

DOCUMENT RESUME

ED 330 822

CE 057 501

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 TITLE Curriculum Development--Learning Center. Final Report.
 INSTITUTION Manor Junior Coll., Jenkintown, PA.
 SPONS AGENCY Pennsylvania State Dept. of Education, Harrisburg. Bureau of Vocational and Adult Education.
 PUB DATE 30 Sep 88
 CONTRACT 93-8008
 NOTE 50p.; Attachment 3, personal information on students and their scores, is not included.
 PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Academic Achievement; *Computer Oriented Programs; *Curriculum Development; Educational Research; *Learning Laboratories; Pretests Posttests; Remedial Instruction; Remedial Mathematics; *Remedial Programs; Remedial Reading; School Holding Power; Student Evaluation; *Tutorial Programs; Tutoring; Two Year Colleges; *Vocational Education; Writing Instruction
 IDENTIFIERS Manor Junior College PA

ABSTRACT

A project at Manor Junior College, Pennsylvania, developed further and implemented the tutoring programs in the Learning Center and integrated them with the Computer Tutorials Program. The objective was to increase retention and graduation rates and academic success of students enrolled in vocational programs. The reading, writing, and peer tutor programs were already well established; the mathematics and Probationary Assigned Supervised Study (PASS) programs were developed and implemented. The Learning Center Director tested all entering freshmen in reading, writing, and mathematics skills. Students scoring below a certain competency level were mandated to take remedial courses and attend the Learning Center for intensive tutoring. Vocational course instructors mandated other students to the Learning Center. Still others came voluntarily. All students were made aware of Center services during Freshman Orientation and through posters and other advertising. The director administered posttests and tracked students' course grades for each subject tutored. Posttest results revealed that over 50 percent of students raised scores in the tutored subject by at least 10 percentile points. Of students in the PASS program, 49 percent were able to remove their probationary status. (Appendixes include mean Scholastic Aptitude Test scores; placement test results; and comparisons of pre- and posttest results.) (YLB)

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FINAL REPORT

CURRICULUM DEVELOPMENT - LEARNING CENTER
93-8008

Dr. Madeline Seltzer

MANOR JUNIOR COLLEGE

JENKINTOWN, PENNSYLVANIA

September 30, 1988

PENNSYLVANIA DEPARTMENT OF EDUCATION
BUREAU OF VOCATIONAL AND ADULT EDUCATION
CURRICULUM AND PERSONNEL DEVELOPMENT SECTION

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II. Final Report Summary

A. Abstract

Agency Number: 4-23-46-555-6
Manor Junior College
Fox Chase Road and Forrest Avenue
Jenkintown, Pennsylvania 19046

Contract Number: 93-8008
Curriculum Development - Learning Center

Funding Period: July 1, 1987 - June 30, 1988
Approved Funds: \$39,960

The purpose of this project was to further develop and implement the tutoring programs in the Learning Center and to integrate them with the Computer Tutorials program.

Objectives Planned

Objective 1 - To raise the percentage of entering students who complete their occupational education programs at Manor from an average of 51% to a new high of 61%.

Objective 2 - To make sure that 100% of those students completing their occupational education programs are employable in the occupation for which they were trained.

Objective 3 - To raise the percentage of students who are employed in the occupation for which they were trained within 60 days of completion of their vocational programs from 85% to 95%.

Objective 4 - To raise the percentage of students who maintain a 2.0 or better grade point average from 75% to 85%.

Objective 5 - To raise the percentage of students by 10% who successfully get themselves off probation by raising their G.P.A. to at least 2.0.

Objective 6 - To raise the pre-test scores of students attending the Learning Center by 10 percentile points for math and reading and by 1 point for writing (on a 6 point scale on their end-of-year post-test scores).

