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ABSTRACT

A longitudinal study was conducted to determine the relative effectiveness of a developmental reading course taught to students in a college of nursing. Forty-two students in the experimental group were enrolled in a ten-week developmental reading course during the first semester of their freshman year; the control group, also composed of 42 students, did not take such a course. Pretests and posttests were administered. In the spring of the students' senior year in college, a reading test was administered to the 16 students from the experimental group and to the 18 students from the control group, who remained in the college. Analysis of the results indicated that, for the control and experimental groups, reading rate, comprehension, and efficiency scores were not significantly different after a four-year period. However, the experimental group maintained a higher reading rate on posttests than did the control group, while the control group maintained a higher posttest comprehension score. The control and experimental groups did not differ significantly in their predicted or earned grade point averages for a four-year period. (GW)

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A Developmental Reading Course--What Lasting Effect?

William A. Bryan

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This is a longitudinal study to determine relative effectiveness of a developmental reading course taught in the College of Nursing at the University of Kentucky in 1969. Few longitudinal reading studies report the permanency of reading gains. Results of this study suggests periodic refresher courses for students.

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Few studies have reported significant improvement in reading comprehension and reading rate as a result of a planned reading experience. Freer (1966), Rose (1964) and Bloomer (1962) reported significant improvement in reading rate and comprehension as a result of a reading experience at the college level. Studies by Miller (1968), Stevens (1968), Maxwell (1967) and Berger (1967) found an improvement of rate with no comprehension improvement.

Some studies have found (1) reading comprehension improvement without reading rate change, (2) no effective reading rate or comprehension change, and (3) reading rate improvement with a drop in comprehension. Numerous researchers have investigated improvement of reading rate and comprehension after a college reading experience, however few researchers have included within the scope of their study the question of retention of gains in reading rate and comprehension. Freer (1966), Glock (1955) and Cosper and Kephart (1955) reported the retention of reading skills over a period of time. Most studies do not report a retention of skills past a 14 month period.

Freer (1966), Stevens (1968), Pauk (1965) and Tillman (1972) reported research findings which support a grade point average change following a reading experience. Studies that exhibited no significant change in grade point average as a result of a planned reading improvement experience were reported by Regensburg (1966), Lowe (1968), Clark (1964), Foxe (1967), Bahe (1969), King, Dellande and Walter (1969) and Keetz (1969).

In summary, studies involving college reading programs generally show: (1) College students improve in reading skills no matter what method or material is used in teaching reading. (2) GPA improvement is not improved or increased by reading training. (3) There is little permanency of reading skills gained (rate and comprehension) after a 14 month period.

Procedure

Problem

The purpose of this study was to determine after a four year period the relative effectiveness of a developmental reading course taught in the College of Nursing at the University of Kentucky in 1969. Specifically, the author attempted to determine: the effect on reading rate, comprehension, efficiency and the relative permanency of the effects; and the effect on grade point average after four years of college work.

Method

Bryan (1972) used the randomized control group pretest-posttest design with two experimental and two control groups. The population consisted of College of Nursing first semester freshman. A developmental reading course, meeting once a week for a two-hour period for ten weeks was experienced by the experimental groups. The original sample consisted of 84 College of Nursing freshman students enrolled in the University of Kentucky during the Fall Semester, 1969. All groups were composed of female students who were subject to the required College of Nursing curriculum.

Instruments

The basic instructional instrument selected for the purpose of this study was Increasing Reading Efficiency by Lyle Miller, designed for the

use of high school students grades 11 and 12, college students and adults. In addition to this workbook, Lyle Miller's Maintaining Reading Efficiency was used to provide practice and longer reading exercises. This workbook provided supplementary exercises with accompanying test questions. Parallel reading tests were used for the pretest, post-one, post-two and post-three tests. All tests had 50 true-false and multiple choice questions. Johnson (1968) indicated that no statistical studies have been made to validate the equivalencies of the tests used but all tests have yielded similar results when used with the developmental reading classes.

1973 Method

In the spring of 1973 a reading test was administered to all students enrolled in the College of Nursing who had originally participated in the 1969 study. Of the original sample of 42 experimental students 16 students remained. Of the original 42 control group students 18 students remained enrolled in the college.

