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This study sought to evaluate the remedial program at Miami-Dade Junior College. As a control group, 73 randomly selected students, eligible for the remedial program, were placed in the regular freshman English course, to be compared with an experimental group of 461 students who were in the remedial program because of GPA, attrition rate, and re-test results. Results showed that the remedial program had little effect on the students' academic progress as measured by these three dependent variables. The remedial program, as presently designed, produced a slightly higher overall first-term GPA, but even that did not reach a grade level of C. The program made no difference in student withdrawal rates nor did it produce a better overall score on a standardized test (one not previously seen by either students or teacher). Moreover, 70% of the control group succeeded in the regular English course. From these results, it seems that (1) present attempts at academic remediation need considerable revision, (2) such remediation per se may not be a viable goal for students with low scores on standard tests, and (3) it is generally just as effective for low-scoring students to go directly into the regular freshman English sequence. In short, the program fails both in facilitating success in typical academic courses and in reducing withdrawal from college. (HH)

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Miami, Florida

November 1968

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I. SUMMARY

The purpose of this study was to evaluate the remedial program at Miami-Dade Junior College. Seventy-three randomly selected students, eligible for the remedial program, were placed in the regular freshman English sequence. They were compared with an Experimental Group of 461 students in the remedial program on the basis of grade point average, attrition rate, and re-test results.

Results demonstrated that the remedial program had little effect on the students' academic progress as measured by the three dependent variables. Moreover, 70 per cent of the Control Group succeeded in the regular freshman English sequence.

It is suggested on the basis of these results that: (1) attempts at academic remediation as presently practiced need considerable revision; (2) academic remediation per se may not be a viable goal for students who score low on a standardized achievement measure; (3) it is just as effective, in general, for low-scoring students to go directly into a regular freshman English sequence as it is to attempt a prepared program of remediation for them.

II. INTRODUCTION

The purpose of this study was to evaluate a program developed to aid academically underprepared students at Miami-Dade Junior College.

Probably one of the most difficult curricular problems facing the public open-door community junior college today is the question of how to cope with the large number of academically underprepared students who enroll. This is clearly not a new problem for institutions of higher learning.¹ However, with the advent of rigorous, selective admissions at many four-year colleges and universities, the community junior college has, in large measure, assumed the role of providing the first two years in university parallel courses for the student who wishes to enroll in the junior college.

In most public open-door community junior colleges, the academically underprepared student is generally handled one of three ways: (1) he is treated as any other student, free to select his courses and to take his chances with students better prepared than he; (2) he is required to take a remedial program, with assignment to that program typically based on achievement test results; (3) he is offered a combination of the first two options.²

One typical rationale offered by advocates of remedial or developmental programs on a junior college level is rooted in the concept of offering to each person the opportunity to develop his individual capacities, academic, vocational, or personal, as completely as possible.³ Another frequently offered philosophy emphasizes the remediation or development of academic skills per se.^{4,5} It is this latter rationale, with its inherent assumption that remedial courses do materially improve academic skills more than ordinary college-level courses, that is being evaluated in the present study. Although there is near universal recognition of the problem, only 20 per cent of the community junior colleges surveyed by Schenz had designed special programs and

¹Brubacher, John S. and Rudy, Willis, Higher Education in Transition, (New York: Harper and Row, 1958).

²Schenz, Robert F., "What Is Being Done for Low-Ability Students?" Junior College Journal, XXXIV (August, 1964), pp. 22-27.

³Gardner, John W., Excellence: Can We Be Equal and Excellent Too?, (New York: Harper and Row, 1961).

⁴Fields, Ralph R., The Community College Movement, (New York: McGraw-Hill Book Company, Inc., 1962).