Objectives Achieved

Objective 1

In May, 1988, 32% of the original 157 entrants in September, 1986, graduated. This apparent drop from the average 51% can be accounted for in the following ways:

a. The method of calculation has been changed. In the past, Manor has been calculating the percentage of students graduating by using the number of incoming freshmen during a particular year and the number of graduating sophomores two years later. The number of graduating sophomores included a number of students who, for various reasons, took more than two years to graduate. Thus, the final calculation was made up of the number of full-time freshmen who entered two years earlier and the number of part-time and full-time students who began Manor more than 2 years earlier. Thus, the graduation rate for freshmen who completed programs in 2 years was inflated. Beginning this year, we have changed our method of calculation to increase our accuracy. Each September, 1986, entering freshman was tracked to determine who graduated in

May, 1988, who withdrew, and who is still in school on a full or part-time basis. For many of our students now, two years is not a realistic time limit in which to complete their studies.

b. Because, over the last 8 years, Manor's entering freshmen have evidenced decreasing levels of basic skills (see Attachments 1 & 2), they need to take non-credit developmental courses and/or fewer courses each semester to succeed in their occupational programs. Therefore, it necessarily takes longer than two years for them to graduate.

c. Our Animal Science Technician program now requires 2 1/2 years to complete, while other programs are considering similar revisions.

Objective 2

Of the 73 students who completed their occupational education programs in May, 1988, 7 transferred to other institutions for such programs as occupational therapy, physical therapy, nursing, etc. The remaining 66 were evaluated by their occupational program directors and were considered to be employable in the occupations for which they were trained.

Objective 3

In August, 1988, the 73 students who graduated in June, 1988, will be sent questionnaires by their program directors to determine their employment status or student status at a transfer institution. Those students who do not respond to the

questionnaire will be contacted by telephone by their occupational program directors to determine status.

Objective 4

Of the fall, 1987, entering freshman class, 85.7% maintained a cumulative grade point average of 2.0 by the end of the spring, 1988, semester.

Objective 5

In spring, 1986, 36 students were put on probation; by May, 1986, only 3 (8%) had achieved a GPA of 2.0 or better. In an attempt to improve students' success rate, in spring, 1987, the Learning Center Director initiated a pilot PASS (Probationary Assigned Supervised Study) Program. Of the 26 students on academic probation, 19 participated in the project. Fourteen (14) of these students showed improvement. Ten (10) were removed from probation.

In fall, 1987, when PASS officially was initiated, of the 12 students placed on academic probation 5 (42%) achieved a 2.0 or better GPA. In spring, 1988, of the 25 students on probation, 13 (52%) achieved a 2.0 or better GPA.

Since the PASS program has been officially in effect, of the 37 students placed on academic probation, 18 (49%) were able to remove their probationary status. This indicates an improvement of 41% from 8% when the program was not operating.

Objective 6

The end-of-year post-test scores reveal that in: Reading, 36 of 50 students (72%) met the objective; Math, 14 of 24 students (58%) met the objective; Writing, 19 of 30 students (63%) met the objective.

B. Financial Summary

CURRICULUM DEVELOPMENT - LEARNING CENTER - BUDGET
September, 1988

	ACTUAL EXPENDITURES	APPROVED EXPENDITURES
INSTRUCTIONAL SALARIES/BENEFITS		
Professional Reading Tutor 15 hrs/wk x 30 wks = 450 hrs (@ \$11.11/hr)	4909.00	4909.00
***Benefits @ 10%	491.00	491.00
Professional Writing Tutor 13 hrs/wk x 28 wks = 364 hrs (@ \$11.11/hr)	4019.80	4019.80
Benefits @ 10%	402.00	402.00
Professional Math Tutor 18 hrs/wk x 28 wks = 504 (@ \$11.11/hr)	5715.80	5715.80
Benefits @ 10%	572.00	572.00
Peer Tutors 5 hrs/wk x 30 wks = 150 hrs (@ \$3.35/hr)	502.00	502.00
Benefits @ 10%	50.00	50.00
-----	-----	-----
Subtotal for Instructional Sal/Ben	16661.60	16661.60
NONINSTRUCTIONAL SALARIES/BENEFITS		
Learning Center Director 3/4 of total salary (12 month contract \$16000)	12000.00	12000.00
* Benefits @ 20%	2400.00	2400.00
Learning Center Coordinator 10 hrs/wk x 45 wks = 450 hrs (@ \$6.00/hr)	2700.00	2700.00
Benefits @ 10%	270.00	270.00
-----	-----	-----
Subtotal for Non-Instructional Sal/Ben	17370.00	17370.00

