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ABSTRACT

This document presents a comprehensive reading program developed for the secondary school, grades 7-12, that is an integral part of the language arts curriculum. The contents include: "Overview," which discusses the reading approach used with the students, the organizational scheme, the materials used for instruction, and the evaluation of pupil progress; "Description of Evaluation," which makes up the bulk of this document discusses pretesting and posttesting for the skill areas of vocabulary, comprehension, rate, and study skills; "Evaluation of Test Results," which reviews the results of testing for both the cognitive and the affective domain in the areas of vocabulary, comprehension, and rate; and "Projection," which discusses further extension of the program. Appendixes provide a developmental reading program that is part of a nongraded, phase elective English curriculum, and evaluation techniques for a secondary reading course. (WR)

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READING TECHNIQUES, A SECONDARY READING COURSE
SEVEN YEARS, AND 5,000 STUDENTS LATER

By

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TRENTON PUBLIC SCHOOLS
Trenton, Michigan 48183

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Trenton High School
Reading Staff

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The Trenton High School Developmental Reading Center, located in Trenton, Michigan, is a comprehensive reading program that works for the secondary school, grades 7 through 12. The program works in any socio-economic setting be it rural, inner city, suburban, or metropolitan. Via this program, a student learns to read, so that he may read to learn.

There is an important difference in how this reading program is operated administratively that should be pointed out before we go any further. This program is not attached to the special education program in the school district, nor is it limited to one grade level. It is an integral part of the Language Arts Curriculum. There are some significant consequences to this: First, students receive regular English credit for the semester course. The stigma of special education and remedial courses is therefore almost totally eliminated, due to the fact that students view reading as part of English. Second, millage defeat, which is common in many school districts, often takes its toll in special education, particularly in reading. Reading is cut when the money drops off because it is considered fringe or special, rather than basic. Since reading here is an integral part of the curriculum, it probably will never be cut or restricted in funds or staffing. Other disciplines are much more likely to go before reading. Third, when reading is attached to special education, staffing can be a problem. State funds usually limit the number of students that can be serviced to around 50 per teacher. Adding staff and funds is very difficult, and concentration must be made on the most serious cases of reading. These students, in many cases, are pulled out of other courses. This is how the stigma is perpetuated.

The result, then, of making the decision to include reading instruction as part of the Language Arts curriculum insures its stability, reduces stigma associated with reading, and opens the door for continued growth and enrollment.

One further point should be considered: A quick overview of the current Federal Administration's attitude toward education makes federal funding of reading programs in secondary schools seem unlikely. Funds will have to be generated locally.

As compared to the 50 or more students who are usually selected for remedial reading in a typical secondary school, there are approximately 650 students out of 2600 that do elect a developmental reading course in our elective English program every year. Our banner year saw the enrollment mark for reading courses reach 850.

A few reasons for the high enrollment and the ultimate success of this approach are that students see the importance of reading ability in their own life styles. They are aware of the transfer of reading to other courses and know that once they have entered a reading course, they will receive a program of instruction that is highly individualized

and tailor made to their unique interests and needs, and abilities. The reading program courses provide instant success for the student because he competes against himself with appropriate, graded materials suited for his level and his instructional needs. Evidence of this student awareness is indicated in surveys and feed-back from Trenton High School graduates via interviews and personal contacts.

At this time, it should be re-emphasized that our approach to reading is developmental, not remedial. Developmental reading starts the student at his present level and develops him to his potential.

Three non-graded, phase-elective developmental reading courses are presently offered. Basic Reading Skills is a phase one and two course elected by those students who feel they have serious deficiencies in their reading skills. Reading Techniques is a phase three, four, and five course elected by those students who feel they are average or better than average readers. Advanced Reading Techniques is a phase five course designed for the superior reader who is inclined to attend college. The course instruction stresses reading concepts, reading habits, and study skills. Perceptual training is assisted with the use of tachistoscopic reading machines. Additional reading machines are used as a tool and not as an end result to the reading process. Diagnostic pre- and post tests are administered to measure growth. In Basic Reading Skills, the Nelson Reading Test, Forms A and B, and/or the Gates-McGinnite Test are used. The Nelson-Denny Reading Test, Forms A and B, are used in Reading Techniques and Advanced Reading Techniques. In addition, informal diagnosis such as interest inventories, reading information sheets, and teacher observations are utilized to measure attitudinal and behavioral change.

After discussing the results of the initial diagnostic tests with the students, four small groups of four to eight students each are established. After a two-week orientation to the reading lab, each student receives a weekly schedule that allows him to work from his own level, at his own pace, in a non-threatening, self-competitive situation for 12 weeks. The main areas of instruction around which these courses operate that will be discussed are: 1) vocabulary development; 2) comprehension skills; 3) rate building; 4) auditory skills; 5) study skills, and; 6) recreational reading.

The auditory and study skills development aspect of the program are essential. One station in our reading center is the Listening Post. Here, students listen to a variety of tapes through headsets. Tapes and related workbooks provide the students with lessons in various comprehension techniques, such as getting the main idea of sentences and paragraphs, or how to read textbooks allows for the transfer of this skill to the content areas of other courses. Students seem to enjoy this activity.

Another station in the reading center is the study skills table. At this station, further exercises in some of the concepts introduced in the tape presentations are provided. In addition to this, there is work with vocabulary building and advancing word attack skills, primarily structural and contextual analysis of words.

One device that we use in this aspect is the 100,000 word chart, which teaches prefix and root word manipulation. The EDL Word Clues Books present approximately 500 words a semester. The remainder of the time at the Study Skills table is devoted to the teaching of those specialized reading skills needed in various academic areas such as science, math, literature, and social studies. One such study technique is the SQ3R Method. SQ3R stands for survey, question, read, recite, review. The primary purpose of this technique is to give the student a clear cut, relevant purpose for reading.

Another station is the Aud-X which is a device for teaching basic word attack skills and is very effective for the non-reader through the sixth grade reading level. The variety of listening, looking, and completion exercises provided by this format has proven useful. This Aud-X activity can be operated independently.

The controlled reader is a machine that is used in the reading courses to help students increase their reading speed and comprehension levels. Because a line of text is exposed for only a short period of time, reading speed is increased due to a reduction in the number of fixations and regressions per line. The Controlled Reader Sr. is designed for small group work, while the Controlled Reader Jr. is designed for individual use. The SQ3R Survey Method and vocabulary study are used before each session to aid in comprehension. Following the session with the machines, a ten question comprehension quiz is taken. After this, a timed reading from Simpson's Better Reading Books 1, 2, or 3 is given to encourage transfer of speed to the printed page. These activities are done twice a week on alternate days for a 12 week period within the weekly schedule concept.

The Craig Reader is a machine designed for use by an individual to increase his reading rate and comprehension level. All levels of comprehension ability can be served since the slides are programmed from the early elementary level to that of an adult. Like the controlled reader, fixations and regressions are reduced. In addition, the Craig Reader program includes tachistoscopic training slides which are used for visual training prior to the reading slide session. Following the machine work, a timed reading from either the Craig Reading Improvement Book, or Simpson's Better Reading Books is administered to insure transfer of speed and comprehension to the printed page, as with the Controlled Reader. The Craig Reader is also used twice a week on alternate days within the weekly schedule concept.

One concern for reading skills classes is the assessment of grades. The following evaluative procedure has worked very effectively at Trenton High School. First, the daily reading and study skills developed in the reading classes within the small groups according to the weekly schedule concept are self-corrected and recorded individually on progress charts. These skill activities comprise 50% of the student grade, and act as a progressive record for both the student and the teacher. This structured format provides the student with initiative plus immediate reinforcement as they can see their progress daily, and can compete against themselves with their previous scores. Second, students must make a transfer of learned skills to their independent reading situations for enjoyment. Self-selection of novels is stressed by using a survey technique with which students receive a good overview of the novel and know whether they will enjoy reading it. Students can pick up a book of their choice from the drugstore, library, or home, skim through 15 pages or so, and tell in 5 minutes whether they will enjoy it or not.

Reading in the novel, which comprises the other 50% of their grade, is done for 15 minutes a day, and a two or three sentence summary of the reading is recorded on a daily reading journal. The daily reading journal provides an immediate comprehension check of the material read, and helps develop the habit of reading each day. Note, this is the only homework assignment in the reading classes, that of reading in a novel of their choice for 15 minutes each day during the semester. The students are taught to count out 15 pages and put a book marker at the end of the 15 page count. The objective is to attempt to read a page per minute within 15 minutes. If they can accomplish this task, they are reading close to 300 words per minute, which will lend itself easily to reading 20 novels per year. This technique must be taught to insure transfer of skills to a life style of reading for enjoyment.

The two above mentioned aspects of evaluation work because they provide a daily and weekly continuity for all the students and make the learner independent and organized due to the structured format.

Beyond this, the students quickly see that so many reading activities completed means a certain grade on the report card. All reading tasks are assigned at each individual's reading level. In reality, each student is graded on the energy he puts into improving his reading ability. For the first time, a poor reader can get a high grade in English which he knows he has earned on the same measurement as the better reader in class.

Reading courses in the Trenton Adult Education Programs are also offered to students enrolled in high school evening classes for credit, and also to adults who wish to improve their reading abilities and techniques. Adult Basic Education reading classes that are Federally and State funded for adults over the age of 16 and reading below a 7th grade level can also be incorporated into the reading center. Type A students and hard of hearing students have also taken advantage of the reading classes. Initial expenditures for a reading laboratory may appear to be elaborate, but when one considers the number of daytime and evening students that can be serviced, the cost is really minimal.

In addition to their regular high school program, those students who were reluctant to read are reading more.

Reference has been made a number of times earlier to the fact that the entire Language Arts curriculum is quite different here at Trenton. It is. Technically, it is called a non-graded, phase-selective curriculum. Non-graded simply means that the students are not grouped into grade levels for instruction. Any student can elect almost any of the courses in the curriculum whether he be a Freshman, Sophomore, Junior, or Senior. Phasing is simply placing a number from 1 to 5 on courses to tell the students how difficult they are, 5 being the most difficult. Electing refers to the fact that any student is free to choose almost any course in the curriculum as long as it suits his needs, abilities, and interests.

Reading is very critical to this curriculum. Since it is being taught with great skill, it is very well received by our students. Our three classes are: 1) Basic Reading Skills for the non-reader and poor reader where we attempt to limit the class size to 18 students for more individual help. 2) Reading Techniques for the average reader who wishes to improve his skill, possibly to the college level, with a class size of 25 students. And 3) Advanced Reading Techniques for the superior reader who is interested in developing his college level skills even further in the reading lab, again with a class size of 25 students. Students who elect a reading class are guided to the proper phase level by their teachers, counselors, and quite often by parents. Approximately 50 students may mis-elect out of the several hundred who take reading classes each year. The flexibility built into the curriculum allows these students to be re-scheduled into the proper classes.

This is the era of accountability. Therefore, an analysis of reading data should be conducted to determine the degree to which students have demonstrated measured growth in the key areas of vocabulary, comprehension, rate, study skills, and recreational reading. This evaluation would prove whether or not students are learning how to read more skillfully as a consequence of having taken a reading course.

Perhaps the following behavioral hypothesis or objective that was utilized in a recent study might be of help to you. The 200 students in Reading Techniques during the fall semester at Trenton High School will demonstrate evidence of growth in vocabulary, comprehension, and rate (words per minute), as measured by the pre- and post tests on the Nelson-Denny Reading Tests, Forms A and B. Responses on the informal inventories will reveal the affective growth.

This evaluation did demonstrate that students are learning how to read more skillfully as a direct consequence of having taken Reading Techniques. Statistical data indicated that this course successfully changes achievement level. One indication is the vocabulary growth shown in one semester with a pretest grade equivalent of 11.3

and a post test of 12.2, a gain of nine months in one semester. The data revealed comprehension growth from the pretest 10.9 grade equivalent to 11.8 on the post test, a gain also of nine months. Overall rate gains increased from a pretest of 264 WPM to a post test of 429 WPM. The statistical growth was reinforced with student attitudinal inventories. Students felt they were below average, 3.21, in vocabulary at the beginning of the course. By the end of the course, they felt they were average, to high average, 4.50.

The Administration of Trenton High School is very impressed with the success and the results of the Trenton High School Reading Center. The staff at large is very supportive of the reading service provided. They can definitely observe the improvements of their own students reading ability in their own classroom, regardless of the academic area. A good reader should become an excellent learner. Since the inception of this reading concept, approximately 5,000 day time students have elected one of the three reading courses for English credit. The students have been motivated to read much more and with more efficiency. Due to a recent evaluation study, 85% of 200 Reading Techniques students agree with the statement that they are better readers now than at the beginning of the course.

A significant aspect of this unique program is that the reading instructors in the lab affect the whole language arts program. Other courses in the curriculum now concentrate on teaching specialized reading skills related to their content area. Students expand breadth and depth reading in courses like Individualized Reading, for example, and over 20 literature courses develop in different ways, more sophisticated comprehension and interpretation skills as they are related to their content.

To find out more about the curriculum on the whole, you might wish to acquire a copy of the document from Trenton High School called Project APEX - A Non-Graded Phase-Selective English Curriculum. If you are interested in developing a reading program similar to the one described here, however, it should be stressed that it is not necessary to adopt the whole non-graded curriculum that we have in order to do so. The reading courses can be implemented in any type of curriculum. There are some helpful steps involved in implementing such a reading program or any educational implementation which you might want to consider:

1. Define and write up the reading course with the needs of your students in mind.
2. Write up a clearly defined proposal before attempting a move.
3. Conduct a student survey examining their needs and interests for such a course.
4. Tabulate the results and present to your local board of education with your written proposal for its implementation and projected cost for such a program.

5. At all times keep the communication open with your local building, teachers, administration, and the superintendent as to your program;
- *6. If possible, have the reading course offered as an elective English course with credit.

Reading, in short, is very alive here at Trenton and we are very excited about it. Students are reading more and liking it better and doing it with much more skill. We heartily encourage you to develop a reading program of your own. It is well worth it.

* For further information about the implementation of a reading program, refer to Appendix # 1, A COMPREHENSIVE READING PROGRAM FOR THE SECONDARY SCHOOL.

DESCRIPTION OF EVALUATION

In the traditional curriculum in most school, students have reacted to reading classes on a lukewarm basis. Because of the stigma of being selected for a reading course or having reading required for certain grade levels due to reading deficiencies, a negative attitude is often present. This is understandable, since such classes deal primarily with remedial approach reading, rather than a developmental reading approach. After seven years of operation, it has been found that because students have the opportunity to select reading classes, with the help of teachers, counselors, other students and parents, based on their abilities, interests, and needs, a very positive attitude toward the reading program has developed.* We have provided instruction for approximately 5000 students in the reading courses over a seven year period. Currently, 665 students are enrolled in the reading program for the 1973-74 school year. Notably, enrollment has not fallen below 600 students per year since the program's inception.

	1967 10-12	1968 10-12	1969	1970	1971	1972	1973	1974	Total of seven years
Basic Reading Skills		121	91	149	155	176	154	163	1009
Reading Techniques	220	279	357	742	571	442	494	403	3508
Advanced Reading Techniques		25	28			47	50	43	193
TOTAL	220	425	476	891	726	665	698	609	4710

Additional day-time special education, Type 4, and hard of hearing classes; evening speed reading, adult basic education, and high school completion courses have been serviced by our reading labs. Thus, the total number of people using our reading improvement service is well over 5,000.

* Refer to the book APEX: A NONGRADED PHASE-ELECTIVE ENGLISH CURRICULUM for more information about the curriculum as a whole.

Our reading program has served as a model for schools within and outside the state of Michigan. Many visitors have come to see the reading laboratories and to discuss the possibilities of establishing such programs in their own schools, as districts re-evaluate their priorities. Both affluent and poorer districts have seen the possibilities a laboratory provides for development of skills at any reading level. There are two main questions commonly asked by visitors. The first is: How do you know how much the students are growing? Since reading improvement is readily measurable, most visitors are encouraged.

The second question is: What happens to students' reading abilities when they leave the reading class? The focus of this report is to answer that question. Included will be recorded data based on the following studies:

- STUDY # 1 : Reading Techniques Comparative Study (1972-73--10th, 11th, 12th grades).
- STUDY # 2 : Reading Techniques Evaluation (9th grade only--separate run from #1 - 1972-73).
- STUDY # 3 : Basic Reading Skills Evaluation (9th, 10th, 11th, 12th - 1972-73).
- *STUDY # 4 : Follow-Up Longitudinal Study (10th, 11th, 12th--comparison of 1971-72 and 1973-74 same students).

* Refer to Appendix # 2, AN EVALUATION OF READING TECHNIQUES. A SECONDARY READING COURSE, for further information.

VOCABULARYCognitive
Study # 1(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>113</u>	<u>10.8</u>	<u>11.8</u>	<u>10 mo.</u>
2. Median score of all students	<u>113</u>	<u>10.7</u>	<u>12.1</u>	<u>14 mo.</u>
3. Seniors mean	<u>10</u>	<u>11.5</u>	<u>12.7</u>	<u>12 mo.</u>
4. Seniors median	<u>10</u>	<u>11.0</u>	<u>13.2</u>	<u>22 mo.</u>
5. Juniors mean	<u>32</u>	<u>10.8</u>	<u>11.7</u>	<u>9 mo.</u>
6. Juniors median	<u>32</u>	<u>11.3</u>	<u>12.4</u>	<u>8 mo.</u>
7. Sophomores mean	<u>71</u>	<u>10.7</u>	<u>11.7</u>	<u>10 mo.</u>
8. Sophomores median	<u>71</u>	<u>10.7</u>	<u>12.1</u>	<u>14 mo.</u>
9. Male students mean	<u>66</u>	<u>11.2</u>	<u>12.0</u>	<u>8 mo.</u>
10. Male students median	<u>66</u>	<u>11.3</u>	<u>12.3</u>	<u>10 mo.</u>
11. Female students mean	<u>47</u>	<u>10.4</u>	<u>11.7</u>	<u>13 mo.</u>
12. Female students median	<u>47</u>	<u>10.1</u>	<u>11.9</u>	<u>18 mo.</u>

Study # 1 : Reading Techniques Comparative Study
(1972-73 10th, 11th, 12th grades).

