Research was conducted at Bucks County Community College, Newton, Pennsylvania, during the 1969-70 academic year to determine the effects of special reading and study skills instruction combined with counseling on the success rate of "high-risk" students. A course, which involved 2 hours of instruction per week plus 1 additional hour of independent work, combined with educational/vocational counseling, was offered. Freshmen who ranked in the bottom 40 percent of their high school graduating class and whose SAT scores were below 800 with a verbal score below 400 were informed that a reading and study skills program was available. Of 82 students who met the criterion for course attendance, 41 enrolled and 33 completed the entire course. The students who did not attend were used as a comparison group. Three studies were made to determine the immediate and relative effects of attending the course: a comparison of pretested data with posttest data obtained from three subscales of the Cooperative Reading Test; a comparison of the pretest data with the posttest data from the Student Attitude subscale of the Brown-Holtzman Survey of Study Habits and Attitudes; and a comparison of semester average, English grades, and frequency of failures between the experimental group and the control group. Results of the studies showed that the experimental group's semester average was significantly improved when compared with the control group, and benefits were realized as a result of the counseling experience. (DB)
Reading and Study Skills
Program
A Counseling Approach
By
John D. Rosella

A research project conducted at Bucks County Community College, Newtown, Pennsylvania, 18940, during the 1969-70 academic year to determine the effects of special reading and study skills instruction combined with counseling on the success rate of "high-risk" students.
The theory behind the present approach to reading and study skills is founded upon a conviction that real change in skills and attitudes towards study can be effected through a combination of teaching techniques and counseling. Our belief is founded upon general research which points to a psychological barrier within the student which in effect "turns him off" when confronted with academic course work. Twelve years of academic rigidity and suppression of motivation by the grade and secondary schools have drained the individual of his desire and ability to succeed when academic pressure is applied.

To test the efficacy of the counseling approach, four members of the counseling staff were utilized as course instructors in the reading and study skills program. Their assignment, after in-service training in reading and study skills techniques, was to meet periodically in didactic sessions, and, more importantly, to meet with each student in a counseling relationship. The rudiments of technique were to be quickly communicated to the students while the greater majority of time was to be spent in one-to-one contact and individual analysis. The modification of attitudes towards self and study was to be attempted so as to eliminate any student predisposition against study.

Course Description

The program in reading and study skills offered the student an opportunity to become proficient in the various academic skills deemed necessary for a successful college career. Speed reading, comprehension improvement, listening - notetaking skill building, vocabulary development and critical reading skills were emphasized.

The course involved two hours instruction per week plus one additional hour of independent work, combined with educational - vocational personal counseling which was provided by the college professional counseling personnel.

Counseling was considered an essential feature of the program and focused upon the particular feelings and emotions of each student. Attitudes change through the building of self-confidence and a realistic self-image was as much a part of the program as the learning of the various reading and study techniques.

No college credit was given for this course.
Course Description

Aims:

(a) To improve each student's reading rate and reading comprehension by intensive training in the several techniques for successful reading.

(b) To develop facility in the various techniques for effective independent study.

(c) To bring about a significant change of attitude in each student enrolled in the program by helping to free him from negative thoughts and feelings about himself and his ability to manage the challenges of the collegiate milieu.

The criterion used to select students for the Reading and Study Skills Program were as follows:

1) High School: rank in the bottom 40% of the graduating class.

2) SAT scores below 800 with a verbal score below 400. (NB. Most of the students who chose to participate in the program had verbal scores in the low 300s or upper 200s.)

During the Freshmen interviews, eighty-two students who met the above criterion were informed that a reading and study skills program was available. Forty-one students from this group enrolled and thirty-three completed the entire course. Some students were dropped from the program for poor attendance, etc.; however, only one withdrew from the college.

The students who did not avail themselves of the program were used as a comparison group. Seven students from this group withdrew from school.