SUPPLIES

Software for Math Center	400.00	400.00
Workbooks for Math Center	200.00	200.00
Photocopying 8,000 sheets (12 months) @ .04	640.00	640.00
Miscellaneous Supplies (paper, pens, pencils, tape, etc)	400.00	400.00
Instructional Materials-Reading, Math, Writing	1100.00	1328.00
-----	-----	-----
Subtotal for Supplies	2740.00	2968.00
-----	-----	-----
Subtotal for Indirect Costs	36771.60	36999.60
-----	-----	-----
Restricted Indirect Costs 8% of applicable total		2959.97

		39959.57

III. Project Approach/Methodology

The scope of the project was to further develop and implement the tutoring programs in the Learning Center. At the beginning of the academic year, the professional reading and writing programs as well as the peer tutor program were already well-established, needing minor development and modification, whereas the math and PASS programs were just formally initiated, requiring major development and implementation.

The Learning Center Director, John Boyd, followed the Learning Center procedures that he successfully established the year before.

All entering freshmen were tested by the Learning Center Director in reading, writing, and math skills. Those students who scored below a certain competency level were mandated to take remedial writing, reading and/or math courses. These students were also mandated to attend the Learning Center for intensive tutoring for a

designated number of hours per week. At the end of the semester, these students were evaluated by the Learning Center Director through a post-test to determine the extent of their improvement. Other students were mandated to the Learning Center by their vocational course instructors. These instructors received feedback from the Learning Center Director on the progress of their students in the tutoring sessions. Still other students came to the Learning Center on a voluntary basis to improve their skills and course grades. Students who attended the Learning Center were carefully tracked (see Attachment 3) so that the effectiveness of the tutoring sessions could be determined. Thus, for each subject tutored, the final grade for the course was recorded. In this way, if a student were mandated to the Learning Center at mid-term with a failing mid-term grade, and were then regularly tutored in the subject, raising the grade to a C or B, we would be able to see the positive effect of the tutoring. In addition, we received positive unsolicited feedback from many of our vocational teachers, on the success of the efforts of the Learning Center in raising their students' competencies in their subjects.

All students in the college were made aware of the Learning Center services through an oral presentation and written material disseminated during Freshman Orientation. In addition, posters throughout the school and advertising through the Division of Student Services emphasized the benefits of Learning Center activities. Finally, all instructors were reminded through frequent memos and announcements to send their students to the Learning Center at the first sign of difficulty in their courses.

The math tutoring program and center were developed by the professional math tutor, Ira Riddle. Being the instructor of the remedial math course, MH080, enabled him to have the extra hours of contact with those students whose weak math skills were preventing them from being successful in their vocational programs. Based on their needs, he developed a tutoring program and purchased materials that would be most beneficial to this group.

Standardized pre-and post-testing was administered by the Learning Center Director so that he could evaluate the remedial courses, the tutoring program, the materials, and the professional tutor's degree of success with these students (see Attachment 4).

The PASS (Probationary Assigned Supervised Study) program was conceived, developed, and implemented by Learning Center Director John Boyd. Before fall, 1987, and spring, 1988, registration, all students who received a cumulative G.P.A. below 2.0 were mandated to participate in the PASS program. All students on probation received a letter from the Academic Dean informing them of their probationary status and mandatory attendance in the PASS program. During the first week of class, PASS students arranged to see the Learning Center Director for evaluation, for testing (Mr. Boyd used the Nelson-Denny Reading Test, Form E), and for a weekly tutoring schedule. Students also made appointments with the counselor, Marylou Delizia, for evaluation and discussion of probationary status. Students who needed further consultation with the counselor continued to see her throughout the semester.

During the second week, PASS students wrote short essays for John Boyd to evaluate and began their tutoring schedule. At the end of the semester, John Boyd readministered the reading test as a post-test and had students submit another writing sample to determine improvement. After grade point averages were calculated, the Academic Dean with input from Mr. Boyd decided which students could be removed from academic probation, which would be dismissed, or which would remain on probation for another semester.