COMPREHENSIONCognitive
Study # 1(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>113</u>	<u>10.7</u>	<u>11.7</u>	<u>10 mo.</u>
2. Median score all students	<u>113</u>	<u>10.7</u>	<u>12.0</u>	<u>13 mo.</u>
3. Seniors mean	<u>10</u>	<u>11.4</u>	<u>12.1</u>	<u>7 mo.</u>
4. Seniors median	<u>10</u>	<u>11.9</u>	<u>12.4</u>	<u>5 mo.</u>
5. Juniors mean	<u>32</u>	<u>10.6</u>	<u>11.1</u>	<u>5 mo.</u>
6. Juniors median	<u>32</u>	<u>10.7</u>	<u>10.9</u>	<u>2 mo.</u>
7. Sophomores mean	<u>71</u>	<u>10.6</u>	<u>11.8</u>	<u>12 mo.</u>
8. Sophomores median	<u>71</u>	<u>10.7</u>	<u>12.0</u>	<u>13 mo.</u>
9. Male students mean	<u>66</u>	<u>10.8</u>	<u>11.6</u>	<u>8 mo.</u>
10. Male students median	<u>66</u>	<u>10.7</u>	<u>12.0</u>	<u>13 mo.</u>
11. Female students mean	<u>47</u>	<u>10.5</u>	<u>11.7</u>	<u>12 mo.</u>
12. Female students median	<u>47</u>	<u>10.2</u>	<u>12.0</u>	<u>18 mo.</u>

Study # 1 : Reading Techniques Comparative Study
(1972-73 10th, 11th, 12th grades).

RATE(Nelson-Denny test results
expressed in raw score)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain</u>
1. Mean score of all students	<u>113</u>	<u>254</u>	<u>426</u>	<u>222</u>
2. Median score of all students	<u>113</u>	<u>238</u>	<u>475</u>	<u>237</u>
3. Seniors mean	<u>10</u>	<u>269</u>	<u>474</u>	<u>205</u>
4. Seniors median	<u>10</u>	<u>250</u>	<u>425</u>	<u>175</u>
5. Juniors mean	<u>32</u>	<u>230</u>	<u>434</u>	<u>204</u>
6. Juniors median	<u>32</u>	<u>226</u>	<u>425</u>	<u>199</u>
7. Sophomores mean	<u>71</u>	<u>262</u>	<u>495</u>	<u>233</u>
8. Sophomores median	<u>71</u>	<u>238</u>	<u>511</u>	<u>273</u>
9. Male students mean	<u>66</u>	<u>255</u>	<u>477</u>	<u>222</u>
10. Male students median	<u>66</u>	<u>238</u>	<u>475</u>	<u>237</u>
11. Female students mean	<u>47</u>	<u>251</u>	<u>475</u>	<u>224</u>
12. Female students median	<u>47</u>	<u>226</u>	<u>488</u>	<u>262</u>

Study # 1 : Reading Techniques Comparative Study
(1972-73 10th, 11th, 12th grades).

ATTITUDE INVENTORYAffective
Study # 1VOCABULARY

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How do you feel about your ability to handle words
that are unfamiliar to you in your reading?

(Items 60 & 61)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.63	4%	8%	23%	47%	15%	2%
Post test	4.64	--	--	3%	42%	45%	11%

COMPREHENSION

How about your ability to understand what you read and
remember it?

(Items 62 & 63)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.88	2%	12%	17%	45%	20%	4%
Post test	4.66	1%	2%	6%	32%	40%	19%

RATE

How do you feel about how fast you read? (rate)

(Items 64 & 65)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.41	6%	7%	34%	27%	22%	4%
Post test	5.04	--	--	5%	16%	48%	31%

STUDY SKILLS

Affective
Study # 1

How do you feel about your ability to study efficiently?

(Items 66 & 67)

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		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.50	3%	17%	25%	41%	13%	2%
Post test	4.53	--	3%	4%	42%	41%	11%

RECREATIONAL ACTIVITIES

Other than assigned reading, how do you feel about your recreational reading habits?

(Items 68 & 69)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.50	19%	13%	14%	21%	19%	14%
Post test	4.68	4%	3%	8%	25%	36%	24%

COURSE EVALUATIONAffective
Study # 1

70. This was one of my best classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.35	4%	23%	29%	30%	12%

71. This was one of my worst classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.35	26%	44%	15%	9%	6%

72. I liked this class, but I didn't change my reading
or study habits.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.34	21%	48%	19%	11%	2%

73. This was not one of my favorite classes, but it was
still a valuable one.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.64	2%	12%	24%	46%	17%

74. This class was okay.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.81	2%	2%	18%	67%	11%

75. I like reading better now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.56	6%	9%	30%	28%	26%

76. I feel that I am a better reader now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
4.27	1%	2%	2%	57%	38%

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PAGES READ SURVEY

Before I took this Reading Techniques course, I would estimate that I read about _____ pages in a 5-month period. The average paperback novel is about 200 pages. During this semester, I have read about _____ pages.

(Items 77 - 78)

	Mean Average	Less than 100 pages	100-200 pages	200-300 pages	300-500 pages	500-700 pages	700-1000 pages	1000-1500 pages	1500-2000 pages	2000-2500 pages	2500 + pages
Pretest	4.44	21%	13%	11%	12%	4%	13%	14%	3%	5%	5%
Post test	8.13	1%	2%	4%	3%	1%	8%	12%	13%	24%	17%

VOCABULARYCognitive
Study # 2(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>110</u>	<u>9.6</u>	<u>11.0</u>	<u>14 mo.</u>
2. Median score of all students	<u>110</u>	<u>9.2</u>	<u>10.8</u>	<u>16 mo.</u>
3. Male students mean	<u>62</u>	<u>9.7</u>	<u>11.2</u>	<u>15 mo.</u>
4. Male students median	<u>62</u>	<u>9.2</u>	<u>11.3</u>	<u>21 mo.</u>
5. Female students mean	<u>48</u>	<u>9.5</u>	<u>10.8</u>	<u>13 mo.</u>
6. Female students median	<u>48</u>	<u>9.0</u>	<u>10.2</u>	<u>12 mo.</u>

Study # 2 : Reading Techniques Evaluation (9th grade only)
 Separate run from Study # 1 - 1972-73

BEST COPY AVAILABLE**COMPREHENSION****Cognitive
Study # 2****(Nelson-Denny Test Results
expressed in grade equivalents)**

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>110</u>	<u>9.4</u>	<u>10.6</u>	<u>12 mo.</u>
2. Median score of all students	<u>110</u>	<u>8.9</u>	<u>10.5</u>	<u>16 mo.</u>
3. Male students mean	<u>62</u>	<u>9.4</u>	<u>10.5</u>	<u>11 mo.</u>
4. Male students median	<u>62</u>	<u>8.9</u>	<u>10.5</u>	<u>16 mo.</u>
5. Female students mean	<u>48</u>	<u>9.4</u>	<u>10.8</u>	<u>14 mo.</u>
6. Female students median	<u>48</u>	<u>8.9</u>	<u>10.9</u>	<u>20 mo.</u>

**Study # 2 : Reading Techniques Evaluation (9th grade only)
Separate run from Study # 1 - 1972-73**

(Nelson-Denny Test Results
expressed in raw score)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain</u>
1. Mean score of all students	<u>110</u>	<u>211</u>	<u>440</u>	<u>229</u>
2. Median score of all students	<u>110</u>	<u>207</u>	<u>425</u>	<u>218</u>
3. Male students mean	<u>62</u>	<u>218</u>	<u>465</u>	<u>247</u>
4. Male students median	<u>62</u>	<u>207</u>	<u>450</u>	<u>243</u>
5. Female students mean	<u>48</u>	<u>201</u>	<u>407</u>	<u>206</u>
6. Female students median	<u>48</u>	<u>185</u>	<u>379</u>	<u>194</u>

Study # 2 : Reading Techniques Evaluation (9th grade only)
Separate run from Study # 1 - 1972-73

VOCABULARY

How do you feel about your ability to handle words
that are unfamiliar to you in your reading?

(Items 60 & 61)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.65	--	9%	26%	55%	9%	--
Post test	4.63	--	--	3%	39%	51%	7%

COMPREHENSION

How about your ability to understand what you read and
remember it?

(Items 62 & 63)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.74	1%	8%	26%	47%	15%	3%
Post test	4.66	--	1%	5%	38%	37%	18%

RATE

How do you feel about how fast you read? (rate)

(Items 64 & 65)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.51	4%	12%	32%	37%	14%	2%
Post test	4.91	--	1%	1%	29%	45%	25%

How do you feel about your ability to study efficiently?

(Items 66 & 67)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.75	2%	8%	20%	54%	15%	1%
Post test	4.61	--	--	5%	45%	40%	11%

RECREATIONAL ACTIVITIES

Other than assigned reading, how do you feel about your recreational reading habits?

(Items 68 & 69)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.40	14%	11%	25%	32%	12%	7%
Post test	4.60	1%	4%	13%	25%	34%	24%

70. This was one of my best classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.42	2%	18%	25%	45%	9%

71. This was one of my worst classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.21	21%	51%	20%	6%	2%

72. I liked this class, but I didn't change my reading or study habits.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.14	23%	55%	11%	10%	2%

73. This was not one of my favorite classes, but it was a valuable one.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.60	4%	14%	17%	53%	13%

74. This class was okay.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.81	2%	6%	12%	69%	11%

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**Affective
Study # 2**

I like reading better now than at the beginning
of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.82	5%	5%	20%	42%	28%

76. I feel that I am a better reader now than at the
beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
4.32	1%	3%	3%	42%	50%

PAGES READ SURVEY

Before I took this Reading Techniques course, I would estimate that I read about _____ pages in a 5-month period. The average paperback novel is about 200 pages. During this semester, I have read about _____ pages.

(Items 77 - 78)

	Mean Average	less than 100 pages	100-200 pages	200-300 pages	300-500 pages	500-700 pages	700-1000 pages	1000-1500 pages	1500-2000 pages	2000-2500 pages	2500 + pages
Pretest	3.71	16%	18%	23%	13%	5%	14%	4%	4%	4%	--
Post test	7.91	1%	1%	1%	3%	5%	10%	17%	18%	15%	28%

VOCABULARYCognitive
Study # 3(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post Test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>74</u>	<u>7.9</u>	<u>8.7</u>	<u>8 mo.</u>
2. Median score of all students	<u>74</u>	<u>8.3</u>	<u>9.0</u>	<u>7 mo.</u>
3. Senior mean	<u>1</u>	<u>10.5</u>	<u>10.5</u>	<u>0 mo.</u>
4. Senior median	<u>1</u>	<u>10.5</u>	<u>10.5</u>	<u>0 mo.</u>
5. Juniors mean	<u>4</u>	<u>9.5</u>	<u>9.7</u>	<u>2 mo.</u>
6. Juniors median	<u>4</u>	<u>8.8</u>	<u>9.5</u>	<u>7 mo.</u>
7. Sophomores mean	<u>13</u>	<u>8.8</u>	<u>9.3</u>	<u>5 mo.</u>
8. Sophomores median	<u>13</u>	<u>8.7</u>	<u>9.3</u>	<u>6 mo.</u>
9. Male students mean	<u>55</u>	<u>7.7</u>	<u>8.4</u>	<u>7 mo.</u>
10. Male students median	<u>55</u>	<u>7.8</u>	<u>8.6</u>	<u>8 mo.</u>
11. Female students mean	<u>19</u>	<u>8.4</u>	<u>9.4</u>	<u>10 mo.</u>
12. Female students median	<u>19</u>	<u>8.3</u>	<u>9.5</u>	<u>12 mo.</u>
13. Freshmen mean	<u>56</u>	<u>7.5</u>	<u>8.4</u>	<u>9 mo.</u>
14. Freshmen median	<u>56</u>	<u>8.0</u>	<u>8.6</u>	<u>6 mo.</u>

Study # 3 : Basic Reading Skills Evaluation
(9th, 10th, 11th, 12th grades - 1972-73)

COMPREHENSIONCognitive
Study # 3(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	<u>74</u>	<u>7.3</u>	<u>8.0</u>	<u>7 mo.</u>
2. Median score of all students	<u>74</u>	<u>7.5</u>	<u>8.7</u>	<u>12 mo.</u>
3. Senior mean	<u>1</u>	<u>10.5</u>	<u>10.4</u>	<u>-1 mo.</u>
4. Senior median	<u>1</u>	<u>10.5</u>	<u>10.4</u>	<u>-1 mo.</u>
5. Juniors mean	<u>4</u>	<u>7.3</u>	<u>10.0</u>	<u>27 mo.</u>
6. Juniors median	<u>4</u>	<u>5.6</u>	<u>9.7</u>	<u>41 mo.</u>
7. Sophomores mean	<u>13</u>	<u>9.0</u>	<u>9.6</u>	<u>6 mo.</u>
8. Sophomores median	<u>13</u>	<u>9.7</u>	<u>9.9</u>	<u>2 mo.</u>
9. Freshmen mean	<u>56</u>	<u>6.8</u>	<u>7.5</u>	<u>7 mo.</u>
10. Freshmen median	<u>56</u>	<u>6.5</u>	<u>7.7</u>	<u>12 mo.</u>
11. Male students mean	<u>55</u>	<u>6.9</u>	<u>7.7</u>	<u>8 mo.</u>
12. Male students median	<u>55</u>	<u>6.5</u>	<u>8.1</u>	<u>16 mo.</u>
13. Female students mean	<u>19</u>	<u>8.4</u>	<u>8.7</u>	<u>3 mo.</u>
14. Female students median	<u>19</u>	<u>8.9</u>	<u>9.3</u>	<u>4 mo.</u>

NOTE: Basic Reading Skills does not have a rate score on the Nelson Reading Test.

Study # 3 : Basic Reading Skills Evaluation
(9th, 10th, 11th, 12th grades - 1972-73)

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ATTITUDE INVENTORY

Affective
Study # 3

VOCABULARY

How do you feel about your ability to handle words
that are unfamiliar to you in your reading?

(Items 60 & 61)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	2.94	8%	20%	43%	26%	3%	--
Post test	3.92	1%	5%	16%	54%	23%	--

COMPREHENSION

How about your ability to understand what you read and
remember it?

(Items 62 & 63)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	2.71	15%	30%	31%	20%	4%	--
Post test	4.01	1%	7%	16%	45%	27%	4%

RATE

How do you feel about how fast you read? (rate)

(Items 64 & 65)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	2.50	19%	27%	36%	14%	3%	--
Post test	4.03	--	7%	11%	52%	22%	3%

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STUDY SKILLS

Affective
Study # 3

How do you feel about your ability to study efficiently?

(Items 66 & 67)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	2.55	12%	41%	30%	15%	3%	--
Post test	3.77	4%	9%	19%	43%	22%	3%

RECREATIONAL ACTIVITIES

Other than assigned reading, how do you feel about
your recreational reading habits?