⁵Medsker, Leland L., The Junior College: Progress and Prospect, (New York: McGraw-Hill Book Company, Inc., 1960).

curricula for academically underprepared students. Most colleges appear to follow the first alternative noted above, i.e., to let the student take his chances. In the same survey, Schenz noted that ". . . very little research regarding the success or failure of students with low ability" is reported by the community junior colleges.⁶ Concerning the paucity of research in this area, Blocker states that "those that do have so-called developmental programs have frequently organized them in haphazard fashion and have uniformly ignored the responsibility to evaluate their contributions honestly."⁷

At many junior colleges, it has been assumed that students do profit from a remedial program designed to strengthen their academic weaknesses. Since there is no reason to doubt that junior colleges will continue to enroll an increasing number of students and little reason to doubt that large segments will continue to be academically underprepared for college-level work as operationally defined, this assumption needs as thorough an empirical grounding as possible.

While the problem is evident, the terminology used to refer to such students is not always as clear. The terms disadvantaged, culturally deprived, remedial, and low-ability are used most frequently to describe that segment of the population in need of special treatment. The term academically underprepared has been chosen for this study because it appears to have the dual quality of being comprehensive while at the same time being definable in operational terms. It also is devoid of etiological connotations.

Related Literature

In their recent publication, Gordon and Wilkerson had this to say regarding evaluation of compensatory education programs:

Despite the almost landslide acceptance of the compensatory education commitment, we find nowhere an effort at evaluating these innovations that approaches the criteria suggested. Where evaluative studies have been conducted, the reports typically show ambiguous outcomes affecting unknown or amorphous educational and social variables.⁸

⁶Schenz, Robert F., "An Investigation of Junior College Courses and Curricula for Students With Low Ability," Dissertation Abstracts, XXIV (1963), p. 1889.

⁷Blocker, Clyde E., Plummer, Robert H., and Richardson, Richard C., Jr., The Two Year College: A Social Synthesis, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965), p. 208.

⁸Gordon, Edmund W. and Wilkerson, Doxey A., Compensatory Education for the Disadvantaged, (New York: College Entrance Examination Board, 1966), pp. 156-157.

The American Association of Junior Colleges has published two bibliographies of doctoral dissertations relating to the junior college. The first (Parker and Bailey⁹) covers the period 1918-1963 and contains 608 references. The second (Rouche¹⁰) begins with those references of 1963 not included in the prior publication and continues through 1966. The Rouche compilation includes 214 references. Of the combined total of 822 dissertation topics, only eight of the titles suggest a relation to the evaluation of programs designed for the academically underprepared. A perusal of the dissertation abstracts further reduces to two the number of studies which attempt an evaluation of the remedial programs using some form of control and focusing on the low-level achieving student.

In her dissertation study, Gregory used both a type of control group and a group of low-achieving high school graduates, and reported that the Developmental Programs at Grand Rapids Junior College were successful.¹¹ At least two important methodological differences between her study and the present one should be noted. First, the control group consisted of students entering in the Fall Term of 1960 and the Spring Term of 1961 (Groups I and II respectively). Second, matching was primarily on the basis of a high school grade point average of 1.5 or lower.

The other directly relevant study which reports a control group is by Handy.¹² The "control" group reported here, however, turns out to be nothing more than an after-the-fact comparison of those students who for some reason did not enroll in the remedial program (but met the criteria for enrollment) with those students who did enroll in the remedial program.

The most thoroughly investigated and reported aspect of the remedial program in the junior college is probably the effectiveness of remedial reading. In reviewing this area, particular use was made of the periodic summaries of research published in the Journal of

⁹Parker, Franklin and Bailey, Anne, A Bibliography of Doctoral Dissertations 1918-1963, (Washington, D. C., 1967).

¹⁰Rouche, John E., A Bibliography of Doctoral Dissertations 1964-1966, (Washington, D. C., 1967).

¹¹Gregory, Merry Anne, "An Analysis of the College Preparation Developmental Program for Low Achieving High School Graduates at Grand Rapids Junior College," Dissertation Abstracts, XXVII (1966), p. 1542.