Twice a month, informal meetings were held with John Boyd, Learning Center Director; Eileen Suffet, Assistant Academic Dean; Madeline Seltzer, Principal Grant Administrator; and Maylou Dellizia, Counselor. In these meetings the programs of the Learning Center were evaluated, new ideas were discussed, and problems were handled. These meetings were very productive and valuable.

IV. Project Summary

The project intent was to increase retention and graduation rates, as well as the academic success, of students enrolled in our vocational programs. Manor has been admitting increasingly large numbers of students who are weak in reading, writing, math, and study skills. In order to help these students successfully complete their vocational programs and begin their occupational careers as competent and skilled employees, Manor Junior College perceived the need to develop and implement an elaborate support system that would enable these students to develop the skills necessary to be successful students in their college courses, particularly in their vocational courses.

In the 1985-1986 school year, Manor implemented a program, partially funded by Carl Perkins Act, for its academically disadvantaged students. This program included the establishment of a Learning Center in which our academically disadvantaged students were tutored in reading, study skills, writing, mathematics and all the subject areas in their programs of study. In the 1986-1987 school year, again, with partial funding by the Carl Perkins Vocational Act, Manor expanded its Learning Center to include vocationally oriented computer tutorials to improve the occupational competency of its students in their future careers and in their vocational courses. This year, through this funded project and the Computer Tutorials funded project, we were able to develop the math and PASS programs as well as to expand and continue to implement the computer tutorials.

To evaluate the effectiveness of the tutoring in the Learning Center, the Learning Center Director administered pre-and post standardized tests in reading, writing, and math to all those students mandated to the PASS program or to any of the remedial reading, writing, and/or math courses. The end-of-year post-test scores reveal that in: Reading, 36 of 50 students (72%) raised their pre-test scores by at least 10 percentile points; Math, 14 of 24 students (58%) raised their pre-test scores by at least 10 percentile points; Writing, 19 of 30 (63%) raised their pre-test scores by 1 point on a 6 point scale. (See Attachment 4).

An additional tool to evaluate the effectiveness of tutoring in the Learning Center was the tracking of the final grades for a course.

In the fall semester, 97 students attended the Learning Center for tutoring. Of these students, 67 were tutored for 5 or more sessions in 84 courses. Of these students, 59 received a grade of P, C, or better in 84 of these courses, yielding a 70.2% success rate.

In the spring semester, 62 students attended the Learning Center for tutoring. Of these students, 37 were tutored for 5 or more sessions for 45 courses. Of these students, 30 received a grade of P, C or better in 45 of these courses, yielding a 66.7% success rate (See attachment 3).

In 1986, the rate of students on probation who could then achieve a G.P.A. of 2.0 or better and remove their probationary status was 8%. Concerned about the low rate of probationary student success, the Learning Center Director, John Boyd, initiated the PASS (Probationary Assigned Supervised Study) Project. The following are excerpts from his report, submitted June, 1988.

"Retention of students is a common concern of all institutions of higher education. Freshman seminars, learning centers, basic skills courses and/or other programs to help students be successful are found on almost every college campus in the country. Some of these are preventive measures while others are remedial in nature. The programs are of such recent development that there is little research evidence available as to their success (most reports on current programs are descriptive in nature).

An investigation of a number of current programs indicates that, other than having students take 'required' basic courses, most of the assistance that is offered relies on the initiative of the student. The help is available, but the student has the option to utilize or reject it. There are notable exceptions to this option. Athletes at many large universities (e.g. Penn State and Notre Dame - - both schools have a very high graduation rate of student-athletes) are required to attend supervised study halls, obtain tutors when necessary, and seek other assistance when needed. If the student-athlete becomes academically ineligible to participate in a sport, he also risks losing his scholarship and may have to leave school before he graduates.

There is no reason why the same concept cannot be applied to other 'at risk' students, especially those who are receiving some form of financial aid.

The Manor Junior College Catalog states:

"Any student who fails to maintain a 2.0 (C) average for a given semester incurs probationary status. A student with probationary status for two consecutive semesters and a cumulative average below 1.9 will incur academic dismissal."
(1986, p. 20).