In order to determine the relative effectiveness of the developmental reading course taught in 1969 the following hypotheses were tested in this study: (1) There will be no significant difference between control and experimental groups on the reading post-three test (after four years). (2) There will be no significant differences between control and experimental groups in grade point averages after four years of college.

Analysis of Data

For the present study Fisher's t-test was used to test differences between means. The .05 level of significance was chosen as the level for rejection of hypotheses. To determine if the loss in enrollments over the four year period was random, the complete set of data (pre- and post-tests, as well as predicted and earned GPAs) for the 16 experimental and

18 control subjects were tested for significant differences using an analysis of variance with repeated measures design (Dayton, 1970). The differences between group means on the four tests were then submitted to post-hoc analysis via Fisher's t-statistic.

Results

A brief summary of the findings by Bryan (1972) where relevant to the discussion of each of the hypotheses tested will be discussed.

Bryan (1972), for the total sample of students (n=84) included in the original study, found no significant differences between groups on the pre-test for reading rate, comprehension, and efficiency. Significant differences were found for all variables on the post-one test and post-two test; however while the experimental group scored significantly better on the reading rate and efficiency variable on the post-one and post-two tests, the control group scored significantly better on the reading comprehension measure at each test period.

The control group showed no change in reading rate at any of three test periods; however, on the post-two test a significant drop in reading efficiency comprehension was found for the control group. No significant differences were found between groups in predicted grade point average and earned grade point average at the end of one year of study.

The results of the 2x4 analysis of variance with repeated measures and t-tests of differences between group means on the measures taken in 1969 for the reduced sample (i.e., those for whom post-three test scores in 1973 were available) paralleled those reported by Bryan (1972) and discussed above, thus, lending support to the assumption that the 1973 sample was representative of the original group.

TABLE 1

MEAN SCORES ON READING ACHIEVEMENT

Variable	Experimental (n=16)				Control (n=18)				Experimental vs. Control			
	Pretest	Posttest1	Posttest2	Posttest3	Pretest	Posttest1	Posttest2	Posttest3	t1	t2	t3	t4
Rate	203.2	1038.0	496.1	314.8	216.6	226.1	228.7	279.6	1.12	-3.54*	3.75**	1.07
Comprehension	77.5	65.8	61.9	65.0	75.8	83.8	67.2	68.9	0.45	4.53**	1.31	0.98
Efficiency	158.4	666.4	302.8	204.3	163.5	188.0	152.7	187.3	0.40	3.49*	3.58*	0.88

*p<.01
**p<.001

t2 = F(1,32)
df = 32

TABLE 2

MEAN PREDICTED AND EARNED GRADE POINT AVERAGES

Variable	Experimental (n=16)			Control (n=18)			Experimental vs. Control		
	Predicted	1st Year	4th Year	Predicted	1st Year	4th Year	t1	t2	t3
GPA	2.36	2.55	2.63	2.23	2.49	2.56	2.42	0.08	0.23

Follow-Up Study--1973

Hypothesis: There will be no significant difference between control and experimental groups on the reading post-three test (after four years).

The control and experimental group were tested after a four year period (spring 1973). The t-ratios for the group means on reading rate, comprehension, and efficiency were not significant at the .05 level of confidence. Therefore, the hypothesis is not rejected.

Hypothesis: There will be no significant differences between control and experimental groups in grade point averages up to four years of college.

Means of the earned grade point average for each group after four years were submitted to a t-test for analysis of the significance of the differences between group means. Data are presented in Table 2. The t-ratio failed to reach the .05 level of significance. Therefore, the hypothesis is not rejected.

Discussion

For the control and experimental groups, reading rate, comprehension and efficiency scores were not significantly different after a four year period. However, it should be noted that the experimental group continued to maintain a higher reading rate than did the control group. The control group continued to maintain a higher comprehension score.

The control and experimental groups did not differ significantly in their predicted grade point average or their earned grade point average for a four year period. The predicted grade point average and earned grade point average for a four year period slightly favored the experimental group.

Conclusions

On the basis of the data presented the following conclusions appear warranted.

(1) A developmental reading course is helpful to freshman students in significantly improving their reading rate and efficiency in their first year at the university; however, after a four year period no significant differences will remain.