¹²Handy, Russell, "An Analysis of Academic Improvement in the Basic Studies Program In Miami-Dade Junior College," Dissertation Abstracts, XXVI (1966), p. 5915.

Educational Research by Theodore L. Harris (1962, 1963, 1964, 1965, and 1967) and of the review articles appearing in Perspectives in Reading.^{13,14}

Most studies reviewed show a positive relationship between academic performance and reading ability. In these studies, academic performance was usually measured by grade point average and scholastic attrition. Reading ability was characteristically measured by reading tests which provided scores on comprehension, vocabulary, and rate.

Conclusions as to the extent to which reading ability and consequent academic success were influenced and enhanced by effective remedial reading programs were, however, quite equivocal. McDonald, in the introduction to a well-designed evaluative study, pointed out that research in this area is deficient in basic design considerations.¹⁵ Specifically, he noted failures to control variables such as curriculum, sex, intelligence, motivational level, and initial differences in reading ability. These variables may affect academic performance as much as or more than the alleged differentiating factor of participation in a remedial reading program.

Failure to provide a valid control group remains a major source of design error. Gains supposedly due to reading instruction may in fact be due to merely attending college, maturation, or any number of factors.¹⁶ This possibility makes the inclusion of appropriately selected control groups mandatory in studies designed to assess remedial program effectiveness. Thus, the literature surveyed indicates that a remedial program may be assessed with the control of certain pertinent variables.

The present study was an evaluation of selected aspects of the remedial program at Miami-Dade Junior College, North Campus, a large, urban community junior college (17,000 enrollment). Motivational level was controlled by the non-voluntary nature of remedial course enrollment.

¹³Eller, William, "Evaluating Achievement in College and Adult Reading Programs," Perspectives in Reading, (1964), pp. 100-115.

¹⁴Jungeblut, Ann and Traxler, Arthur, "Summary and Evaluation of Pertinent Research at the College and Adult Level," Perspectives in Reading, (1964), pp. 115-127.

¹⁵McDonald, Arthur S., "Influence of a College Reading Program on Academic Performance," Journal of Educational Psychology, XLVIII (1957), pp. 171-181.

¹⁶Campbell, Donald T. and Stanley, Julian C., "Experimental and Quasi-Experimental Designs for Research on Teaching," Handbook of Research on Teaching, edited by N. L. Gage, (Chicago: Rand McNally and Co., 1963).

Curriculum control was maintained,¹⁷ and initial reading levels were assessed on Nelson-Denny, Form 1A, pre-tests.

Hypotheses

The following hypotheses related to the general question of the effectiveness of selected aspects of the Guided Studies Program at Miami-Dade Junior College, North Campus, were tested. Each hypothesis was stated in null form.

- A. There will be no difference between Experimental and Control Groups on mean grade point average at the end of the first semester, or at the end of the second semester.
- B. There will be no difference between Experimental and Control Groups on the Nelson-Denny, Form 1B, and the Sequential Tests of Educational Progress, Form A.
- C. There will be no difference in the proportion of students from the Control Group receiving "F" grades in English from that found in the general population of English 101 students.
- D. There will be no difference in continuation in college as measured by the number of students (proportionately) enrolled at the end of each semester in the Experimental and Control Groups.

¹⁷Much of the incoming freshman's program is already mapped out for him. A majority of the academically underprepared will take Social Science 101 (3 credits), remedial math (3 credits), remedial English and reading (or English 101 for the Control Group) (3 credits), orientation (1 credit), and physical education (1 credit).

III. METHODS

Procedure

General Design

The independent variable was designated as placement in a combination reading-writing course. The basic assumption was that minimal levels of skills in reading and writing, not found in those students who score at or below the twenty-first percentile on the School and College Ability Test, Verbal, are critical for success in any college curriculum. Therefore, students taking part in intensive remedial reading and writing programs should fare better than comparable students not enrolled in such a program. The selected dependent variables were grade point average, re-test improvement, and continuation in college. These variables have the advantage of being widely used in educational research and of being relatively easy to define operationally and to assess.