Inasmuch as all the students interviewed met the same general characteristics, the experimental and control groups were automatically "matched" according to reasonably sound techniques. This greatly facilitated comparison and the production of statistics which can be classified as valid.
In order to determine the immediate and relative effects of the reading and study skills research project for the fall, 1969 semester, the following studies were made:

1. A comparison of pre-tested data with post-test data obtained from the following sub-scales of the Cooperative Reading test:
   a) To determine whether or not the program would bring about a significant improvement in the vocabulary scores.
   b) To determine whether or not the speed of comprehension score improved significantly.
   c) To determine whether or not the level of comprehension score improved significantly.

2. A comparison of the pre-test data with the post-test data from the Student Attitude sub-scale of the Brown-Holtzman Survey of Study Habits and Attitudes.

3. A comparison of semester average, English grades and frequency of failures between the experimental group and control group.

It perhaps should be noted here that certain students were not included in the experimental group even though they showed obvious improvement in basic skills. Older students, including two veterans, were eliminated because they did not match the experimental population in age, and no relevant national test scores were available for comparison. The eight dropouts from the experimental group kept coming in for voluntary counseling sessions.

Hypotheses To Be Tested

Generally, we expected to find statistically significant changes in Vocabulary, Comprehension, Speed of Comprehension, Study Attitudes and semester grade point average (GPA). The "proof of the pudding" in this instance was to be the comparison of the GPA between the experimental and control groups. (Test information, Co-op English, & Brown-Holtzman were not available for the control group.)

The GPA was stated in terms of two null hypotheses:

1. The semester averages of the experimental group was not significantly different from the expected distribution.
2. The semester averages of the control group was not significantly different from the expected distribution.
RESULTS

Pre and Post Test results of the Cooperative Reading Test and the Brown-Holtzman Survey of Study Habits and Attitudes are indicated in Table I.

TABLE I

Comparison of Pre and Post Test Results on Cooperative Reading and SSHA

<table>
<thead>
<tr>
<th>Sub-tests</th>
<th>Pre</th>
<th>Post</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary</td>
<td>140.24</td>
<td>142.26</td>
<td>1.65</td>
</tr>
<tr>
<td>Comprehension</td>
<td>135.38</td>
<td>139.50</td>
<td>2.79</td>
</tr>
<tr>
<td>Speed of Comprehension</td>
<td>129.62</td>
<td>138.88</td>
<td>5.87</td>
</tr>
<tr>
<td>Study Attitudes</td>
<td>45.41</td>
<td>52.25</td>
<td>6.84</td>
</tr>
</tbody>
</table>

1. Significant at .01 level
2. Significant at the .05 level

The Cooperative Reading Test measures high school and college students in reading expression. The following areas are measured: vocabulary, level of comprehension, speed of comprehension, and total reading comprehension.

In selecting an appropriate norm, raw scores were converted on Table 8 of the manual and interpreted by representative samples established by the author. However, for the purpose of this evaluation, only the converted (raw) scores were utilized. Pre and post test evaluations are illustrated in Table I.
### TABLE II
Percentage Distribution of Fall, 1969, Semester Average

<table>
<thead>
<tr>
<th>G.P.A.</th>
<th>.99 and below</th>
<th>1.0-1.49</th>
<th>1.50-1.99</th>
<th>2.0-2.49</th>
<th>2.5-2.99</th>
<th>3.0-3.49</th>
<th>3.5-4.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total School Population (N=1770)</strong></td>
<td>7</td>
<td>8</td>
<td>16</td>
<td>27</td>
<td>23</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td><strong>Expectation (0 to 40th %)</strong></td>
<td>17</td>
<td>20</td>
<td>40</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1. <strong>Experimental Group (N=33)</strong></td>
<td>3</td>
<td>21</td>
<td>30</td>
<td>31</td>
<td>15</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. <strong>Control Group (N=34)</strong></td>
<td>12</td>
<td>13</td>
<td>49</td>
<td>22</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