A student who is on probation is 'at risk' and is in danger of leaving school without completing his education. Although some students are able to overcome their academic deficiencies through their own efforts, others need direct intervention. To provide

this support, the Probationary Assigned Supervised Study (PASS) project was initiated.

Pilot Project
(Spring, 1987)

The majority of students who received assistance in the Learning Center during the fall '87 semester improved their grades. However, concern was expressed for those who did not seek help and, as a result of poor academic performance, were placed on probationary status. It was felt that many of these students would probably be dismissed at the end of the spring semester if there were no intervention. The idea of a supervised study program was proposed and implemented.

The students on academic probation were identified and contacted by the Academic Dean. The concept of the PASS program was explained to them. Of the 26 students on academic probation, 19 participated in the project. Fourteen of these students showed improvement in their Grade Point Averages. Ten (10) were removed from probation.

The pilot was regarded as being successful and was continued for the 1987-1988 school year.

(FALL, 1987)

Twelve (12) full-time students were placed on academic probation. Each student received a letter from the Academic Dean explaining the probationary status and assignment to the PASS program. This

was followed by a personal contact or telephone call from the Director of the Learning Center. At this time, the conditions of probationary status were re-explained, and the academic support services available through the Learning Center were outlined. Students were encouraged to seek help in the Learning Center when it was needed. Contact was maintained during the semester informally by phone or in person. The size of the school made this relatively easy.

A number of problems impeded implementation of the PASS program:

1. The apparent lack of understanding of the seriousness of the problem on the part of the students involved.
2. Reluctance of students to take the initiative to seek help when it was needed.
3. The time needed to orient new Learning Center staff members.
4. The resignation of the writing tutor just prior to the beginning of the semester.
5. Tutorial time demands on the Learning Center staff made by other students.
6. Inability to find a person qualified to handle the program (The Director of the Learning Center assumed the responsibility).

The second formal contact with each student was made after mid-term grades were released. Each student's progress was discussed and

recommendations, where necessary, were made to further assist the student. The status of the students at mid-term was as follows:

3 had no below average grades

3 had one below average grade

2 had more than one below average grade

2 switched to part-time status

1 had left school

1 rejected any offer of help

Informal contact was maintained for the rest of the semester.

Final results were:

5 were removed from probationary status (42%)

2 left school before the end of the semester

2 changed to part-time status

2 continued to the next semester on probation

1 remained on probation (left school at end of semester)

(Spring, 1988)

During the fall semester, academic probation was discussed in the freshman seminar classes to make the students aware of the seriousness of probationary status. Also, prior to the beginning of the spring '88 semester, each full-time student whose G.P.A.

fell below 2.0 received a letter from the Academic Dean informing him of the probationary status. Participation in PASS became a condition of probation.

The students were informed that the dismissal provision of probationary status might be waived if they raised their semester G.P.A. but did not attain a 2.0 (the decision would be made by the Academic Dean after considering the recommendation of the Director of the Learning Center.)" It was understood that students who diligently participated in the PASS program would receive favorable recommendations from the Learning Center Director.

"During the first week of the spring '88 semester, all students on academic probation were personally contacted by the Learning Center Director and initial appointments were scheduled." In addition, the school Counselor, Marylou Delizia, interviewed all students on probation. Those who wished to see her again or to see her on a continuing basis, scheduled future appointments with her.

"Twenty-three (23) full-time and 2 part-time students were included in the program.

I. Attendance

10 - 14 sessions	13 students (+ 2 part-time)
8 - 9 sessions	3 students
4 - 7 sessions	3 (1 student left school)
Less than 4	4 students

II. End of Semester Results

A. Full-time students

1. 11 attained a G.P.A. of 2.0 or better
2. 5 showed improvement but did not attain a G.P.A. of 2.0
3. 6 showed a lower G.P.A. than in the fall '87 semester
4. 1 left school before the end of the semester

B. Part-time students

1. 2 were no longer on probation

III. Total Results

49% (18/37) of the students were removed from probationary status during the 87 - 88 school year."