It was also assumed that teacher bias would not be a relevant factor inasmuch as students were permitted to select different times, and therefore, different teachers, thereby cancelling out the bias that would have been introduced by using only one or two teachers for the Control Group. For the purpose of this study, the teaching process per se was not analyzed.

Population

Students who earned a raw score of twenty-two or less on the School and College Ability Test, Revised Form 1A (twenty-first percentile, Miami-Dade Junior College norms), were operationally defined as under-prepared for college-level work and were required to take a course in remedial reading-writing. Of those who scored below this level, all full-time (12 credit hours or more), first-time-in-college freshmen, not supported by Veteran's benefits, eligible for enrollment in both the remedial reading-writing program and an orientation course (1 credit), were included in the population. The total N in this category was estimated to be 500-600.

The total population was subcategorized into two groups:

1. Control Group (C Group) - a randomly selected control group, N = 73.¹⁸

¹⁸The Control Group is smaller than originally anticipated because, of those initially identified, some did not enroll and some were missed in the advisement process. There should have been about 90 in the Control Group based on a selection of every sixth student.

2. Experimental Group (E Group) - the total population group of guided studies students less the Control Group, N = 461.

Thus, analysis of the results proceeded on the basis of a comparison between the Control Group with the overall group.

The procedure for developing the Control Group was as follows. After each testing session beginning in May, 1967, each student filled out a questionnaire which was essentially designed to aid the academic advisor in prescribing courses for students. This questionnaire contained data which permitted sorting students into full-time students and part-time students on the basis of their intention for enrollment in the Fall Term. It also sorted out those students who were transferring or returning to Miami-Dade Junior College. This allowed definition of full-time, first-time-in-college students for the Fall Term.

After this group of full-time, first-time-in-college students who scored below the twenty-first percentile on SCAT, Verbal, was defined, every sixth student from an alphabetical listing was designated as a member of the Control Group. This was accomplished by submitting to an academic advisor a list of names of those students designated as members of the Control Group. These students were not permitted to take the remedial reading-writing course for which their test scores made them eligible, but were placed in the regular college-level freshman English course.

It should be noted that the students had no option in this regard. Since students did not receive their test results until November and did not know the cut-off score even then, there was almost no chance that a student was aware that he was taking part in an experiment.

In the assignment of students to the Control Group, care was taken that neither the advisors nor the teachers in whose classes the students enrolled were aware of the experiment. This was achieved by not announcing that such a program existed and by having only one advisor responsible for the placement of all the Control Group. There was also a built-in safeguard in that faculty members did not have access to the placement test results for their students until after the semester had been completed.

All students whose attendance was supported by the Veteran's Administration were systematically excluded inasmuch as the federal government does not recognize remedial work for payment purposes.

Re-testing of both the Experimental and Control Groups was accomplished at the end of the Fall Term. Grade point average and persistence in college were computed for both the Fall and Winter Terms.

Analysis of the Data

In each instance where tests of statistical significance¹⁹ were determined, a probability equal to or less than .05 was used as the point beyond which the null hypothesis was rejected.

Hypothesis A: Grade Point Average

The mean grade point average was obtained for the Experimental and Control Groups and evaluated for statistical significance.

Hypothesis B: Re-Test on Reading Measure

Initial test score means for the Experimental and Control Groups were compared with means on re-test. Re-testing was with Form 1B of the Nelson-Denny Reading Test and the STEP (Sequential Tests of Educational Progress), Form A.

Hypothesis C: Grade Comparison

The proportion of students who earned a grade of "F" in English 101 was compared with the proportion of students in the Control Group (taking English 101 instead of remedial English) who received a grade of "F".

Hypothesis D: Continuation in College

This was a statistic summarizing the present difference in drop-out rate (complete withdrawal from college during each semester of the study) between the Experimental and Control Groups. A chi square analysis was made between the differences in drop-out rates.