(Items 68 & 69)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Ave. ag.	Above Average	Very Strong
Pretest	2.40	26%	32%	26%	14%	3%	--
Post test	3.55	8%	11%	23%	36%	19%	3%

COURSE EVALUATIONAffective
Study # 3

70. This was one of my best classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.41	7%	15%	20%	47%	11%

71. This was one of my worst classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.14	30%	42%	18%	5%	5%

72. I liked this class, but I didn't change my reading
or study habits.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.73	9%	34%	36%	15%	5%

73. This was not one of my favorite classes, but it was
still a valuable one.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.15	7%	16%	32%	38%	5%

74. This class was okay.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.91	1%	4%	12%	68%	15%

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**Affective
Study # 3**

75. I like reading better now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.34	5%	15%	31%	31%	16%

76. I feel that I am a better reader now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.81	--	11%	15%	58%	16%

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VOCABULARY

(Nelson-Denny Test Results
expressed in grade equivalents)

Cognitive
Study # 4

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain</u>	<u>Post- Post test</u>	<u>Gain</u>
1. Mean score of all students	<u>115</u>	<u>11.3</u>	<u>12.4</u>	<u>11mo.</u>	<u>12.8</u>	<u>4 mo</u>
2. Median score of all students	<u>115</u>	<u>11.3</u>	<u>12.5</u>	<u>12mo.</u>	<u>13.0</u>	<u>5 mo</u>
3. Seniors mean	<u>28</u>	<u>11.6</u>	<u>12.6</u>	<u>10mo.</u>	<u>12.7</u>	<u>1 mo</u>
4. Seniors median	<u>28</u>	<u>12.2</u>	<u>12.9</u>	<u>7mo.</u>	<u>12.9</u>	<u>0 mo</u>
5. Juniors mean	<u>87</u>	<u>11.2</u>	<u>12.3</u>	<u>11mo.</u>	<u>12.8</u>	<u>5 mo</u>
6. Juniors median	<u>87</u>	<u>11.0</u>	<u>12.5</u>	<u>15mo.</u>	<u>13.0</u>	<u>5 mo</u>
7. Male students mean	<u>45</u>	<u>11.8</u>	<u>12.6</u>	<u>8mo.</u>	<u>12.8</u>	<u>2 mo</u>
8. Male students median	<u>45</u>	<u>11.9</u>	<u>12.5</u>	<u>6mo.</u>	<u>13.0</u>	<u>5 mo</u>
9. Female students mean	<u>67</u>	<u>10.9</u>	<u>12.2</u>	<u>13mo.</u>	<u>12.6</u>	<u>4 mo</u>
10. Female students median	<u>67</u>	<u>12.4</u>	<u>12.5</u>	<u>1mo.</u>	<u>12.9</u>	<u>4 mo</u>

Study # 4 : Follow-Up Longitudinal Study
(10th, 11th, 12th - comparison of 1971-72
and 1973-74 same students)

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COMPREHENSION

Cognitive
Study # 4

(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain</u>	<u>Post- Post test</u>	<u>Gain</u>
1. Mean score of all students	<u>115</u>	<u>10.8</u>	<u>11.8</u>	<u>10mo.</u>	<u>12.4</u>	<u>6mo</u>
2. Median score of all students	<u>115</u>	<u>10.7</u>	<u>12.0</u>	<u>13mo.</u>	<u>12.8</u>	<u>8mo</u>
3. Seniors mean	<u>28</u>	<u>10.8</u>	<u>11.8</u>	<u>10mo.</u>	<u>12.6</u>	<u>8mo</u>
4. Seniors median	<u>28</u>	<u>10.2</u>	<u>12.0</u>	<u>18mo.</u>	<u>13.3</u>	<u>13mo</u>
5. Juniors mean	<u>87</u>	<u>10.8</u>	<u>11.8</u>	<u>10mo.</u>	<u>12.3</u>	<u>5mo</u>
6. Juniors median	<u>87</u>	<u>10.7</u>	<u>12.0</u>	<u>13mo.</u>	<u>12.8</u>	<u>8mo</u>
7. Male students mean	<u>45</u>	<u>11.2</u>	<u>12.4</u>	<u>12mo.</u>	<u>12.7</u>	<u>3mo</u>
8. Male students median	<u>45</u>	<u>11.1</u>	<u>12.8</u>	<u>17mo.</u>	<u>13.3</u>	<u>5mo</u>
9. Female students mean	<u>67</u>	<u>10.5</u>	<u>11.5</u>	<u>10mo.</u>	<u>12.2</u>	<u>7mo</u>
10. Female students median	<u>67</u>	<u>10.2</u>	<u>10.9</u>	<u>7mo.</u>	<u>12.8</u>	<u>19mo</u>

Study # 4 : Follow-up Longitudinal Study
(10th, 11th, 12th - comparison of 1971-72
and 1973-74 students)

(Nelson-Denny Test Results
expressed in raw score)

	<u>Total</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Gain</u>	<u>Post- Post test</u>	<u>Overall Gain</u>
1. Mean score of all students	<u>115</u>	<u>266</u>	<u>449</u>	<u>183</u>	<u>418</u>	<u>152</u>
2. Median score of all students	<u>115</u>	<u>250</u>	<u>438</u>	<u>188</u>	<u>403</u>	<u>153</u>
3. Seniors mean	<u>28</u>	<u>243</u>	<u>450</u>	<u>207</u>	<u>407</u>	<u>164</u>
4. Seniors median	<u>28</u>	<u>226</u>	<u>438</u>	<u>212</u>	<u>379</u>	<u>153</u>
5. Juniors mean	<u>87</u>	<u>274</u>	<u>449</u>	<u>175</u>	<u>422</u>	<u>148</u>
6. Juniors median	<u>87</u>	<u>262</u>	<u>425</u>	<u>163</u>	<u>403</u>	<u>141</u>
7. Male students mean	<u>45</u>	<u>267</u>	<u>451</u>	<u>184</u>	<u>415</u>	<u>148</u>
8. Male students median	<u>45</u>	<u>250</u>	<u>425</u>	<u>175</u>	<u>391</u>	<u>141</u>
9. Female students mean	<u>67</u>	<u>268</u>	<u>451</u>	<u>183</u>	<u>420</u>	<u>152</u>
10. Female students median	<u>67</u>	<u>250</u>	<u>438</u>	<u>188</u>	<u>403</u>	<u>153</u>

Study # 4 : Follow-Up Longitudinal Study
(10th, 11th, 12th - comparison of 1971-72
and 1973-74 students)

VOCABULARY

How do you feel about your ability to handle words that are unfamiliar to you in your reading?

(Items 60 & 61)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.21	6%	20%	34%	32%	8%	2%
Post test	4.50	1%	1%	6%	45%	39%	7%

COMPREHENSION

How about your ability to understand what you read and remember it?

(Items 62 & 63)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.32	4%	22%	30%	31%	12%	2%
Post test	4.65	1%	1%	3%	36%	52%	9%

RATE

How do you feel about how fast you read? (rate)

(Items 64 & 65)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.24	9%	17%	29%	36%	8%	2%
Post test	4.83	--	1%	6%	25%	45%	23%

STUDY SKILLS

Affective
Study # 4

How do you feel about your ability to study efficiently?

(Items 66 & 67)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.42	5%	15%	29%	40%	10%	2%
Post test	4.43	--	2%	7%	47%	37%	9%

RECREATIONAL READING

Other than assigned reading, how do you feel about your recreational reading habits?

(Items 68 & 69)

	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.36	13%	19%	23%	23%	15%	9%
Post test	4.55	2%	3%	10%	33%	29%	24%

COURSE EVALUATIONAffective
Study # 4

70. This was one of my best classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.03	9%	28%	23%	34%	8%

71. This was one of my worst classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.42	15%	51%	19%	10%	6%

72. I liked this class, but I didn't change my reading or study habits.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.26	19%	53%	14%	13%	2%

73. This was not one of my favorite classes, but it was still a valuable one.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.68	3%	15%	13%	52%	18%

74. This class was okay.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.67	3%	11%	16%	60%	12%

75. I like reading better now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.11	7%	27%	26%	31%	10%

76. I feel that I am a better reader now than at the beginning of the course.

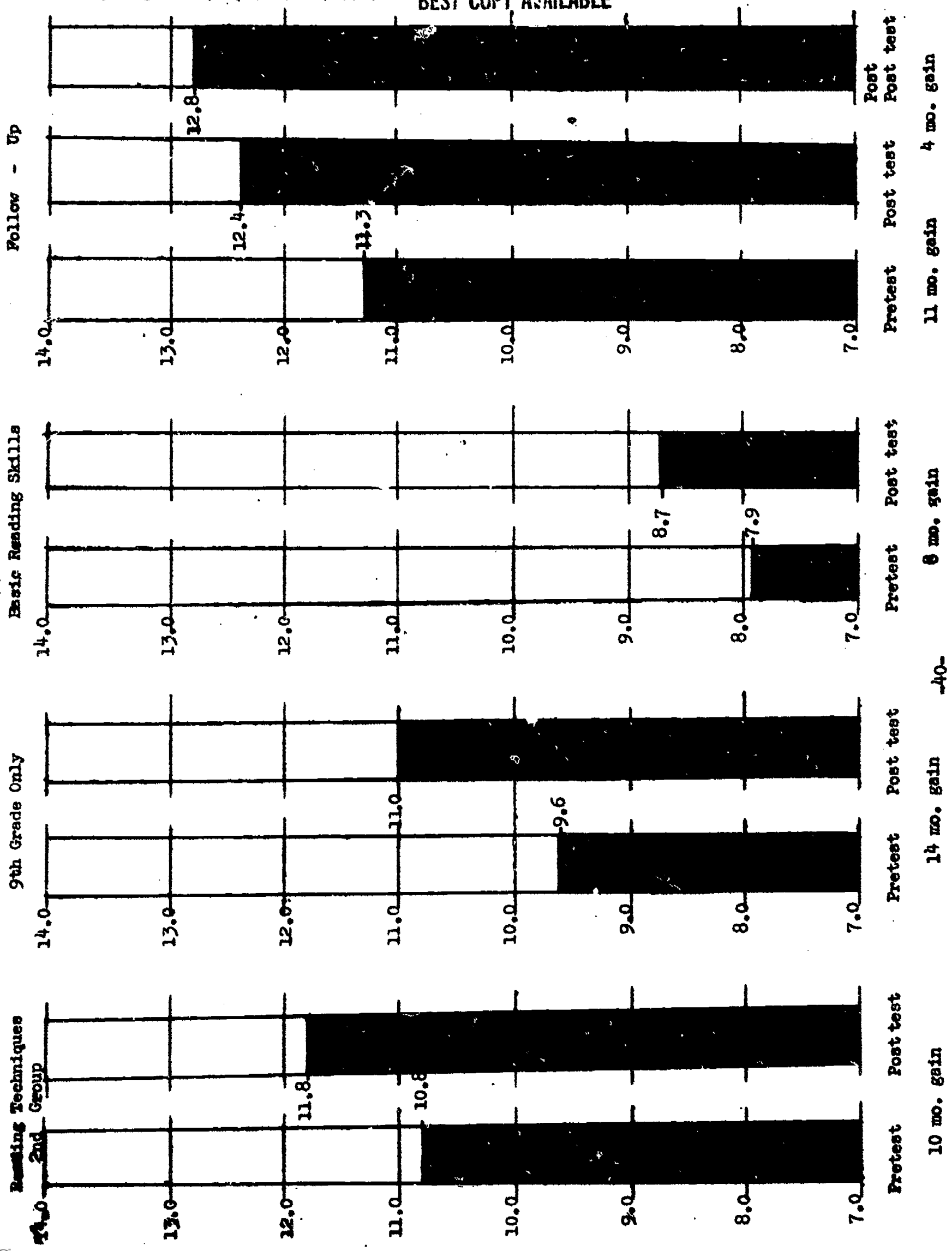
	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
4.10	4%	5%	7%	48%	37%

PAGES READ SURVEY

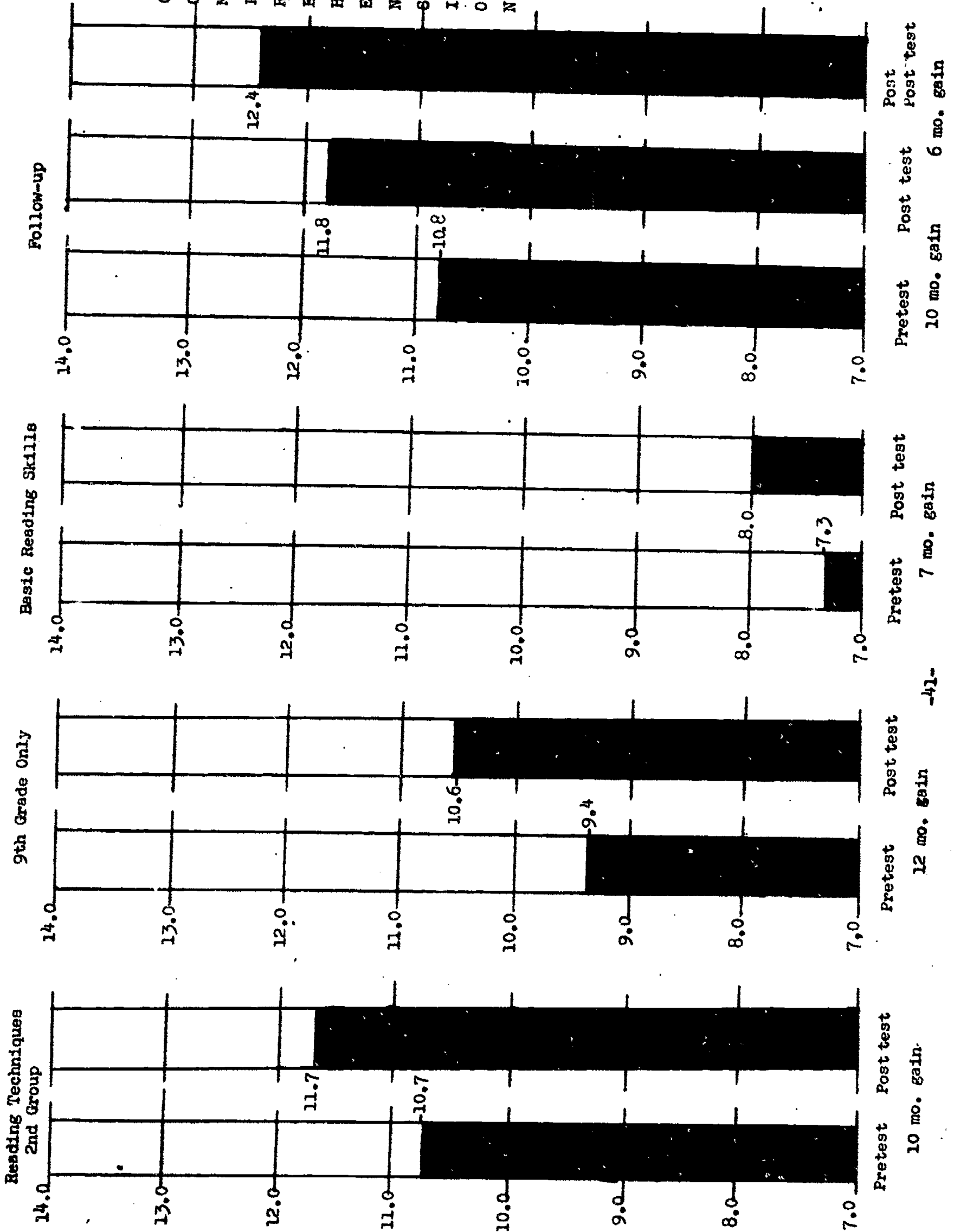
Before I took this Reading Techniques course, I would estimate that I read about _____ pages in a 5-month period. The average paperback novel is about 200 pages. During this semester, I have read about _____ pages.

(Items 77 - 78)

	Mean	Less than 100 pages	100-200 Pages	200-300 pages	300-500 pages	500-700 pages	700-1000 pages	1000-1500 pages	1500-2000 pages	2000-2500 pages	2500 + pages
Pretest	4.71	11%	12%	16%	12%	15%	11%	9%	8%	3%	6%
Post test	7.91	--	1%	1%	3%	8%	9%	13%	22%	22%	22%



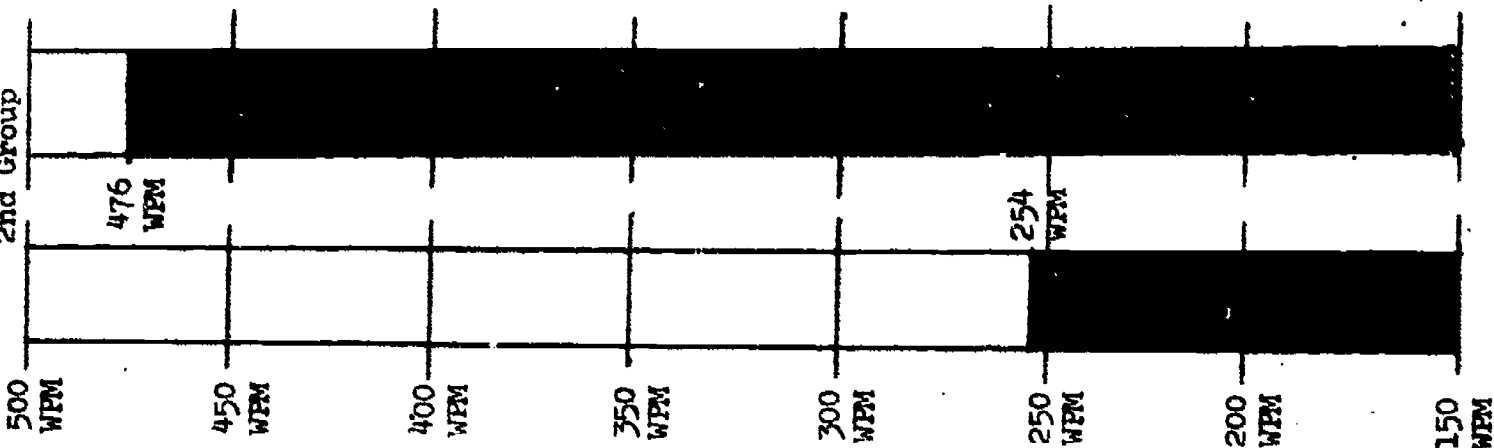
C O M P R E H E N S I O N



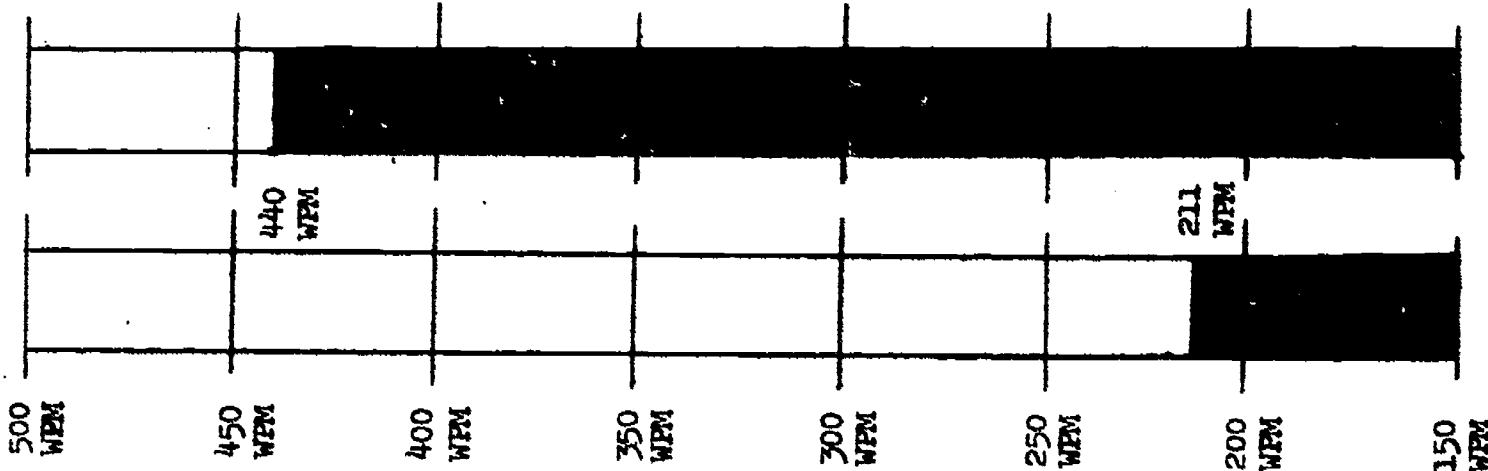
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R A T E