In reviewing the above data, the Principal Grant Administrator, Madeline Seltzer, the Learning Center Director, John Boyd, and the rest of the Learning Center staff are encouraged by the success of many of the Learning Center projects. The dramatic increase by 41% of students who were able to get themselves off probation far exceeded our objective of 10%

In addition, the 70% of students who received grades of C or better in courses for which they were being tutored attests to the success of the peer and professional tutoring. The Learning Center staff feel a great sense of satisfaction in their contribution to student

success at Manor. Being able to participate in the growth process of students, who entered with weak academic skills but who are now completing their vocational programs and moving toward promising futures, constitutes the greatest reward for the Learning Center staff. With pride, they look forward to continuing the Learning Center programs and to developing new ones in the future.

MEAN SAT SCORES - QUINTILE RANKING FOR FULL-TIME STUDENTS - 1980-1986*

Based upon the statistics for placement scores in reading, writing and math, as well as SAT and quintile rank of entering freshmen, a more realistic objective of retention is to stabilize rather than raise the average retention rate of 65%. Similarly, a more realistic objective of graduation is to stabilize rather than raise the average graduation rate of 50%.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Verbal SAT	389	378	369	372	372	366	360
Math SAT	394	381	371	376	373	365	363
Total Mean SAT	783	759	740	748	745	731	723
Not available	10	17	27	37	30	44	25
1st Quintile	18%	13%	8%	15%	14%	18%	9%
2nd Quintile	31%	28%	30%	16%	19%	35%	23%
3rd Quintile	31%	24%	22%	25%	31%	14%	21%
4th Quintile	8%	16%	24%	20%	28%	22%	21%
5th Quintile	5%	10%	11%	14%	8%	11%	16%
Not Available	7%	9%	5%	10%			10%

Analysis

- (1) There has been a 50 point reduction in total mean SAT scores from 1980 to 1986.
- (2) Percentage of students ranked in the first quintile has dropped from 18% in 1980 to 9% in 1986; percentage of students ranked in the lowest (5th) quintile has increased from 5% in 1980 to 16% in 1986.

* Source: Middle States Accreditation Self-Study, 1987

PLACEMENT TEST RESULTS FOR FALL 1987 ENTERING FRESHMAN CANDIDATES
(Source: Learning Center Placement Division)

READING SKILLS

	#	%	cum. % [*]	N = 132
	---	---	---	
below 9th grade level	17	12.9	12.9	
9th grade level	15	11.4	24.2	
10th grade level	11	8.3	32.6	
11th grade level	9	6.8	39.4	
12th grade level	15	11.4	50.8	
post-high school level	65	49.2		
	-----	-----		
TOTALS	132	100.0		

WRITING SKILLS

	#	%	cum. %	N = 132
	---	---	---	
below 9th grade level	17	12.9	12.9	
9th grade level	9	6.8	19.7	
10th grade level	15	11.4	31.1	
11th grade level	13	9.8	40.9	
12th grade level	23	17.4	58.3	
post-high school level	55	41.7		
	-----	-----		
TOTALS	132	100.0		

MATH SKILLS

	#	%	cum. %	N = 135
	---	---	---	
below 9th grade level	47	34.8	34.8	
9th grade level	16	11.9	46.7	
10th grade level	18	13.3	60.0	
11th grade level	4	3.0	63.0	
12th grade level	8	5.9	68.9	
post-high school level	42	31.1		
	-----	-----		
TOTALS	135	100.0		

* percentage of total who are at or below indicated level

THE LEARNING CENTER
Manor Junior College
Jenkintown, PA

1/11/88

COMPARISON
OF
PRE/POSTTEST RESULTS

MATH 080

Fall, 1987

Prepared by:

John E. Boyd, Director
The Learning Center

THE LEARNING CENTER
Manor Junior College
Jenkintown, PA 19046

EVALUATION

INTRODUCTION: The purpose of Math 080 is to raise the level of math skills of students who score below an acceptable level in the Math subtest on the placement test (Test of Academic Skills, Level 2).

The established criteria for exempting MH 080 are-

Grade Equivalent	10.2
Percentile	50
Stanine	5

Rationale: A student entering the introductory college algebra course should be able to demonstrate adequate computational and problem solving skills. This would include some familiarity of algebraic equations. Since Algebra I is usually taught in ninth grade (9.0) in most school districts and is measured on the General Education Development test (GED), one level above (10.0) was established as the criteria for placement in the college Algebra I course.