¹⁹Guilford, J. P., Fundamental Statistics in Psychology and Education, (New York: McGraw-Hill Book Company, Inc., 1956), pp. 198-200.

IV. RESULTS

The data were collected and analyzed on students who enrolled in the Fall Term, 1967-68. Grade point average and attrition statistics were computed for the Fall Term and for the Winter Term of 1967-68. The final number of students in each group on the last day of registration was in the Experimental Group, 461, and in the Control Group, 73. In all cases, a test of statistical significance between the Experimental and Control Groups on initial test scores indicated that the groups did not differ originally on test score means, nor did the groups differ significantly from the college population with regard to sex, race, or age distribution.

Hypothesis A related to the question of differences between the Experimental and Control Groups relative to mean grade point average for the Fall Term and for the Winter Term. Table I summarizes the findings for the Fall Term and Table II for the Winter Term.

TABLE I - MEAN GRADE POINT AVERAGE FOR EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

	<u>N</u>	<u>Mean G.P.A.</u>	<u>Standard Deviation</u>	<u>Critical Ratio</u>
E	364	1.83	.64	3.27
C	61	1.47	.82	

TABLE II - MEAN GRADE POINT AVERAGE FOR EXPERIMENTAL AND CONTROL GROUPS, WINTER TERM, 1967-68

	<u>N</u>	<u>Mean G.P.A.</u>	<u>Standard Deviation</u>	<u>Critical Ratio</u>
E	288	1.29	.805	.85
C	53	1.18	.905	

Of the 461 students in the Experimental Group, 364 received grades at the end of the Fall Term. Of the original 73 in the Control Group, 61 received grades. The difference in mean grade point average between the two groups is highly significant, $p .001$, in favor of the Experimental Group. Table II demonstrates that there was no statistically significant difference between the two groups in terms of mean grade

point average for the Winter Term. The mean grade point average for each group was lower for the Winter Term than for the Fall Term.

Hypothesis B was designed to test the mean differences between the Experimental and Control Groups with regard to pre- and post-testing. The Nelson-Denny, Form A, was used as the pre-test, and the Nelson-Denny, Form B, and the Sequential Tests of Educational Progress were used as the post-tests.

On the Nelson-Denny, Form A, the groups showed no statistically significant difference initially. On the re-test, the groups performed quite differently as indicated in Table III.

TABLE III - EXPERIMENTAL AND CONTROL GROUPS
COMPARED ON BASIS OF POST-TEST RESULTS

	<u>E Group</u> <u>N = 364</u>	<u>C Group</u> <u>N = 61</u>	<u>Critical</u> <u>Ratio</u>
Nelson-Denny Vocabulary	$\bar{M} = 25.10$	$\bar{M} = 15.43$	5.50
Nelson-Denny Comprehension	$\bar{M} = 28.28$	$\bar{M} = 17.44$	5.58

The Sequential Tests of Educational Progress was also used as a post-test measure, although the groups were not pre-tested with this measure. The results are shown in Table IV.

TABLE IV - COMPARISON OF EXPERIMENTAL AND CONTROL
GROUPS ON THE STEP AT END OF FALL TERM, 1967-68

	<u>N</u>	<u>M</u>	<u>Standard Deviation</u>	<u>Critical Ratio</u>
E	364	23.90	5.45	1.61
C	61	20.93	14.23	

The results from Table IV indicate that there was not a statistically significant difference between the two groups on their performance on the Sequential Tests of Educational Progress.

Hypothesis C asked whether there were significant differences between the two groups relative to their attrition rates during the Fall and Winter Terms, 1967-68. Table V summarizes the results for the Fall Term and Table VI for the Winter Term.