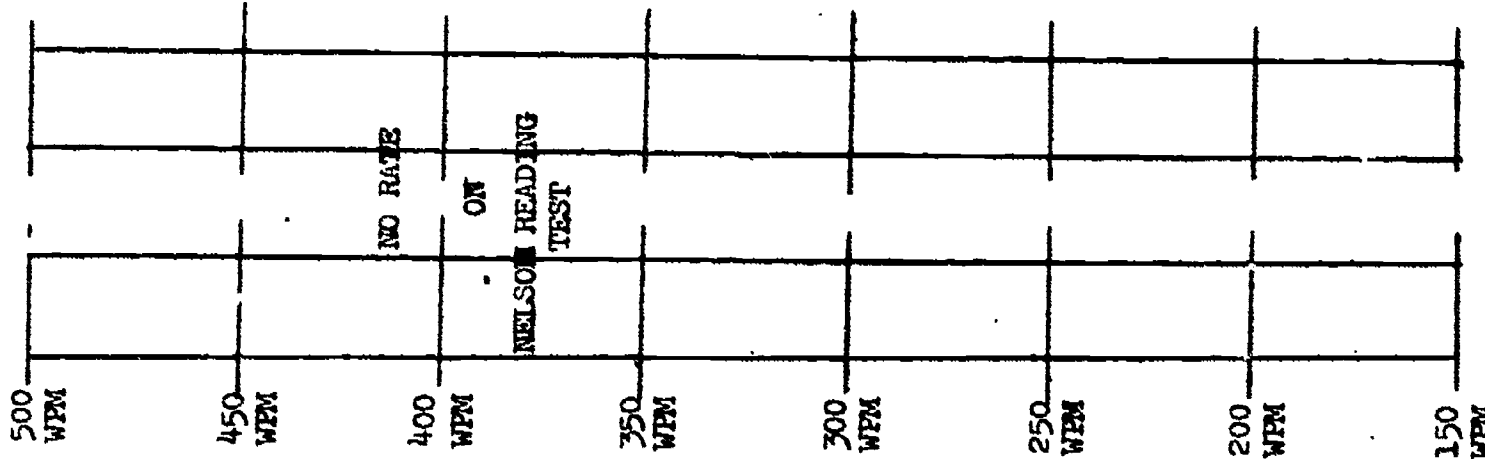
Reading Techniques 2nd Group



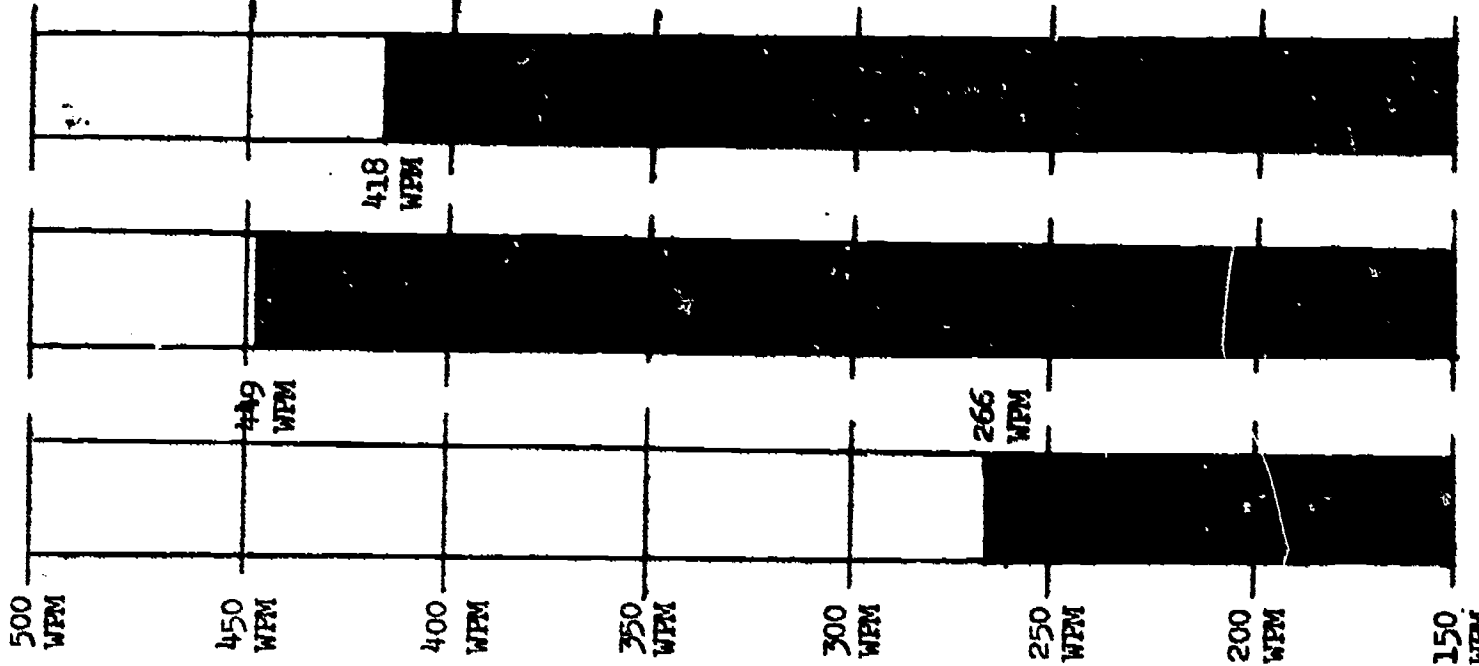
9th Grade Only



Basic Reading Skills



Follow - up



Pretest Post test
Gain 222 WPM

Pretest Post test
Gain 229 WPM

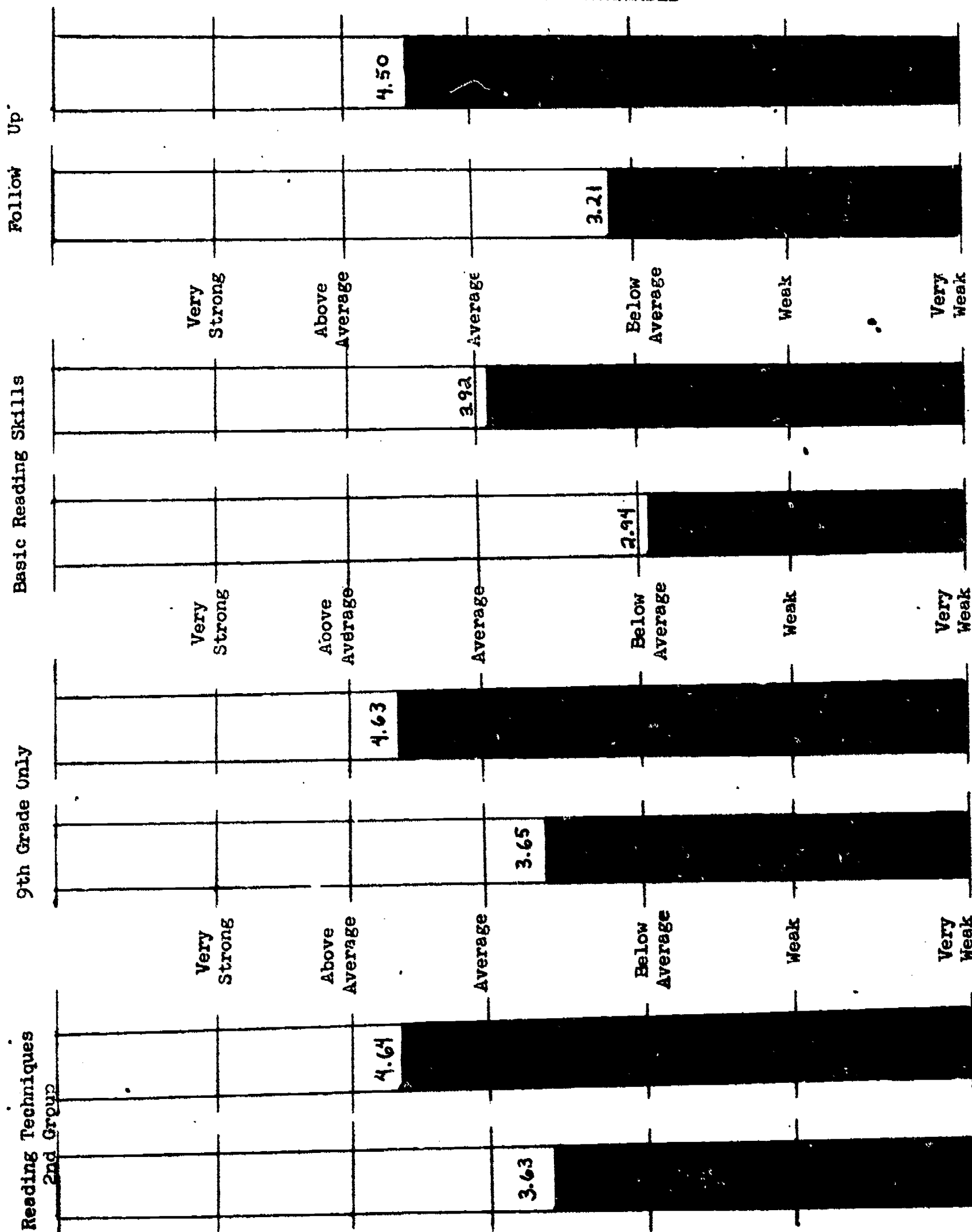
Pretest Post test

Pretest Post test
Gain 183 WPM

Post Post test

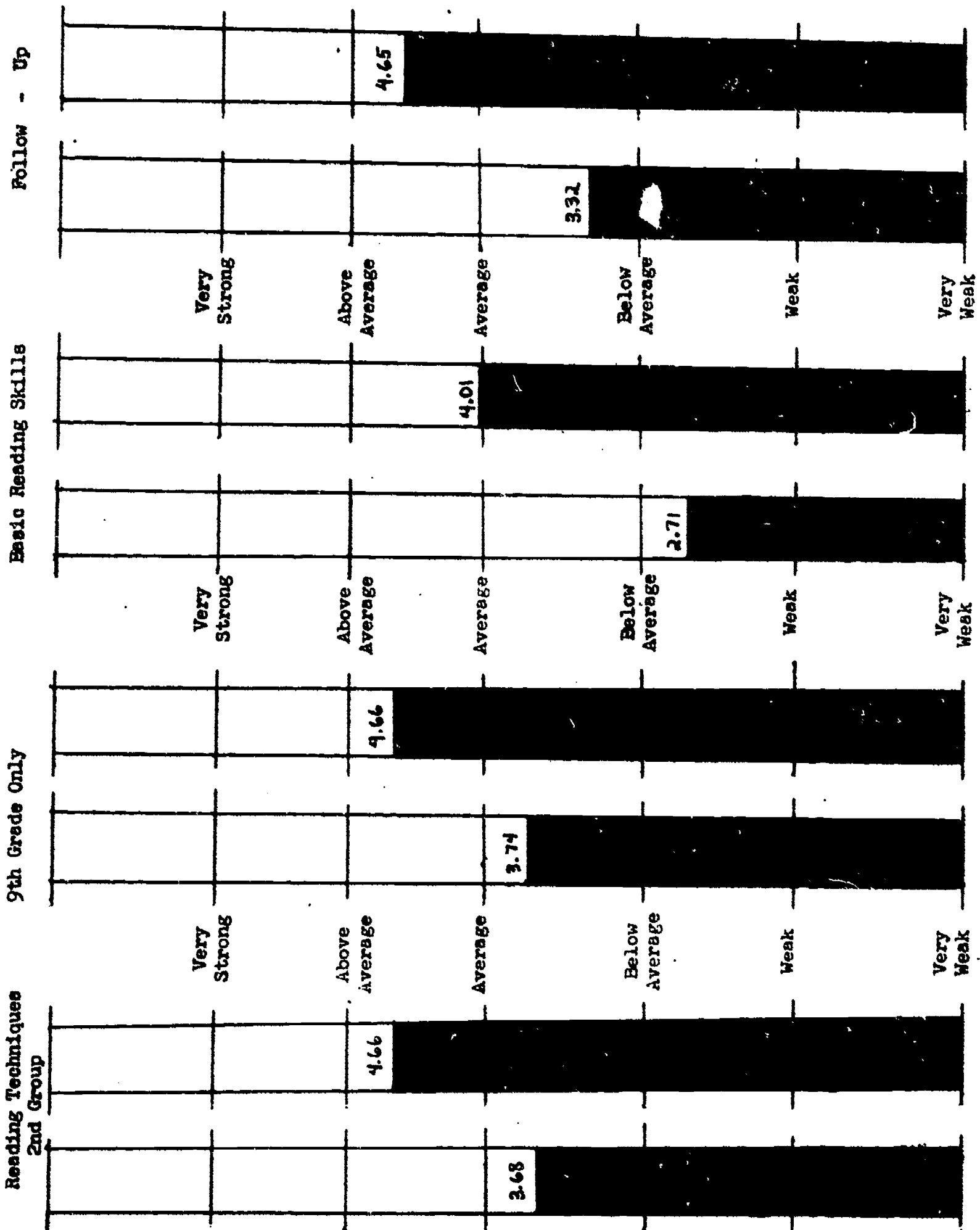
Overall Gain 152 WPM

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How do you feel about your vocabulary?

A P P E C T I V E



How do you feel about your comprehension?

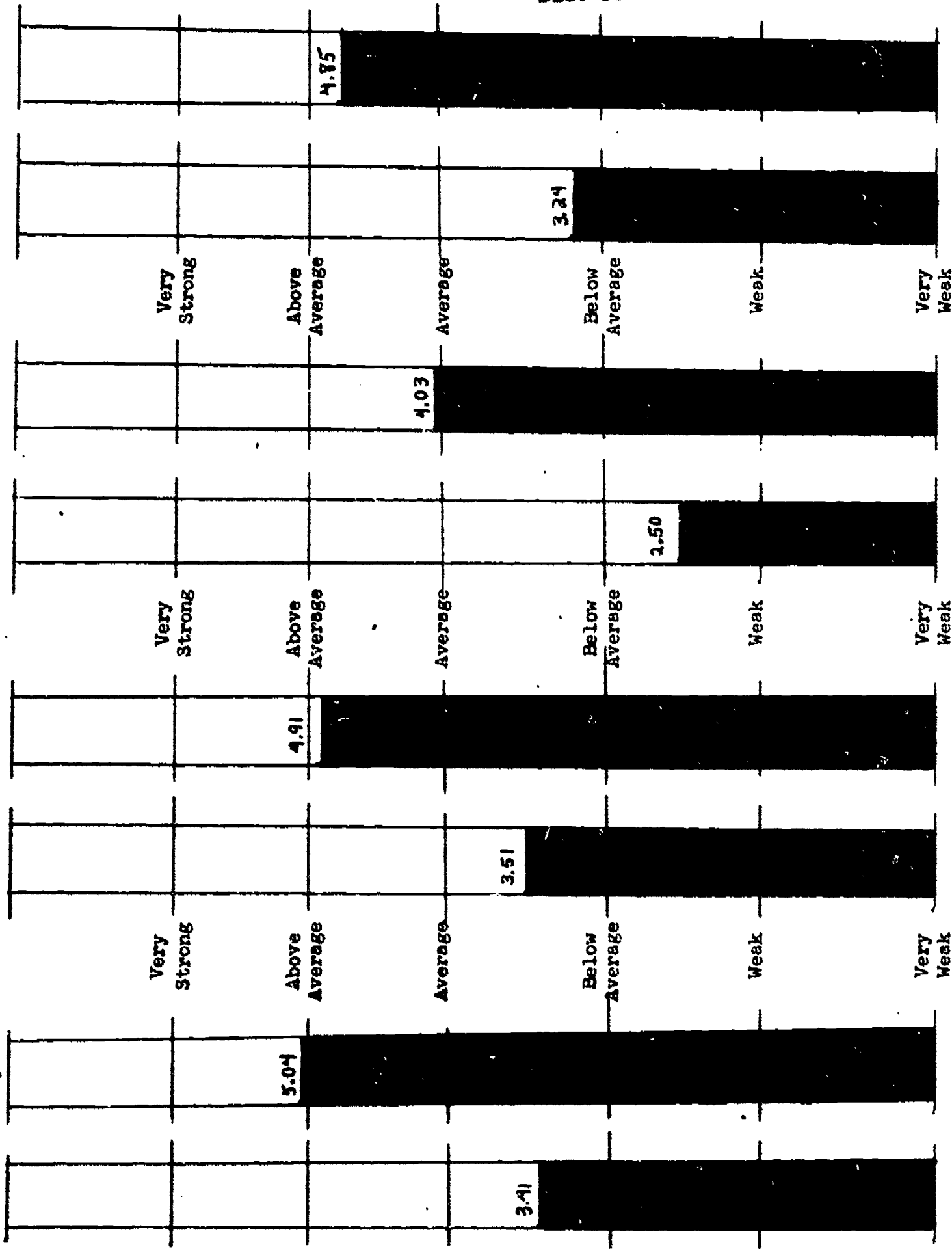
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Follow - Up