1. Chi Square = 16.86 with 6 d.f. significant
2. Chi Square = 5.46 with 6 d.f.
   No significance

(The expectancy distribution of semester averages for the students was based upon the initial criterion for selection into the program; that is, that the high school grade average was at the 4th or 5th quintile. Briefly, the expected semester average would fall within the 0 to 40th percentile of the total population distribution as a conservative estimate. Secondly, that the observed group distribution would not be significantly different from the expectant distribution.)
Pre and post testing found significant differences in three of the four areas analyzed. Lack of any real difference between vocabulary scores may be due in part to the structure of the reading and study skills course which did not emphasize vocabulary building. In the general area of comprehension, both scores are significant at the .01 level. (This is interpreted to mean that if we were to conduct this experiment again, we could expect to achieve the same results 99 times out of 100 --- or only 1% of the time would we achieve the results through mere chance.)

The course then was evidently successful in altering performance in three out of four measured categories.

Table II is a frequency distribution of the percentage students comprising each grade point category. A tabulation of 1770 student GPAs yielded a percentage distribution of our school population for all grade categories. From this, we expected ("Expectation" row) certain percentages of our experimental and control groups to distribute themselves, as indicated. By comparing the expected distribution with the actual, we can then draw some conclusion as to the efficacy of the experiment. For example, if we look at the column "2.5-2.99," we would not expect any of our experimental or control students to achieve a GPA in that category. Their very poor academic performance to date mitigates against this level of achievement. The experimental group, however, had 15% in this category while the control showed but 4%. This type of achievement by the experimental group was shown to be significantly better than the prediction while the control group achieved as expected.

Comparison of semester average, English grades, and frequency of failure is illustrated in Table III.

**TABLE III**
Comparison of Means of Semester Averages, English Grades, and frequency of Failures between the Experimental and Control Groups.

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group (N=33)</th>
<th>Control Group (N=34)</th>
<th>t</th>
<th>d.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Average</td>
<td>1.87</td>
<td>1.56</td>
<td>1.88*</td>
<td>54</td>
</tr>
<tr>
<td>English Grades</td>
<td>2.19</td>
<td>1.21</td>
<td>3.36**</td>
<td>43</td>
</tr>
<tr>
<td>Frequency of Failures</td>
<td>0.58</td>
<td>1.00</td>
<td>1.12</td>
<td>52</td>
</tr>
</tbody>
</table>

1. Significant at the 10% level
2. Significant at the 1% level
Mean scores when compared in Table III show the experimental group to be achieving at a significantly better rate than the control group in both semester average and English grades. There is no testable difference in failure rate between the two groups. Results indicated by Tables II and III allow us to reject the hypotheses: (1) the semester averages of the experimental group was not significantly different from the expected distribution and (2) the semester averages of the control group was not significantly different from the expected distribution.

In other words, the experimental group average distribution was significantly different from the expected average distribution, and the control group distribution was not significantly different from the expected distribution.

CONCLUSIONS

Our findings indicate that our experimental group's semester average showed a statistically significant improvement when compared to the control group. We also found that English Composition grades were significantly higher as were the scores on speed of comprehension and level of Comprehension sub-scales on the Cooperative Reading Test. Vocabulary scores did not improve significantly; however, no direct emphasis was placed upon this during the course.

Reading speed, as observed on daily progress charts, also indicated that students appear to have improved their reading speeds from two to six times their beginning rates while maintaining or improving upon the beginning comprehension scores.

Scores on the sub-scales for the Brown-Holtzman Survey of Study Habits and Attitudes also showed considerable improvement. The Study Attitude sub-scale was tested statistically and the improvement that to place appears to be significant.

Our observations also appear to indicate, although we did not attempt to measure this, that benefits were realized by many students as a result of the counseling experience. Many students appear to be developing a realistic self-image and are adjusting their vocational-educational plan in a confident, realistic, and mature manner.

Some students who participated in the program did not succeed academically. However, many of these individuals have commented that the counseling support has helped them to explore other areas of endeavor that will not require a college degree, yet may lead to a rewarding career.

In short, the result obtained through the program during the fall of 1969 are encouraging. We hope to further test our findings in later projects.

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