TABLE V - COMPARISON OF RATE OF WITHDRAWAL FROM COLLEGE BETWEEN EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

	<u>Original Enrollment</u>	<u>Received Grades</u>	<u>x²</u>
E	461	398	.54*
C	73	61	

*not significant at .05 level

TABLE VI - COMPARISON OF RATE OF WITHDRAWAL FROM COLLEGE BETWEEN EXPERIMENTAL AND CONTROL GROUPS, WINTER TERM, 1967-68

	<u>Enrolled Winter</u>	<u>Received Grades</u>	<u>x²</u>
E	377	288	9.98*
C	56	53	

*significant at $< .05$

Although the attrition rates were quite similar for the two groups for the Fall Term, a considerably higher proportion of students in the Experimental Group withdrew from college during the Winter Term.

In addition to specifically testing the formal hypotheses, several questions were asked with regard to the performance of the groups in their academic work during the Winter Term. The groups were compared on the basis of their performance in Humanities, Social Science, and English during the Winter Term. Not all students from either group took identical courses, but sufficient numbers did take these core courses so that comparisons could be made.

More specifically, the question was asked: How do students who have not had the purported benefit of remedial work fare in Humanities,

Social Science, and English (second semester) when compared with those students who have had remedial work? Two approaches were used in answering this question. One approach was to simply record the grade distributions of the Experimental and Control Groups in each course. The other was to define a pass-fail criterion in two ways as follows: (1) pass = a grade of "C" and above, failure = a grade of "D" and below; (2) pass = a grade of "D" and above, failure = a grade of "F" or "W"*. The two groups were then compared along these variables.

Table VII records the grade distributions in English 101 for the Fall Term compared with distribution of grades earned in English 101 by the Control Group.

TABLE VII - GRADE DISTRIBUTIONS OF CONTROL GROUP
IN ENGLISH 101 AND DISTRIBUTION FOR TOTAL
ENROLLMENT IN ENGLISH 101, FALL TERM

Course Grade	Total Enrollment in English 101		C Group	
	N	%	N	%
A	N = 30	5%	N = 0	0%
B	N = 700	26%	N = 7	9%
C	N = 1177	44%	N = 27	38%
D	N = 299	11%	N = 17	23%
F	N = 257	10%	N = 9	12%
W	N = 106	4%	N = 13	18%
Total	N = 2669		Total N = 73	

χ^2 tests of significance between the per cent difference were obtained. (If the students were permitted, as with the Control Group, to take English 101 even though they scored in the bottom 21 per cent of the population, then a much higher per cent of "D's" and "F's" would be expected.) In the regular English course distribution, 75 per cent of the students earned a grade of "C" or better, whereas only 47 per cent of the Control Group earned a "C" or better. Nearly all of this difference occurs in the "A" and "B" grade distribution, with 31 per cent of the regular English 101 students earning an "A" or "B", but with only 9 per cent of the Control Group earning "B's" and no one

* "W" equals complete withdrawal from college

earning an "A". X^2 between the Control Group and total enrollment based on "A + B + C + D" grades versus "F + W" equals 17.096 and is significant at $<.001$. X^2 between "A + B + C" grades versus "D + F" equals 13.673 and is significant at $<.001$.

Students who were in the Experimental and Control Groups were compared with regard to their performance in Social Science and Humanities. Tables VIII, IX, X, and XI summarize these results.

TABLE VIII - COMPARISON OF GRADES EARNED IN SOCIAL SCIENCE BY EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

<u>Grade</u>	<u>E</u>	<u>C</u>	<u>X^2</u>
Pass (A + B + C + D)	185 68%	29 66%	0.12*
Fail (F + W)	86 32%	15 34%	

TABLE IX - COMPARISON OF GRADES EARNED IN SOCIAL SCIENCE BY EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

<u>Grade</u>	<u>E</u>	<u>C</u>	<u>X^2</u>
Pass (A + B + C)	102 42%	12 31%	1.97*
Fail (D + F)	143 58%	27 69%	

TABLE X - COMPARISON OF GRADES EARNED IN HUMANITIES BY EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

<u>Grade</u>	<u>E</u>	<u>C</u>	<u>X^2</u>
Pass (A + B + C + D)	102 55%	14 44%	1.32*
Fail (F + W)	83 45%	18 56%	