Basic Reading Skills

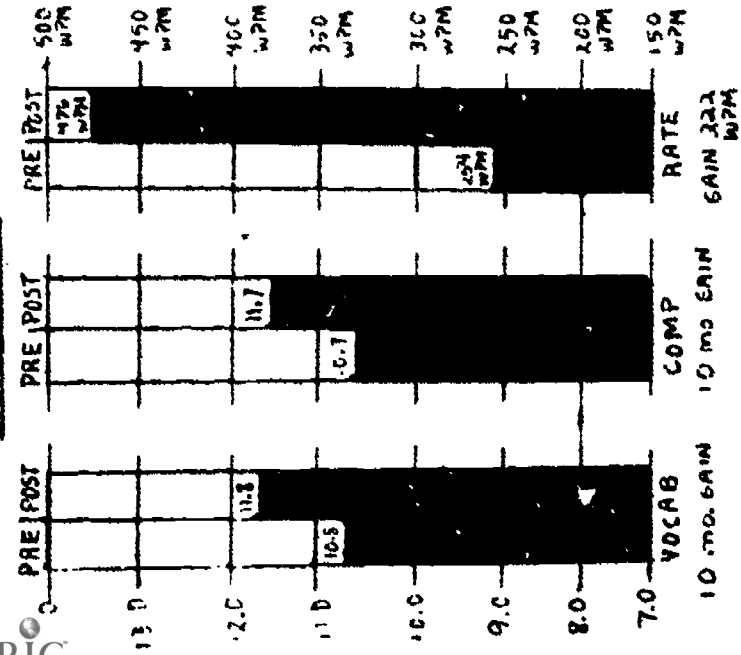
9th Grade Only

Reading Techniques
2nd Group



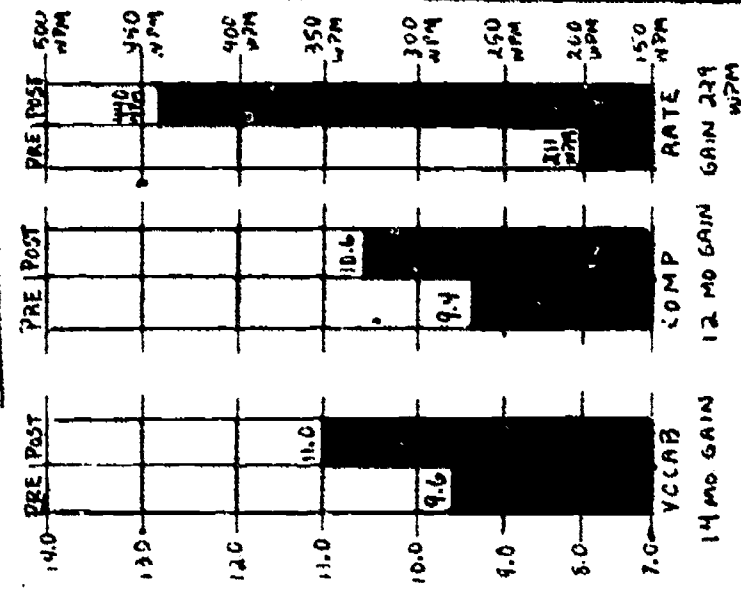
How do you feel about your reading speed?

COGNITIVE



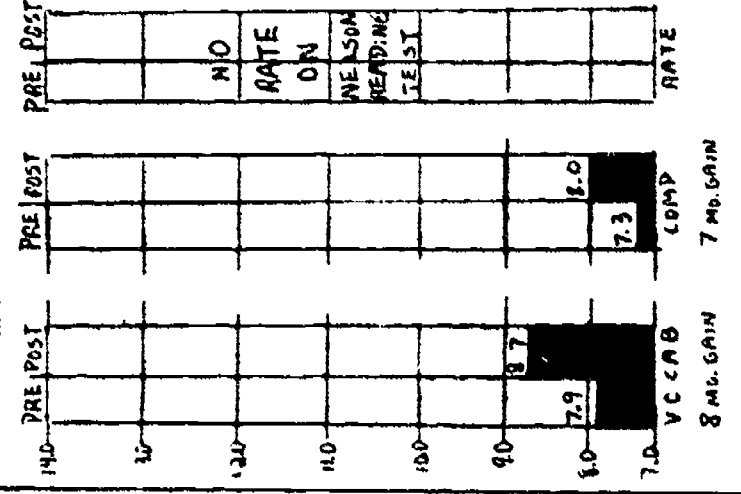
STUDY #1 - READING TECHNIQUES 2nd GROUP

COGNITIVE



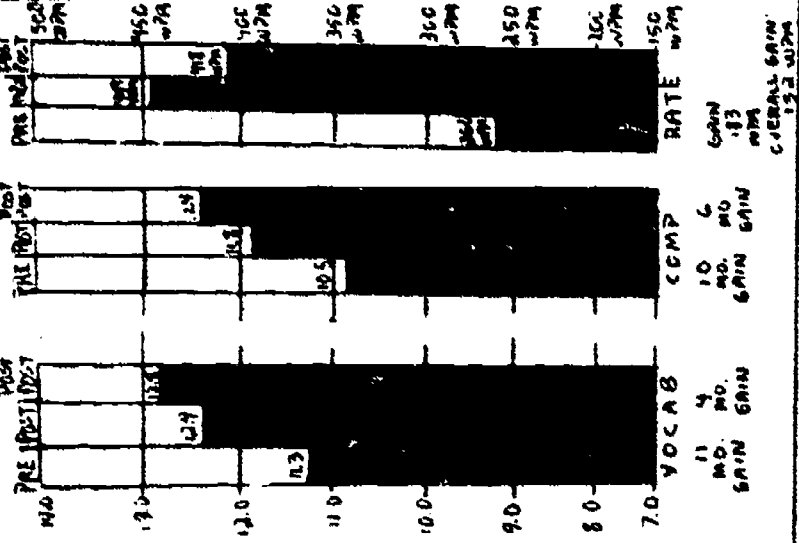
STUDY #2 - 9th GRADE ONLY

COGNITIVE



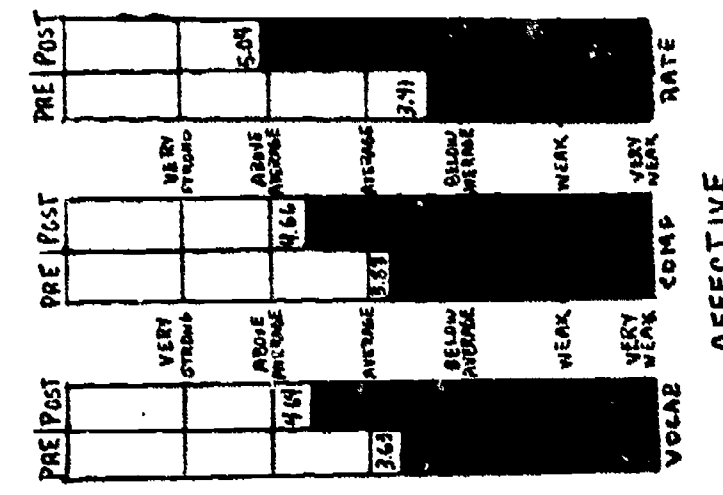
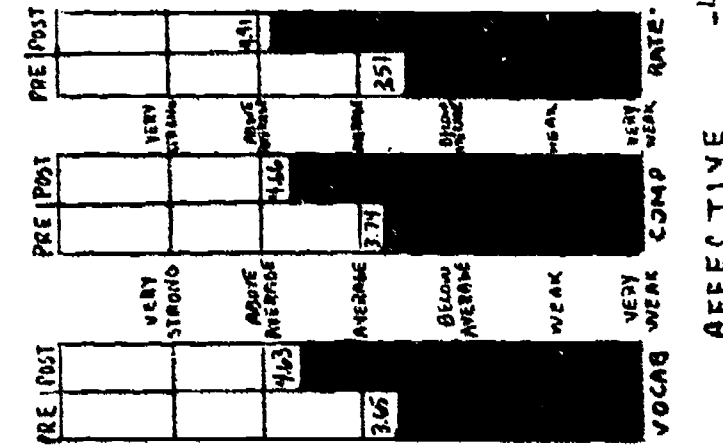
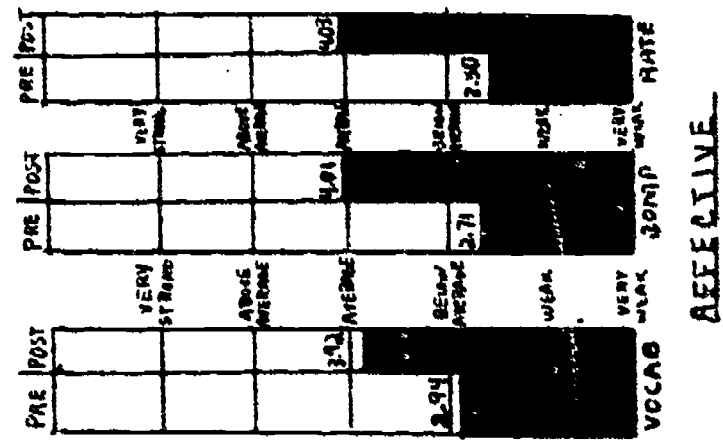
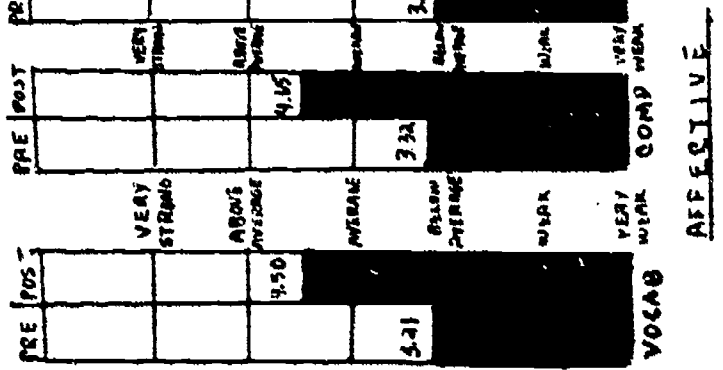
STUDY #3 - BASIC READING SKILLS

COGNITIVE



STUDY #4 - FOLLOW UP

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AFFECTIVE

AFFECTIVE

AFFECTIVE

AFFECTIVE

-46-

EVALUATION OF TEST RESULTSVOCABULARY

The primary objective in the teaching of vocabulary skills is to provide appropriate drill which increases the student's ability to handle words which are not totally known to the reader. The emphasis is in increasing vocabulary skills rather than just to increase the list of sight words known by the student. Thus, lab work includes drill in structural and contextual analysis of words. In this way, we attempt to get the student to predict with greater accuracy the meaning of an unknown word by reading the word in context.

DISCUSSION OF RESULTS

COGNITIVE. The vocabulary test of the Nelson and the Nelson-Denny reflects a good amount of growth generally. Study # 1, the Reading Techniques Comparative Study, indicated an average growth of 10 months. (Vocabulary growth tends to keep pace with the years in school. That is to say, that a student at grade level in reading ability will continue to increase one month per month in school). The "average" student in Study # 1 was at grade level. In a semester it is reasonable to expect that he would grow five months. Study # 2, 9th grade only, shows an increase in vocabulary of 14 months. Study # 3, the Basic Reading Skills Evaluation Study, which is of those students who are on an average a couple of years behind in reading, indicates that they approach grade level. (Holding up the same yardstick as mentioned above, we would only expect perhaps a two to three month gain). Study # 3 indicates an eight month gain. Study # 4, the Follow-Up Longitudinal Study, indicates that after the experience in the reading lab, the students progress at their normal rate.

AFFECTIVE. Much of reading ability really depends on how aggressive a reader is. Generally, a student who feels good about his ability to attack material is more successful than a student who feels inadequate. The affective measures reveal that we are producing more aggressive readers. Study # 1 indicates that students felt less than adequate in their ability to handle difficult words when coming into the lab and better than average when leaving. Study # 2 concurs with Study # 4. The Basic Reading Skills Study, Study # 3, also indicates a gain but the level of adequacy is not felt as strongly as with the better readers.

CONCLUSIONS. Every index used shows a real gain in vocabulary skill. Not only is real skill in attacking words gained in the lab, but also the skills learned are not lost when the student leaves the laboratory situation.

EVALUATION OF TEST RESULTSCOMPREHENSION

If one can learn to retain more information when reading a passage of material then we might conclude that he has increased his reading comprehension. The comprehension test instrument used operates on this principle; that is, the student reads a paragraph and then answers questions about what he has read.

DISCUSSION OF RESULTS

COGNITIVE. Using this criteria for measuring comprehension, Study # 1 indicated a ten month gain and Study # 2 indicated a 12 month gain. Study # 3, Basic Reading Skills, showed a seven month gain with students at and below grade level measuring a significant growth in comprehension. The Follow-Up Study, #4, indicates that ability in comprehension gained in the lab is retained after the student leaves the laboratory experience.

AFFECTIVE. As with vocabulary skill, the attitude which the reader has in approaching material is very important. Our objective is to make the reader know he can read and understand if he is willing to use efficient reading techniques and apply himself to the reading task at hand. So we try to instill a positive approach as well as teaching methods that measure efficiency. The affective test results show significant gain in the attitude students have about their ability to understand what they read. Study # 1 shows that students felt slightly below average when entering the course and felt better than average when finished with the course. Study # 2 concurs. Study # 3 showed that students who really felt inadequate about their ability to comprehend felt that they were about average at the end of the course. Study # 4 reflects the attitude of those students at the time they took the course. They, too, felt significantly better about their comprehension when finishing the course.

CONCLUSIONS. Our study reveals that we are developing more aggressive readers who are applying efficient reading techniques to their reading tasks with greater skill.

EVALUATION OF TEST RESULTS

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RATE

Rate skills are very important, but because of the publicity promoted by commercial programs in rate improvement, they are often misunderstood. Our use of rate improvement skills helps students to feel more confident in their reading by knowing that they can apply appropriate speed to whatever reading task is assigned.

If the best way to get the assignment done is to read for selective information, then our students hopefully can apply appropriate speed to the task. Unfortunately, most of our students come into the lab with only two speeds: slow and very slow. One of the main goals of our reading lab is to be in and to provide to be in skill and an appropriately applied rapid reading.

DISCUSSION OF RESULTS

COGNITIVE. There can be little doubt that the results of all studies indirectly are significant. The statistical averages show that students read nearly twice as fast with an increase in comprehension in the Reading Techniques classes. (Studies # 1, # 2, the Reading Techniques studies show this). Study # 4, the Follow-Up Longitudinal Study, shows that students lose a little of the speed after being out of the lab for a year and a half, but do, generally, hold on to most of their gain in rate. Study # 3, Basic Reading Skills, didn't generate rate gain scores. Our strategy for improving skill in reading in Basic is different than with better readers, so gain is not a significant nor appropriate measure here.

AFFECTIVE. Our students feel that they are faster readers when they leave the laboratory experience. This may account for the success of getting large numbers of students to continue to elect to avail themselves of experience in the reading lab. On all studies the responses to the question asking about their increase in rate showed significant gain.

CONCLUSIONS. We are producing students who can read faster.

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PROJECTION

What we would like to do as an extension of this longitudinal study is to run a control group within subject matter courses, comparing the abilities of students taking reading during the semester with those of students not taking reading within those subject matter areas.

In conclusion, our projection for the future is to proceed in the direction of devising and implementing subject matter approaches based on the knowledge, techniques, methodologies, and approaches gained from the Trenton High School Reading Skills Program.

APPENDIX I

A COMPREHENSIVE READING PROGRAM
FOR THE SECONDARY SCHOOL

By

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and
Robert L. Fishback

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Project APEX
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Trenton, Michigan 48183

Let's face it, there is a stigma attached to most high school reading classes today. These classes deal mostly in the remedial approach to reading, and the students who take these classes are often labeled "dumb, different, or slow" by other students and teachers. However, at Trenton High School, our reading courses are two of the most popular classes elected by students. Last year 850 students elected one or the other of these courses in our reading program as compared to the fifty or more students who are usually selected for reading at other schools. These courses at Trenton High School are ranked in the top five of all forty elective English courses offered for semester credit.

Often at other schools reading is attached to the special education program and when a millage is defeated, reading is usually eliminated. However, at Trenton, due to community acceptance and teacher and school support, our reading program is part of the language arts department and would be one of the last to be dropped!

One of the reasons 850 students did elect a reading class is that they are aware of the relevance of reading to other course work and the importance of reading ability in their own life styles. Evidence of this student awareness is indicated in the results of student surveys and feedback from our graduates through interviews and personal contacts.

At this time we should establish that our overall approach to reading is termed "developmental". "Remediation" is handled as well, but through individualized instruction within the courses. Developmental reading starts the student at his present level and extends him, i. e., "develops" him to his potential. This potential is, of course, an individual trait based on I. Q., age, environment, etc. Grade level is not necessarily a factor.

Developmental reading at the secondary level should be a part of a total elective English curriculum, if maximum success is to be achieved. "Students are motivated when they are free to study what interests them and when they are satisfying their immediate needs." To insure the students' reaching their potential in reading skills, they must feel a need to improve these skills.

The developmental reading program that will be discussed is part of a non-graded, phase elective English curriculum known as APEX. * Apex is an acronym for appropriate placement for excellence in English. "Non-grading means that freshmen, sophomores, juniors, and seniors may be enrolled in any course since courses are not designated as 9th, 10th, 11th or 12th grade English." "Phasing is simply the classifying of courses according to difficulty and complexity of skills and materials. It is

*For further information about the curriculum as a whole, consult the book: APEX: A NONGRADED PHASE-ELECTIVE ENGLISH CURRICULUM, Trenton High School, 2601 Charlton Road, Trenton, Michigan, 48183, \$2.00 per copy.

nothing more than a way of putting handles on courses in order to indicate their relative degree of sophistication. It should be made clear that the term "phasing" does not apply to students. In order to avoid the possibility of stereotyping, an APEX axiom is that "courses are phased, not students".