(2) Students during their collegiate experience will experience a drop in reading comprehension scores. Considering the reading content of the instruments used, the control and experimental groups demonstrated adequate comprehension scores after a four year period for their reading purposes.

(3) For the effects of a developmental reading course to be lasting it is necessary that there be periodic refresher courses for students in an effort to assist them to maintain their reading rate, comprehension and efficiency.

(4) Students experiencing a developmental reading course should not expect to significantly improve their grade point averages as a result of this experience.

REFERENCES

1. Bahe, Virginia R., "Reading-Study Instruction and College Achievement." Reading Improvement, 6(Winter 1969), 57-61.

2. Bloomer, Richard H., "The Effects of a College Reading Program on a Random Sample of Education Freshman." Journal of Developmental Reading, 5(No. 2, Winter 1962), 110-118.

3. Bryan, William A., "The Effectiveness of a Developmental Reading Course in a College of Nursing." ERIC-MF RE-003993, February 1972.

4. Clarke, Clifford H., "An Analysis of Reading Deficiencies and Corrective Treatment Among Freshman Students from the Pacific Area Enrolled at the Church College of Hawaii," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXIV, (No. 10) April 1964, p. 4050.

5. Cosper, Russell, and Newell C. Kephart, "Retention of Reading Skills." Journal of Educational Research, 49(No. 3, November 1955), 211-216.

6. Dayton, C. Mitchell, The Design of Educational Experiments. New York: McGraw-Hill, 1970.

7. Foxe, Esther Kranz, "An Experimental Investigation of the Effectiveness of a Brief Study Skills Program for Freshman College Chemistry Students," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXVII, (No. 9) March 1967, pp. 2876A-2877A.

8. Freer, Imogene Johns, "A Study of the Effect of a College Reading Program Upon Grade Point Average in Odessa College, Odessa, Texas," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XVII, (No. 3) September 1966, p. 601A.

9. Glock, John William, "The Relevant Value of Three Methods of Teaching Reading--Tachistoscope, Films and Determined Effort," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XV, 1955, pp. 2072-2073.

10. Johnson, Edward L., "A Comparison of Two Approaches to Developmental Reading Instruction in the Junior High School." Unpublished doctoral dissertation, Laramie: University of Wyoming, August 1968.

11. Keetz, Mary Ann, "An Experimental Investigation of the Effectiveness of College Reading and Study Skills Course for Freshman Students Enrolled in Scientific Courses of Study," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXIX, (No. 7) January 1969, pp. 2121A-2122A.

12. King, Paul T., and others, "The Prediction of Change in Grade Point Average from Initial Reading Rates." Journal of Reading, 13(No. 3, December 1969), 215-218.

13. Lowe, Alvin Jenkins, "An Evaluation of a College Reading Improvement Program," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXVIII, (No. 9) March 1968, p. 3512A.

14. Maxwell, Martha J., and Arthur C. Mueller, "Relative Effectiveness of Techniques and Placebo Conditions in Changing Reading Rates." Journal of Reading, 11(No. 3, December 1967), 184-191.

15. Miller, J. O., "A Comparison of a Self-Improvement and Teacher Oriented Approach to Reading Improvement at the College and University Level," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXVIII, (No. 12) June 1968, pp. 4955-4956.

16. Pauk, Walter, "Study Skills and Scholastic Achievement." Reading Teacher, 19(No. 3, December 1965), 180-182.

17. Regensburg, George Ervin, "Relationship between Participation in a Reading Improvement Course and Grade Point Averages of College Freshman," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXVII, (No. 6) 1966, p. 1559A.

18. Rose, Harriet A., "Report of Three Semesters of Voluntary Reading Improvement Courses at the University of Kentucky." Journal of Reading, 8(November 1964), 126-129.

19. Stevens, Loren Duane, "A Study of the Relationship between Reading Skills and Academic Achievement in Specific Subject Matter Areas," as reviewed in Dissertation Abstracts. Ann Arbor: University Microfilms, Vol. XXVIII, (No. 12) June 1968, p. 4881A.

20. Tillman, C. E., "Measuring Outcomes in College Reading Programs," College Reading: Problems in Programs, F. T. Greene, editor. Twenty-first yearbook of the National Reading Conference, Vol. 2, Boone, North Carolina: National Reading Conference, Inc., 1972.