*not significant

TABLE XI - COMPARISON OF GRADES EARNED IN HUMANITIES BY
EXPERIMENTAL AND CONTROL GROUPS, FALL TERM, 1967-68

<u>Grade</u>	<u>E</u>	<u>C</u>	<u>x²</u>
Pass (A + B + C)	62 37%	10 40%	0.199*
Fail (D + F)	105 63%	15 60%	

*not significant

Tables VIII, IX, X, and XI indicate that the Experimental and Control Groups achieved at about equal levels in their Humanities and Social Science courses.

Table XII summarizes a comparison of grades earned by students in English 101 after one semester of remediation with grades earned by a comparable group without remediation.

TABLE XII - COMPARISON OF EXPERIMENTAL AND CONTROL GROUP
GRADE DISTRIBUTION IN ENGLISH 101

<u>Course Grade</u>	<u>E Group English 101 Winter</u>		<u>C Group English 101 Fall</u>		<u>x²</u>
A	N = 4	2%	N = 0		
B	N = 24	11%	N = 7	9%	7.87*
C	N = 92	41%	N = 27	38%	
D	N = 44	19%	N = 17	23%	2.45**
F	N = 25	11%	N = 9	12%	
W	N = 36	16%	N = 13	18%	
	<u>Total N = 225</u>	<u>100%</u>	<u>N = 73</u>	<u>100%</u>	

*significant at .01 level

**not significant

Table XII indicates that when pass is defined as earning a letter grade of "D" or better, the Experimental Group earned a statistically significant better grade distribution in their regular English course, taken in the Winter Term, than did the Control Group, who took English 101 without benefit of remediation. However, when pass is defined as an earned grade of "C" or better, there was no significant difference between the two groups.

V. DISCUSSION

The results of this study indicate that the remedial program at Miami-Dade Junior College, North Campus, is effective using some criterion measures, ineffective using others.

Measured by the Fall Term overall grade point average, the group receiving the remedial work performed significantly better than a Control Group not receiving such remedial work, although both groups earned less than a "C" average. It is also the case that during the Winter Term, the mean grade point average of both groups dropped significantly. In addition, there was no statistically significant difference between the two groups with regard to their overall grade point average for the second term.

With regard to re-test measures as an index of differential performance between the two groups, the Experimental Group demonstrated a clear superiority as measured by the Nelson-Denny Reading Test, but there was no difference between the two groups as measured by the Sequential Tests of Educational Progress. A likely interpretation of this apparent discrepancy is that the Experimental Group was known by the teachers to be in a remedial program and subject to re-testing with the Nelson-Denny at the end of the term. Many teachers have expressed the opinion that in such situations, there is a conscious effort to teach to the test. Because this phenomenon was anticipated, the design of this study included use of the Sequential Tests of Educational Progress as a post-test instrument. On this instrument, there was no difference between the two groups. It is probable that results on the Sequential Tests of Educational Progress present a more accurate picture than the results of the Nelson-Denny post-testing.

Withdrawal from college is a complex problem with many factors contributing to the phenomenon. This study made no attempt to analyze withdrawal as such, but rather used withdrawal from college as a dependent variable. During the Fall Term, there was no statistically significant difference between the withdrawal rates of the two groups. During the Winter Term, however, students in the Experimental Group withdrew at a much higher rate than did those students in the Control Group. It may be that as the students moved from the less demanding environment of the remedial program into regular college-level courses during the Winter Term, that they found these courses to be too demanding. On the other hand, the Control Group had no such remedial environment initially, and heavier attrition would be expected to take place during their first term. This explanation seems to account for the fact that the Control Group did show a higher attrition rate during the Fall Term than during the Winter Term.