To develop courses and to assist in guidance, the following definitions are used:

Phase 1 courses are designed for students who find reading, writing, speaking and thinking quite difficult and have serious problems with basic skills.

Phase 2 courses are created for students who do not have serious difficulty with basic skills but need to improve and refine them and can do so best by learning at a somewhat slower pace.

Phase 3 courses are particularly for those who have an average command of the basic language skills and would like to advance beyond these basic skills but do so at a moderate rather than an accelerated pace.

Phase 4 courses are for students who learn fairly rapidly and have good command of the basic language skills.

Phase 5 courses offer a challenge to students who have excellent control of basic skills and who are looking for stimulating academic learning experiences.

Elective means that the student can choose from a list of forty or more English courses on the basis of his or her abilities, interests and needs. Two of these possible electives are Basic Reading Skills and Reading Techniques, which are developmental reading courses.

Basic Reading Skills is a Phase 1 and 2 course. Ordinarily, this course is elected by those students who feel they have serious deficiencies in reading skills and who wish to develop these skills in a small class setting of fifteen to eighteen students. Generally, we find that the student choosing Basic Reading Skills is two or more grade levels behind.

Reading Techniques is a Phase 3, 4, and 5 course. Those students who feel they are average or better than average readers and who wish to refine and sophisticate their reading skills select this course. Class size ranges from twenty to twenty-eight students. The students who select Reading Techniques are usually reading at or above grade level.

Since both courses are developmental, the methodology employed is essentially the same. Diagnostic pre-tests and post-tests are administered. In Basic Reading Skills, the Nelson Reading Test, forms A and B, and the Gates MacGinitie Tests, forms E 1M and E 2M, are used. The Nelson-Denny Reading Tests, forms A and B, are used in Reading Techniques. In addition, informal diagnosis such as interest inventories, reading evaluation sheets, and teacher observation are utilized. After discussing the results of the initial diagnostic tests with the students, four small groups of four to eight students are set up. These groups are flexible and a high degree of individualization may occur with each. By means of programmed learning materials, reading machines, and individual instruction, the student is allowed to work from

his own level at his own pace. Non-threatening self-competition has proved to be highly motivational for the students.

The main areas of instruction around which these courses operate are:

- (1) Vocabulary development
- (2) Comprehension skills (literal to interpretive)
- (3) Rate building
- (4) Auditory skills
- (5) Study skills
- (6) Recreational reading

Vocabulary development is achieved through word analysis methods and unlocking meaning through context. Programmed learning is employed in the forms of the SRA Words series and the EDL Word Clues series.

Comprehension and rate building skills are based on work with various reading machines that we have found to be high motivation devices for our high school students. Tachistoscopic training is used to introduce the machine work. An EDL Controlled Reader has been found to be effective with small groups. Another advantage to this program is that the workbooks stress the SQ3R (Survey, Question, Read, Recite, Review) method of study. Craig Readers and Controlled Reader Juniors are used for individualized work. Immediately following the machine work, timed

readings from Elizabeth Simpson's Better Reading Books are done in order to insure transfer of skills from machine to the printed page.

Auditory, or listening activities, are centered around a listening post. EDL has several series of tapes that might be used. There are Listen and Read series for Basic Reading Skills (GHI-2 series) and for Reading Techniques (MN series). The Listen and Write series could also be used in the lower phased courses.

Study skills centers on reading in the content areas: social studies, science, math, and literature. The SQ3R method is applied here as well as with the Controlled Reader. Nila Banton Smith's Be a Better Reader (books one through five) are used along with SRA Study Skills Kits.

Fridays are generally set aside for recreational reading. The student using materials of his own choice (novels, magazines, newspapers, etc.) attempts to apply the reading skills on which he has been working. In addition to this, students are encouraged to spend fifteen minutes per night reading from a novel and also to make brief journal entries on this reading.

The first five activities discussed are conducted within four small group settings. Comprehension and rate-building skills are stressed two days per week on alternate days. The listening post is used one day per week, while vocabulary and study skills work are employed together one

day per week. All students are thus exposed to these areas of instruction in the course of any given week; the groups rotate daily.

The following summaries describe the two reading courses currently offered at Trenton High School.

ENGLISH 121 BASIC READING SKILLS (Phases 1 - 2)

COURSE DESCRIPTION

Basic Reading Skills is an individualized course to help you read with less difficulty. You will build vocabulary skills and develop your reading ability by improving speed and understanding. You will also be introduced to methods of studying assignments and improving your listening habits.

ACHIEVEMENT LEVEL

The student should have a desire to improve his reading skills. Generally, he will be reading below the 10th grade level and be experiencing difficulty handling reading material assigned at his grade level. Students reading above this level should be guided into Reading Techniques. A pretest in reading should be given to help make this distinction. Other factors to consider are the student's present grade level, achievement test scores, past performance, and teacher observation. Because of the individualization required at this level, class size should be held as close to 15 as possible.

OBJECTIVES

1. To develop individual success in reading for each student at his level.
2. To develop comprehension in reading at the literal level.
3. To increase sight and auditory vocabulary.
4. To develop word attack skills.
5. To develop a positive approach to study habits and skills.
6. To encourage wide reading for pleasure.

CHIEF EMPHASES

The Nelson Reading Test and/or Gates MacGinitie Reading Test will be given initially. Individual instruction with graded materials will be stressed. Exercises and activities designed to remedy specific difficulties in reading will be emphasized. Reading and study skills that should have been learned previously will be developed on an individual basis.

ENGLISH 341 READING TECHNIQUES
(Phases 3 - 5)

Semester Course - English Credit

COURSE DESCRIPTION

Reading Techniques is a course for the average or good reader who wishes to improve his reading skills, study skills, and listening skills. The reading skills of vocabulary, comprehension, and speed will be emphasized, as well as methods of reading more effectively in other course areas.

ACHIEVEMENT LEVEL

The student should have a desire to improve his reading skills and study skills. He should be reading at or above his grade level. Students reading below grade level should be guided into Basic Reading Skills. Superior students who appear to be reading above the twelfth grade level should be guided into Advanced Reading Techniques. A pre-test in reading will be given to assist in making these distinctions. (See Achievement Level for Basic Reading Skills).

OBJECTIVES

1. To develop reading power through vocabulary growth.
2. To increase effective rate of reading (varying rate).
3. To improve comprehension (literal, interpretive, and critical) and retention of what is read.
4. To increase general studying effectiveness by learning to point out main ideas, supporting ideas, and critical details.
5. To increase ability to read critically.
6. To apply all skills studied in class to reading done in other classes.

CHIEF EMPHASES

The Nelson-Denny Diagnostic Reading Test will be administered initially. The basic method of study will be the SQ3R -- Survey, Question, Read, Recite, Review--method. Intensive vocabulary study will continue throughout the course. Group work will be done with a controlled reader and listening post. Individual work will be carried out with Craig Readers, reading accelerators, and timed readings.

The following pages represent the format that is used for both courses. The materials and approaches used are geared to the individual student's ability.

MATERIALS

EDL Controlled Reader, Filmstrips and Manuals
AVE Craig Readers: Slides C-1, 2, 3B, VPR and workbooks
SRA Reading Laboratory (reading levels 3 through 9)
SRA Reading Accelerators Model IV
AVE Tachomatic 150 (tachistoscopic vision training)
with filmstrips
EDL Listening program: Listen and Read and Listen and
Write with listening tapes MN and GHI-2 series
SRA Better Reading Books (1 - 2)
EDL Word Clues (programmed vocabulary development)
SRA Words (vocabulary development)
Tactics in Reading I (Scott, Foresman)
Gates MacGinitie Reading Test (Forms E 1M and 2M)
Smith: Be a Better Reader (1 - 3)
Thorndike -- Barnhart Basic Dictionary Skills Workbooks
Scope Magazine
Literature Sampler
A wide variety of paperbacks and magazines
EDL Controlled Reader Juniors
EDL Aud-X machine
The Nelson-Denny Reading Test (Forms A & B)
The Nelson Reading Test (Forms A and B)

SEMESTER OUTLINE

WEEK 1

1. Administer the Nelson-Denny Diagnostic Reading Test for Reading Techniques classes or the Gates MacGinitie Diagnostic Reading Test for the Basic Reading Skill classes.
2. Administer informal reading tests such as Reading Information Sheet, Interest Inventory, etc.

WEEK 2

1. Introduce survey method for novels (giving fifteen minute home-work assignments each day for the remainder of the semester).
2. Discuss rationales for fifteen minute readings in novels that the students select and have the class read pass out "How to Find Time to Read"

3. Discuss the Daily Log Sheet and how to record daily from their novels.
4. Introduce Book Review Sheet.
5. Introduce tachistoscopic training (fifteen minutes with Tachomatic 150).
6. Present Study Habits (SQ3R method worksheet).
7. Study vocabulary methods daily throughout the course (word attack method worksheets).

WEEK 3

1. Discuss diagnostic testing with students and group by grade level for vocabulary, comprehension and rate.
2. Introduce syllabication principles and structural analysis application (100,000 word chart).
3. Introduce context clues concept.
4. Discuss regression in eye movements (fifteen minutes with Tachomatic 150).
5. Introduce and discuss the relationship between vocabulary, comprehension, rate and study skills.
6. Introduce survey methods using Listen and Read tape.
7. Introduce EDL Word Clues book.

WEEK 4

1. Discuss length of fixation in eye movements (fifteen minutes with Tachomatic 150).
2. Emphasize the importance of defining a purpose before reading.
3. Reinforce methods and materials previously presented and prepare students for grouping procedures that will be implemented during weeks 5 through 15.

WEEKS 5 through 15

The accompanying diagram illustrates this procedure.

WEEKLY SCHEDULE (Week 5 through Week 15)
(Used to break up students into groups of 4 - 8)

	Monday	Tuesday	Wednesday	Thursday	Friday
Group A	Controlled Reader Junior or Craig Reader & Timed Reading	Study Skills & Vocab.	Controlled Reader Junior or Craig Reader & Timed Reading	Listening Post & SRA Kit	Free Reading & Make-up
Group B	Study Skills & Vocab.	Controlled Reader Junior or Craig Reader & Timed Reading	Listening Post & SRA Kit	Controlled Reader Junior or Craig Reader & Timed Reading	Free Reading & Make-up
Group C	Controlled Reader & Timed Reading	Listening Post & SRA Kit	Controlled Reader & Timed Reading	Study Skills & Vocab.	Free Reading & Make-up
Group D	Listening Post & SRA Kit	Controlled Reader & Timed Reading	Study Skills & Vocab.	Controlled Reader & Timed Reading	Free Reading & Make-up

Note: If any time is left in the hour, the student has an option to work in vocabulary, free reading in novels, SRA Laboratory and/or study skills. Additional time is available in each class when progress in reading skills occur, especially in rate development.

WEEK 16

1. Discuss reading in other subject areas.
2. Explore power of persuasion in advertising and television.
3. Use EDL Study Skills Library.

WEEKS 17 and 18

1. Give final diagnostic tests.
2. Evaluate test results and discuss these results individually with students in conferences
3. Encourage individual work in areas of weakness while conferences are being held.

SUGGESTED APPROACHES AND TEACHING AIDS

1. Appropriate performance charts should be devised in each reading area and students should be expected to keep them up-to-date.
2. The controlled reader should be used during a ten-week period (no more than two times a week on alternate days). This practice should be followed by speed timings from SRA books or free reading from paperbacks.
3. Use Fridays as free reading (application of skills) and make-up periods. Show students how to use the Literature Sampler and encourage its use during these free reading periods. Reading accelerators may also be used during this time.
4. Timed readings (especially for 15 minutes) from novels may be used throughout the semester.
5. Other reading variations are applied after the students are taught a survey method for their novels, textbooks, chapters, materials in class, etc.
6. Various programmed materials (laboratories) or workbooks designed for developing skills in such areas as reading comprehension and vocabulary may be used for individual and small group study.

7. Paperbacks should be made available in Ludington book racks with a high enough interest level that students will "want" to finish them even after they are through using them for the exercises in developing reading techniques. A survey method is taught for all fiction, non-fiction, biographies, etc.
8. Free reading should regularly follow the use of the controlled reader, reading accelerators or shadow scopes, so that students may be encouraged to apply the skills they have been attempting to "mechanically" develop. All students are encouraged to read and time themselves for 15 minutes every day in their novels as homework.
9. Workbooks with exercises designed to build skills in vocabulary, comprehension, word attack skills, structural analysis and speed may be used with small groups and individual students for brief periods daily or as often as needed or desired.
10. The Tachomatic 150 is used on alternate days (twice a week) for tachistoscopic training.
11. The Craig Reader (extremely individualized) is used on alternate days (twice a week only) as a motivational device. A student should not use both a Craig Reader and Controlled Reader at the same time!
12. A Listening Post is provided once a week to develop the student's auditory skills with Listen and Read and Listen and Write tapes from EDL as well as additional tapes from the University of Michigan.
13. Study skills may be developed by using Be a Better Reader Books I, II, III, IV, and V; SRA Laboratories; Tactics in Reading I and II; EDL Study Skills Library; Scope Magazine; Reader's Digest and SQ3R Method.

The following forms are six examples of suggested supplementary materials. **

READING INFORMATION SHEET

- A. What courses have caused you the most difficulty in high school? List.

**Exact authors unknown except for Page 16.

B. Place an X in front of the following statements which apply to you.

- ☐ 1. I can't read fast enough.
- ☐ 2. I have trouble remembering what I read.
- ☐ 3. I'm tired most of the time.
- ☐ 4. My eyes hurt or I get headaches frequently.
- ☐ 5. I'm beginning to question my ability to do college work successfully.
- ☐ 6. I seem to understand what I read, but I don't do well on exams.
- ☐ 7. I seldom have enough time to study.
- ☐ 8. I am a poor speller.
- ☐ 9. Writing themes is difficult for me.
- ☐ 10. I have to read and re-read before I understand what I'm reading.
- ☐ 11. I neglect certain courses because of lack of interest.
- ☐ 12. Emotional problems may interfere with my school work.
- ☐ 13. Other than assigned reading, I have read fewer than 6 books in the last year.
- ☐ 14. I would simply like to learn to read and study more efficiently.

C. What are your future plans?

D. In one or two sentences, tell why you selected this course.

E. What do you expect to gain from this course?

SURVEY FORM FOR NOVELS

1. Title of book
2. Author
3. Read the first 10-15 pages QUICKLY! Then answer questions #4 to #7.
4. Where and when does the story take place?
5. Identify two to four main characters by name and brief description.
6. What kind of problem do the characters seem to be having?
7. Does each chapter seem complete in itself or is the plot continuous through many chapters?
8. Turn to 1/3, 1/2, 3/4 of your novel and read a page quickly!
9. NOW! The choice is yours!!

DAILY READING LOG

Name _____
 Hour _____
 Total pages in novel _____

NOTE: Count 15 pages and READ

Date (Monday)	Title	No. of pp. read in 15 min. timing	Extra pp. read after timing
Write a Summary		_____	_____

Date (Tuesday) Title	No. of p. read in 15 min. timing	Extra p. read after timing
Write a Summary	_____	_____
Date (Wednesday) Title	No. of p. read in 15 min. timing	Extra p. read after timing
Write a Summary	_____	_____
Date (Thursday) Title	No. of p. read in 15 min. timing	Extra p. read after timing
Write a Summary	_____	_____
Date (Friday) Title	No. of p. read in 15 min. timing	Extra p. read after timing
Write a Summary	_____	_____
Date (Sat. or Sun.; opt.) Title	No. of p. read in 15 min. timing	Extra p. read after timing
	_____	_____

BOOK REVIEW FORM

1. The title of my novel is:
2. The main characters are: (Write a descriptive sentence for each character).
3. The story takes place in:
4. The problem or conflict is:
5. The outcome is:
6. Two new words that I found were:
7. Write one sentence for each word:
8. Choose one character in the story that you liked. In a complete sentence tell why you liked this character.
9. Total number of pages read _____. Number of pages in book _____.
10. Write a summary of the story, using the back of this paper if necessary. Use only one complete paragraph to tell about the plot development. Note: Construct a well-organized topic sentence. Make sure the following detailed sentences in your paragraph support the main idea. Stick to the point.

SQ3R ***

While this study method may be slow and difficult for the first tries (like golf, tennis, anything new), as skill is developed, study time is halved and learning is less painful. So give the method a fair trial!

- I. **SURVEY:** Determine the structure, organization or plan of the chapter. Details will be remembered because of their relationship to the total picture. Think about the title. Guess what will be included in the chapter. Read the introduction. Here the main ideas are stressed. Read the main headings. Here are the main ideas. Determine where in the sequence of ideas each one fits. (If there are no main headings, read the first sentence in every third paragraph.) Read the summary. Here is the relationship among the main ideas.
- II. **QUESTION:** Having in mind a question results in (1) a spontaneous attempt to answer it with information already at hand; (2) frustration until the question is answered; (3) a criterion against which the details can be inspected to determine relevance and importance; and (4) a focal point for crystalizing a series of ideas (the answer). Use the questions at the beginning or end of the chapter, or those given by the teacher. Formulate questions by changing main-heads; for each heading, you should have at least one depth question: why, background, etc.
- III. **READ:** Read to answer the question; move quickly. Sort out ideas and evaluate them. If content does not relate to the question, give it only passing attention. Read selectively and read short chunks at a time.
- IV. **RECITE:** Answer the question -- in your own words, not the author's. Then: Write the question. Write the answer, using only key words, listing clues which will enable you to recall the whole.
- V. **REVIEW:** Increase retention and cut cramming time by 90% by means of immediate and delayed review. To do this: Read the written questions. Try to recite the answer. If you can't, look at your notes. Five to ten minutes will suffice for a chapter. Do this immediately after studying the chapter and again that evening. Review again after one week. Plan occasional review sessions every two or three weeks.

