Compare two newspaper editorials on the same subject from different newspapers and explain how their approaches and conclusions differ.

3. Analyze three headlines and their articles to determine whether headlines are justified or simply sensational.

4. Analyze an editorial to see whether facts and opinions are presented as such, whether or not sources are given for facts, and what use has been made of propaganda techniques, if any.

5. Compare the manner in which two newspapers report the same news event; note differences in appeal and presentation of facts. Note the amount of space that each newspaper devotes to the story.

6. Prepare a listening exercise by taping a news article from the daily newspaper. Record the article and prepare quick comprehension quizzes to accompany it.

7. Write an editorial based upon a news article.

8. Compile a list of fifteen key words and meanings from several news articles. Use each word in an original sentence.

9. Write original headlines for ten news stories.

10. Summarize two news articles and one editorial.

11. Make up an outline for an article contained in a newspaper.

12. Use the W5 approach to analyze five news stories.
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