The Control Group was placed in the regular college-level English course rather than a remedial English course for which they qualified. Their grades in this English course were generally poorer than those

earned by the overall group (cf., Table VII). It is particularly worth noting, however, that 70 per cent of the Control Group did earn a grade of "D" or better in the course. Stated in different terms, the present system for placing students in remedial English results in requiring large numbers of students to spend a term in remedial English when 70 per cent of them can pass the regular college-level English without the remedial course. True, there were no "A's" and very few "B's" in the Control Group, but it must be kept in mind that these students scored in the bottom one-fifth of the population on the SCAT Verbal and are competing with only the top 80 per cent. (The remainder of the bottom one-fifth were, of course, in the remedial course and constituted the Experimental Group.)

The Control Group did just as well as the Experimental Group in earning grades in both Social Science and Humanities. Moreover, when the Experimental Group took the regular college-level English course in the Winter Term following a semester of remedial preparation, their grade distribution was not significantly different from the Control Group grade distribution even though the Control Group took the course without remedial preparation.

VI. CONCLUSIONS

It would appear that the remedial program, as presently designed, was successful in producing a slightly higher overall first term grade point average for those students in the remedial program, but even the overall mean grade point average did not reach a grade level of "C". The program made no difference in student withdrawal from college, nor did the program produce a better overall score on a standardized test to which neither the students nor the teachers had been previously exposed.

The program can be said to be unsuccessful in facilitating success in typical academic courses and also unsuccessful in reducing withdrawal from college.

APPENDIX

OBJECTIVES FOR ENGLISH 090

General Objectives

The course should enable the student:

1. To gain greater self-confidence in reading and to derive more pleasure from it.
2. To make significant progress toward achieving an average college freshman level reading rate with average comprehension.
3. To improve his ability to listen and to follow directions as well as to upgrade his visualization skills.
4. To acquire an interest in new and unusual words.
5. To achieve flexibility in reading rates in order to adjust rate to reading purpose.

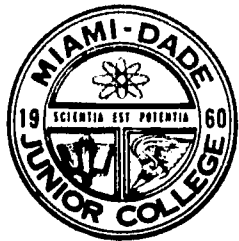
Specific Objectives

The course should enable the student:

1. To identify and correct reading faults that retard his progress (e.g., vocalization, lack of concentration, head movements, frequent regressions, etc.).
2. To attack new words through a variety of methods (e.g., context, phonemes, affixes, roots, dictionary, etc.).
3. To locate key words, topic sentences, and main ideas.
4. To make inferences.
5. To become experienced and skillful in taking a variety of timed tests.
6. To grow in ability to read tables, graphs, maps, and charts of different sorts.
7. To be aware of limiting words in sentence reading.
8. To distinguish between a sentence and a sentence fragment and to write simple sentences correctly.

Specific Objectives (continued)

9. To read a minimum of three books with interest and understanding and to report on them.
10. To complete required assignment sheet in Reading Laboratory.



APPENDIX

Miami-Dade Junior College

NORTH CAMPUS

ACADEMIC ADVISEMENT WORKSHEET

DATE _____

ORIGINAL WORKSHEET _____ OR A REVISED WORKSHEET _____

NAME _____
LAST FIRST MIDDLE

STUDENT NUMBER _____

PROGRAM TITLE _____

STUDENT'S AGE _____

AREA OF STUDY: ACADEMIC TVS UNDECLARED

STUDENT CLASSIFICATION: NEW RETURNING TRANSFER READMIT

STUDENT ENROLLMENT: FULL-TIME PART-TIME

ANTICIPATED EMPLOYMENT: _____ HOURS PER WEEK

VA BENEFITS: _____ YES OR NO

PROPOSED SENIOR INSTITUTION _____

COURSES SELECTED FOR TERM BEGINNING _____ 19 _____

PRIMARY COURSE SYMBOL	NUMBER	HOURS	ALTERNATE COURSE SYMBOL	NUMBER

TOTAL SEMESTER HOURS AUTHORIZED:

ACADEMIC ADVISOR _____

COMMENTS: _____