***Reproduction of Study Sheet #1 from the Division of Reading Improvement Services, University of Michigan.

STUDENT SURVEY

(A) This survey is designed to help plan the class next year. Please think about your answers carefully and fill out the survey as truthfully as you can.

CHECK the following that apply to you:

- ☐ 1. I have improved my vocabulary.
- ☐ 2. My vocabulary has stayed about the same.
- ☐ 3. I find it easier to study now.
- ☐ 4. I have always liked to read.
- ☐ 5. I have not always enjoyed reading but I do now.
- ☐ 6. I still do not care for reading.
- ☐ 7. I now survey my books and lessons before I read.
- ☐ 8. I still do not use a survey method before reading.
- ☐ 9. I can finish my school work in less time than it took in the fall.
- ☐ 10. My reading speed is much faster than before.
- ☐ 11. My reading speed is somewhat faster.
- ☐ 12. My reading speed is about the same as before.
- ☐ 13. I have developed an interest in good books.
- ☐ 14. I will probably read more books the second semester than I have before.
- ☐ 15. I will probably not do any extra reading this coming semester.
- ☐ 16. I will probably read the same number of books next semester that I usually do.
- ☐ 17. I am looking forward to next semester when I will have the opportunity to use the reading skills that I have obtained this semester.
- ☐ 18. I don't plan to read any more books than I have to.

(B) Rate the Reading Class: (Check the one that applies)

- ☐ one of my best classes
- ☐ one of my worst classes
- ☐ I like the class, but I didn't change my study or reading habits
- ☐ It wasn't one of my favorite classes, but it still was a valuable one
- ☐ The class was okay

At this juncture you may ask the question, "How could we ~~implement a similar~~ reading program in our school?" Initially, you must examine your own English curriculum, students' needs, teacher and administrative attitudes. In order to have success, define the reading concept that would best meet the needs of your students and then consider the following suggested procedure for implementation:

1. Define and write up the reading course with the needs of your students in mind.
2. Write up a clearly defined proposal before attempting a move.
3. Conduct a student survey examining their needs and interests for such a course.
4. Tabulate the results and present to your local board of education with your written proposal for its implementation and projected cost for such a program.
5. At all times keep the communication opened with your local building, teachers, administration, and the superintendent as to your program.
6. If possible, have the reading course offered as an elective English course with credit.

In conclusion, a most significant point must be emphasized, which is also difficult to measure statistically. That point is the prevailing positive attitude that exists among our student body in regard to our English program. In the traditional English curriculum in most schools students have reacted on a lukewarm basis which many of you, we are sure, have experienced at one time or another. Particularly, in regard

to READING there has been that stigma of being selected for a reading course or having reading required for certain grade levels due to reading deficiencies and, therefore, a negative attitude is sometimes present!

It is our conviction, after three years of implementation, that when a student is allowed to elect with the help of his teachers, counselor, other students and parents according to specific courses on the basis of his own abilities, interests, and needs, a positive attitude occurs unlike any total attitudinal change that we have ever experienced. This is not a subjective observation alone but is reflected in the fact that students elect 200-300 extra English classes a year! This is beyond their required English credits. In terms of reading, we have serviced approximately 400 students a year in the past three years, and currently have 850 students enrolled in our reading program.

APPENDIX II

AN EVALUATION OF READING TECHNIQUES.

A SECONDARY READING COURSE

By

Duane A. Whitson

and

Trenton High School Reading Staff

Trenton High School
Reading Center
2601 Charlton Road
Trenton, Michigan 48183

TRENTON PUBLIC SCHOOLS
Trenton, Michigan 48183

BOARD OF EDUCATION
1972--1973

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Assistant Principal
Assistant Principal

BACKGROUND

Unfortunately, there is a stigma attached to most traditional high school reading classes today. These classes deal primarily with a remedial approach to reading, and the students who take these classes are often labeled "dumb, different, or slow" by other students and teachers.

In the traditional curriculum in most schools, students have reacted to reading classes on a lukewarm basis. Because of the stigma of being selected for a reading course or having reading required for certain grade levels due to reading deficiencies, a negative attitude is often present.

It is our conviction, after five years of implementation, that when a student is allowed to elect with the help of his teachers, counselor, other students and parents, according to specific courses on the basis of his own abilities, interests, and needs, a positive attitude occurs unlike any total attitudinal change that we have ever experienced. Today a very positive attitude exists in our student body with regard to our reading program. We have serviced approximately 3,500 students in the reading courses over a three year period. Currently, 665 students are enrolled in our reading program for the 1972 - 1973 school year.

TRENTON HIGH SCHOOL READING COURSE ENROLLMENT

	1967 10-12	1968 10-12	1969	1970	1971	1972	Total of six years
Basic Reading Skills		121	91	149	155	176	692
Reading Techniques	220	279	357	742	571	442	2,611
Advanced Reading Techniques		25	28			47	100
TOTAL	220	425	476	891	726	665	3,403

Our overall approach to reading is termed "developmental." Remediation is handled as well, but through individualized instruction within the courses. Developmental reading starts the student at his present level and extends or "develops" him to his potential. This potential is, of course, an individual trait based on I.Q., age, environment and other factors. Grade level is not necessarily a factor.

Ideally, developmental reading at the secondary level should be a part of a total elective English curriculum, if maximum success is to be achieved. This, of course, is true at Trenton High School. Students are motivated when they are free to study what interests them and when they are satisfying their immediate needs. To insure the students reaching their potential in reading skills, they must feel a need to improve these skills.

In our elective language arts program, students can choose from a list of forty or more English courses on the basis of their abilities, interests and needs. Three possible electives are Basic Reading Skills, Reading Techniques, and Advanced Reading Techniques, which are developmental reading courses. The developmental reading course, Reading Techniques, dealt with in this report is an integral part of our non-graded, phase-elective English curriculum known as APEX.

The focal points of instruction in this course are:

- (1) Vocabulary
- (2) Comprehension skills
- (3) Rate building
- (4) Auditory skills
- (5) Study skills
- (6) Recreational reading

Reading Techniques is a Phase 3, 4, and 5 course. Those students who feel they are average or better than average readers and who wish to refine and sophisticate their reading skills select this course. Class size ranges from twenty to twenty-eight students. The students who select Reading Techniques are usually reading at or above grade level.

COURSE DESCRIPTION

Reading Techniques is a course for the average or good reader who wishes to improve his reading skills, study skills, and listening skills. The reading skills of vocabulary, comprehension, and speed will be emphasized, as well as methods of reading more effectively in other course areas.

ACHIEVEMENT LEVEL

The student should have a desire to improve his reading skills and study skills. He should be reading at or above his grade level. Students reading below grade level should be guided into Basic Reading Skills. Superior students who appear to be reading above the twelfth grade level should be guided into Advanced Reading Techniques. A pre-test in reading will be given to assist in making these distinctions.

OBJECTIVES

1. To develop reading power through vocabulary growth.
2. To increase effective rate of reading (varying rate.)
3. To improve comprehension (literal, interpretive, and critical) and retention of what is read.
4. To increase general studying effectiveness by learning to point out main ideas, supporting ideas, and critical details.
5. To increase ability to read critically.
6. To apply all skills studied in class to reading done in other classes.

CHIEF EMPHASES

The Nelson-Denny Diagnostic Reading Test will be administered initially. The basic method for study skill development will be the SQ3R -- Survey, Question, Read, Recite, Review -- method. Intensive vocabulary study will continue throughout the course, primarily with the EDL word clues book. Group work will be done with a Controlled Reader Senior and listening post. Individual work will be developed with Craig Readers, Controlled Reader Juniors, and supplementary reading materials.

The Nelson-Denny Reading Tests, forms A and B, are used in Reading Techniques. In addition, informal diagnosis such as interest inventories, reading evaluation sheets, and teacher observation are utilized. After discussing the results of the initial diagnostic tests with the students, four small groups of four to eight students are set up. These groups are flexible and a high degree of individualization may occur with each. By means of programmed learning materials, reading machines, and individual instruction, the student is allowed to work from his own level at his own pace. Non-threatening self-competition has proved to be highly motivational for the students. The diagram on the following page illustrates this procedure.

WEEKLY SCHEDULE (WEEK 5 through WEEK 15)
(Used to break up students into groups of 4 - 8)

	Monday	Tuesday	Wednesday	Thursday	Friday
Group A	Controlled Reader Junior or Craig Reader & Timed Reading	Study Skills & Vocab.	Controlled Reader Junior or Craig Reader & Timed Reading	Listening Post & Vocab.	Free Reading in Novels & Make-up
Group B	Study Skills & Vocab.	Controlled Reader Junior or Craig Reader & Timed Reading	Listening Post & Vocab.	Controlled Reader Junior or Craig Reader & Timed Reading	Free Reading in Novels & Make-up
Group C	Controlled Reader & Timed Reading	Listening Post & Vocab.	Controlled Reader & Timed Reading	Study Skills & Vocab.	Free Reading in Novels & Make-up
Group D	Listening Post & Vocab.	Controlled Reader & Timed Reading	Study Skills & Vocab.	Controlled Reader & Timed Reading	Free Reading in Novels & Make-up

NOTE: If any time is left in the hour, the student has an option to work in vocabulary, free reading in novels, and/or study skills. Additional time is available in each class when progress in reading skills occur, especially in rate development.

The following is a letter outlining the agenda for this study.
This approach was approved and followed.

TRENTON PUBLIC SCHOOLS
Trenton, Michigan
November 5, 1971

Trenton High School

To: Phil E. Van Riper, Principal
From: Duane A. Whitson
Subject: Evaluation Reading Techniques - 1st Semester

At your request, I am here submitting a rough sketch of an evaluation scheme for the reading program in Reading Techniques.

HYPOTHESIS

The 200 students in Reading Techniques during the fall semester at T.H.S. will demonstrate evidence of growth in vocabulary, comprehension, and rate (words per minute), as measured by the Pre and Post Tests on the Nelson-Denny Reading Tests Forms A and B. Responses on the informal inventories will reveal affective growth.

INSTRUMENTS

1. Nelson-Denny Reading Test, Forms A and B.
2. Informal Diagnostic Checklist for errors and Interest Inventory and Student Narratives.

PROCEDURE

Both of the above instruments will be administered by qualified reading specialists at the beginning and the end of the Reading Techniques course and the data generated will be recorded and analyzed.

TEST SAMPLE

Students in Reading Techniques classes in the fall semester of 1971 will be evaluated; ten sections of approximately 200 students taught by four instructors.

DATA ACQUIRED

Scores will be keypunched into IBM cards and a program will be devised to generate the kinds of information needed.

Grade equivalent and percentile ranking expressions will be based on norms given in the Nelson-Denny examiners manual.

DATA ANALYSIS

An analysis of the data will be conducted to determine the degree to which students have demonstrated measured growth in the key areas of vocabulary, comprehension, rate, study skills, and recreation reading. The computer program should be set up to generate the data mentioned above.

DATA REPORTING AND CONCLUSIONS

The data will be reported in three forms, A - useful raw data, B - charts and graphs, ~~C - prose explanation~~ of the data. Conclusions derived from the data would indicate how effectively the Reading Techniques course in the high school reading program reaches its primary objectives. Expressed differently, this evaluation would prove whether or not students are learning how to read more skillfully as a consequence of having taken Reading Techniques.

SUGGESTED TIME SCHEDULE

September	Pre-tests given.
November	Pre-test data ready for key punching and computer program devised.
December	Pre-test data key punched and program run and print-out received.
January	Post tests given.
March	Post tests ready for key punching.
April	Post test data key punched and computer program rechecked.
May	All data run through program and print-out received.
June	Data analyzed.
August	Report written.
October	Report submitted to Board.

The results of the study were as follows.

VOCABULARY

(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	200	11.3	12.2	9 months
2. Median score of all students	200	11.6	12.5	9 months
3. Seniors mean	27	12.4	12.7	3 months
4. Seniors median	27	13.0	13.1	1 month
5. Juniors mean	40	11.7	12.6	9 months
6. Juniors median	40	11.9	12.9	10 months
7. Sophomores mean	132	11.0	12.0	10 months
8. Sophomores median	132	10.7	12.4	17 months
9. Male students mean	89	11.8	12.5	7 months
10. Male students median	89	13.6	14.0	4 months
11. Female students mean	107	10.9	12.0	11 months
12. Female students median	107	11.6	12.8	12 months

DEFINITIONS:

Mean is an arithmetic average of all 200 scores.

Median is the middle score; that is, half the scores are above this and half are below.

Both the Mean & Median are ways of expressing central tendencies.

COMPREHENSION

(Nelson-Denny Test Results
expressed in grade equivalents)

	<u>Total</u>	<u>Pretest</u>	<u>Post test</u>	<u>Gain in 5 months</u>
1. Mean score of all students	200	10.9	11.8	9 months
2. Median score of all students	200	10.7	12.2	15 months
3. Seniors mean	27	11.8	12.5	7 months
4. Seniors median	27	11.1	13.3	22 months
5. Juniors mean	40	11.0	11.9	9 months
6. Juniors median	40	10.7	12.8	21 months
7. Sophomores mean	132	10.7	11.6	9 months
8. Sophomores median	132	10.7	11.4	7 months
9. Male students mean	89	11.3	12.2	9 months
10. Male students median	89	11.1	12.6	15 months
11. Female students mean	107	10.8	11.5	7 months
12. Female students median	107	10.2	11.4	12 months

RATE

(Nelson-Denny Test Results
expressed in raw score)

	<u>Total</u>	<u>Pretest</u> (W.P.M.)	<u>Post test</u> (W.P.M.)
1. Mean score of all students	200	264	429
2. Median score of all students	200	250	425
3. Seniors mean	27	258	404
4. Seniors median	27	238	379
5. Juniors mean	40	253	457
6. Juniors median	40	238	450
7. Sophomores mean	132	269	426
8. Sophomores median	132	250	413
9. Male students mean	89	260	428
10. Male students median	89	238	425
11. Female students mean	107	269	431
12. Female students median	107	250	425

ATTITUDE INVENTORY

VOCABULARY

How do you feel about your ability to handle words that are unfamiliar to you in your reading?

(Items 60 & 61)

1 2 3 4 5 6

	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.21	6%	20%	34%	32%	8%	2%
Post test	4.50	1%	1%	6%	45%	39%	10%

COMPREHENSION

How about your ability to understand what you read and remember it?

(Items 62 & 63)

1 2 3 4 5 6

	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.32	4%	22%	30%	31%	12%	2%
Post test	4.65	1%	1%	3%	36%	52%	9%

RATE

How do you feel about how fast you read? (rate)

(Items 64 & 65)

1 2 3 4 5 6

	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.24	9%	17%	29%	36%	8%	2%
Post test	4.83	—	1%	6%	25%	45%	23%

STUDY SKILLS

How do you feel about your ability to study efficiently?

(Items 66 & 67)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.42	5%	15%	29%	40%	10%	2%
Post test	4.43	--	2%	7%	47%	37%	9%

RECREATIONAL READING

Other than assigned reading, how do you feel about your recreational reading habits?

(Items 68 & 69)

		1	2	3	4	5	6
	Mean Average	Very Weak	Weak	Below Average	Average	Above Average	Very Strong
Pretest	3.36	13%	19%	23%	23%	15%	9%
Post test	4.55	2%	3%	10%	33%	29%	24%

COURSE EVALUATION

70. This was one of my best classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.03	9%	28%	23%	34%	8%

71. This was one of my worst classes.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.42	15%	51%	19%	10%	6%

72. I liked this class, but I didn't change my reading or study habits.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
2.26	19%	53%	14%	13%	2%

73. This was not one of my favorite classes, but it was still a valuable one.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.68	3%	15%	13%	52%	18%

74. This class was okay.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.67	3%	11%	16%	60%	12%

75. I like reading better now than at the beginning of the course.

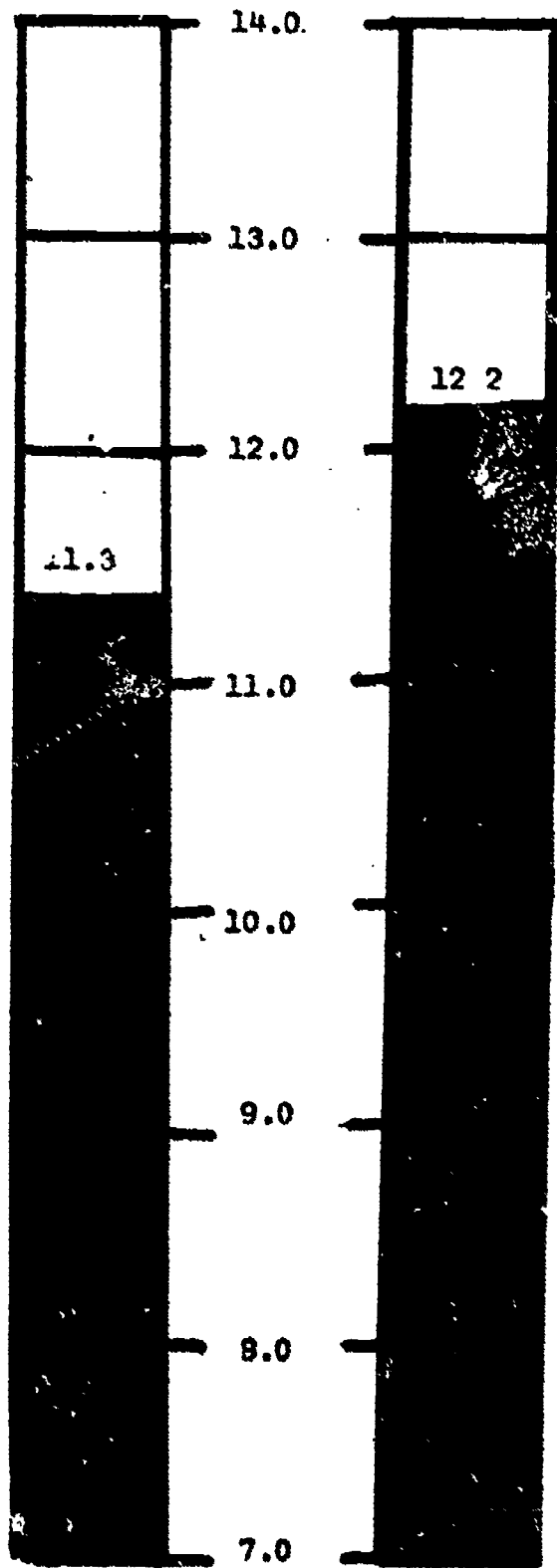
	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
3.11	7%	27%	26%	31%	10%

76. I feel that I am a better reader now than at the beginning of the course.

	1	2	3	4	5
Mean Average	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
4.10	4%	5%	7%	48%	37%

VOCABULARY

Cognitive

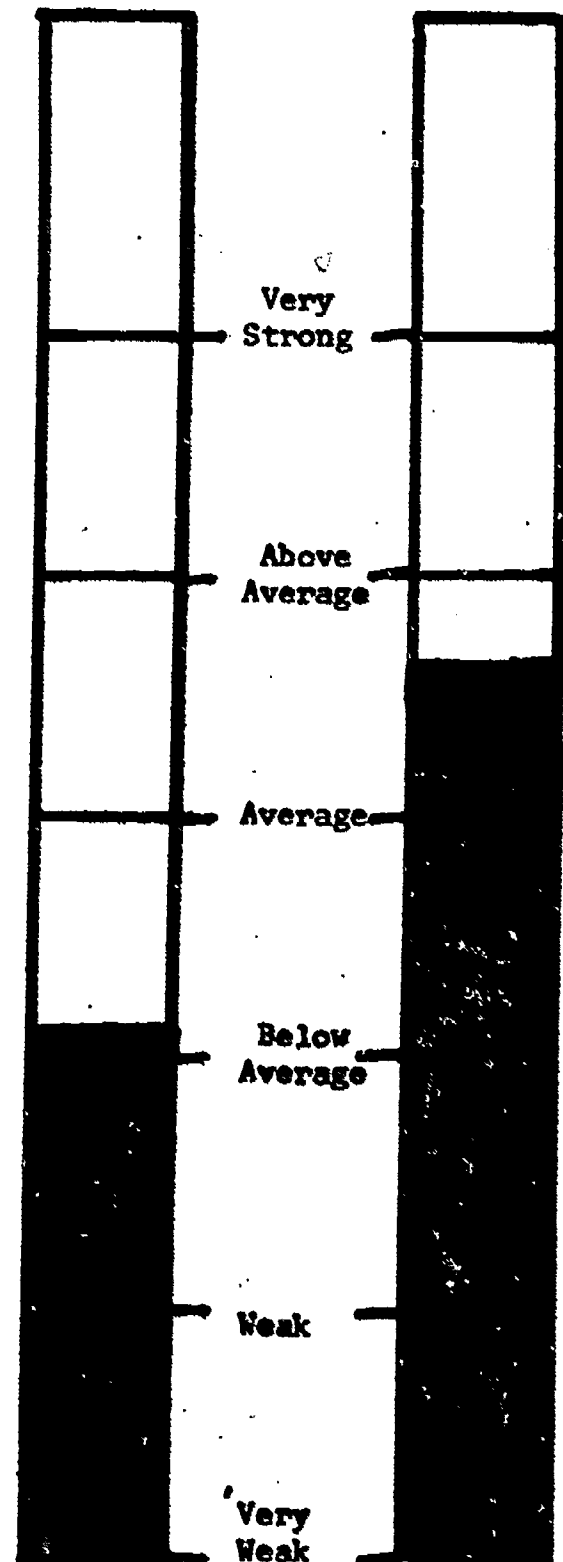


Pre Test

Post Test

(Nelson-Denny test results
expressed in grade equivalents
Page 9)

Affective



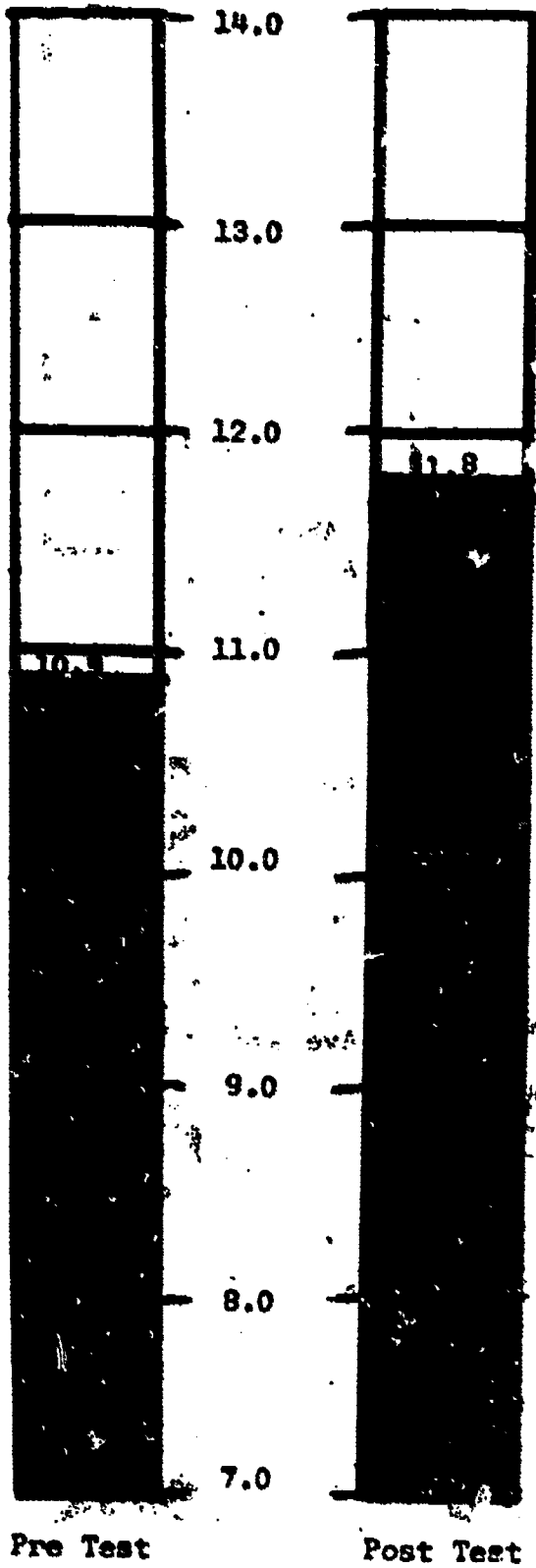
Pre Test

Post Test

(Attitude Inventory results. How
do you feel about your vocabulary?
Page 12)

COMPREHENSION

Cognitive

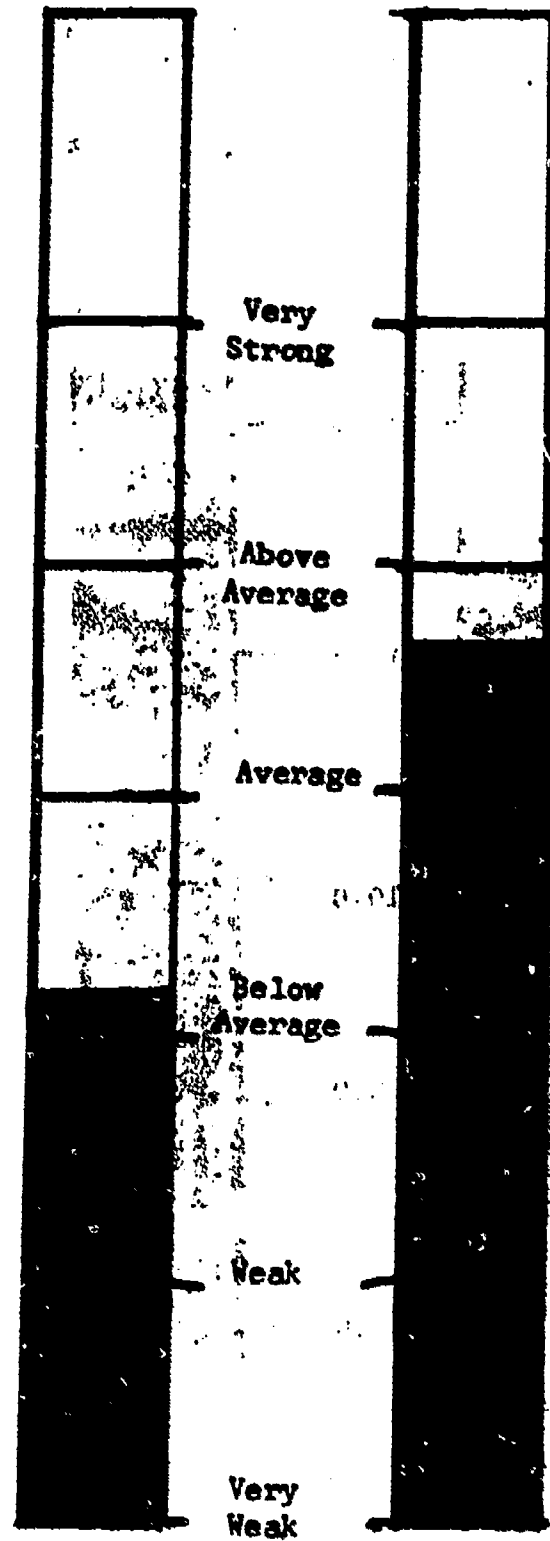


Pre Test

Post Test

(Nelson-Denny test results
expressed in grade equivalents
Page 10)

Affective



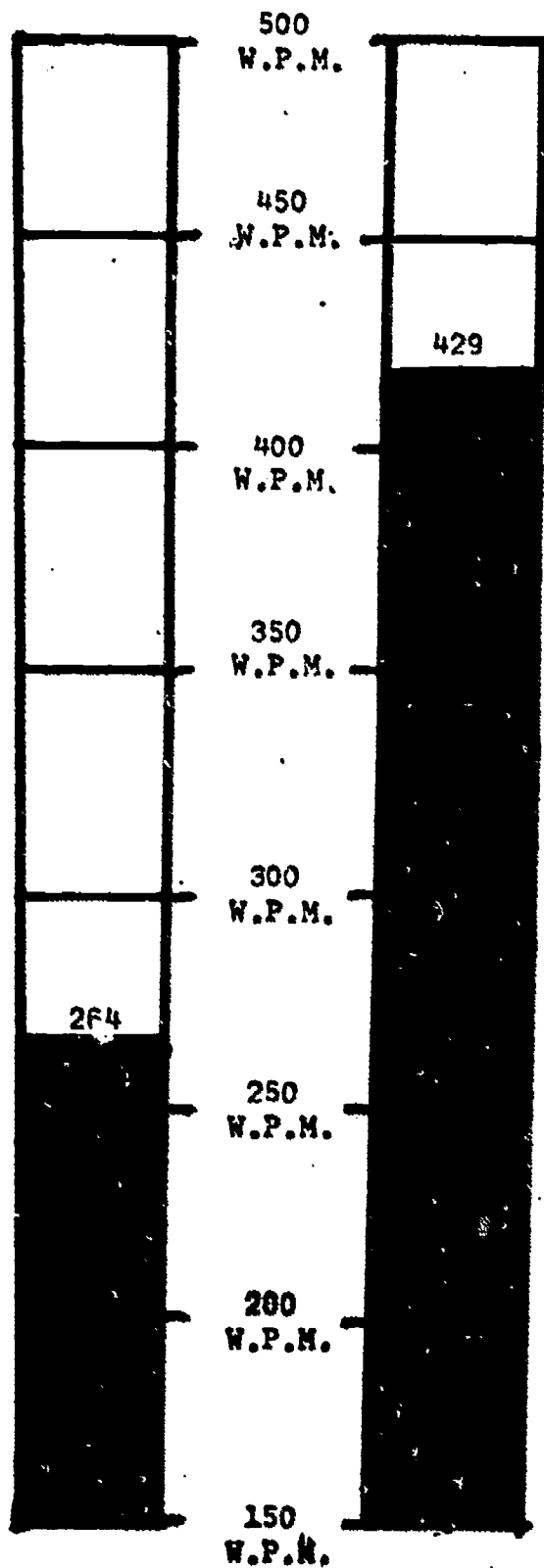
Pre Test

Post Test

(Attitude Inventory results. How
do you feel about your comprehension?
Page 12)

RATE

Cognitive

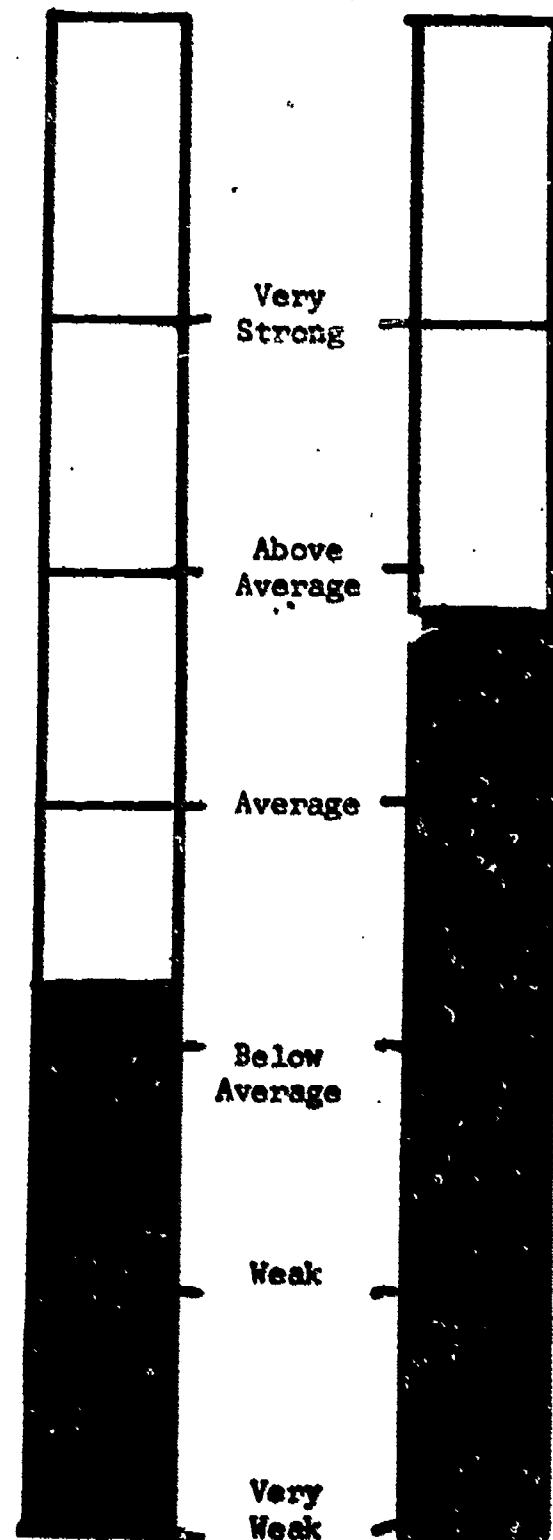


Pre Test

Post Test

(Nelson-Denny test results expressed in raw score. Page 11)

Affective



Pre Test

Post Test

(Attitude Inventory results. How do you feel about your reading speed? Page 12)

CONCLUSION

The evaluation suggests that the reading program at Trenton High School is viewed very positively by the student body. In six years 3,403 students have elected to take advantage of the instruction offered in the reading labs. The most popular reading course is Reading Techniques. The capability exists in the reading labs to improve the reading skill of anyone from non-reader to college level reader. During the daytime, high school students can elect reading classes such as Basic Reading Skills, Reading Techniques and Advanced Reading Techniques. In the evening, adults interested in learning to read more effectively can take reading courses such as Speed Reading, High School Completion and Adult Basic Education. We can and do service the high school population and community at large in our reading center. By servicing a wide variety of people no one feels ashamed to approach the task of improving his reading ability. This is one of the major reasons why such a positive attitude prevails in the school regarding reading improvement classes.

The evaluation also demonstrates that students are learning how to read more skillfully as a direct consequence of having taken Reading Techniques. Statistical data indicates that this course successfully changes achievement level. One indication is the vocabulary growth shown in one semester with a pretest grade equivalent of 11.3 and a post test of 12.2, a gain of nine months in one semester. The data revealed comprehension growth from the pretest 10.9 grade equivalent to 11.8 on the post test, a gain also of nine months. Overall rate gains increased from a pretest of 264 W.P.M. to a post test of 429 W.P.M. The statistical growth is reinforced with student attitudinal inventories. Students felt they were below average, 3.21, in vocabulary at the beginning of the course. By the end of the course they felt they were average to high average, 4.50. In reference to comprehension ability, the students felt they were below average at the beginning of the year, 3.32, and by the end of the semester, felt they were high average, 4.65. In regard to rate of reading, the students felt at the beginning of the course that they were slower than average, 3.24, and faster than average at its conclusion, " 83. Perhaps the best overall measure of the course was that 85% of the 200 students in the sample agreed or strongly agreed with the statement that they are better readers now than at the beginning of the course.