A standardized instrument, such as the Test of Academic Skills, can be used to:

1. Measure the effectiveness of a particular program.
2. Compare a specified group of students to a norm
3. Make other comparison (not done in this study)
4. Provide empirical data for reports, grants, etc.

CAVEAT: The purpose of this study is to provide information and direction. There are a number of weaknesses inherent in this presentation:

1. The population is very small. (N = 18)
2. Only one variable is being examined (difference in pre/post tests)
3. The normative data is for entering junior college students. These norms would be different if the students were compared to students in a four year college.

PURPOSE: To compare the pre- and posttest Task 2 math subtest results of students who have completed MH 080 during the fall, 1987 semester.

POPULATION: Test results of 18 students who completed MH 080 during the fall semester of 1987.

INSTRUMENT: Test of Academic Skills, Level 2, Form E
(Math subtest)

PROCEDURE: The median score was calculated for the grade equivalent (G.E.), percentile (%-ile), and stanine (S) for the math subtest on the pre- and posttest.

RESULTS: The median gain is described below:

Subtest	PRE			POST		
	G.E.	%-ile	S	G.E.	%-ile	S
Math	8.7	35	4	9.7	45	5

Gains:

- +1.0 year gain in Grade Equivalent (G.E.)
- +12 gain in percentile points (%-ile)
- +1 gain in Stanine (S)

Distribution: Percentage of Students at each Grade Level on the Pre- and Posttest:

Grade Level	Pre		Post	
	No.	%	No.	%
5	2	11	0	0
6	0	0	0	0
7	2	11	2	11
8	5	28	6	33
9	9	50	3	17

***** Placement Test Cut-Off *****

10	0	0	3	17
11	0	0	4	22

Discussion of Results: 39% of the students raised their scores to, or above, the level expected on the original Placement Test. No students scored at the elementary school level on the posttest. 61% scored in the junior high school range.

Percentile Changes (No. of Students)

Band	PRE	POST
0 - 10	2	0
11 - 20	2	0
21 - 30	2	3
31 - 40	7	5
41 - 50	5	4
51 - 60	0	5
61 - 70	0	1

Discussion of Results: The group appears to move upward towards the 'average range' of junior college students. On the posttest there are no students below the 20th-%ile.

Stanine Changes (No. of Students)

Stanine	PRE	POST
1	0	0
2	2	0
3	2	2
4	9	6
5	5	9
6	0	1

Discussion of Results: Only two students remain in the below average range. However, 33% fall into the 'low average range' range for junior college students.

Comparison of Pretest Scores with Meeting the Placement Criteria at the End of the Semester:

Pre G.E.	Met Criteria
9.9	Yes (11.2)
9.9	Yes (10.9)
9.7	Yes (11.2)
9.7	Yes (11.2)
9.4	Yes (10.9)
9.1	Yes (10.2)
9.1	No (8.9)
9.1	No (9.7)
9.1	No (8.9)
8.4	No (8.9)
8.4	No (8.9)
8.4	No (8.4)
8.0	Yes (11.7)
8.0	No (9.7)
7.3	No (9.7)
7.3	No (7.5)
5.8	No (7.5)
5.2	No (8.4)

On the basis of the initial data, it might appear that a G.E. of 9.1 - 9.4 might be an indicator of future success in MH 080. It must be remembered that this is a very limited sample. A larger population is needed to verify this hypothesis.

DISCUSSION

These results should be regarded as 'base data'. Two factors hamper the study:

1. Small population (N = 18)
2. No specific program of studies (detailed curriculum)

Results suggest that the program has raised the math computational proficiency of the group of students. However, 61% of the students did not meet the original Placement Test criteria.

Currently, a written curriculum is being developed. Once it is field tested, it can be revised to meet the needs of the students.

Finally, some consideration must be given to establishing a minimum entry for students and what is to be done with students who do not meet the Placement Test criteria after taking MH 080.

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THE LEARNING CENTER
Manor Junior College
Jenkintown, PA

2/6/88

COMPARISON
OF
PRE/POSTTEST RESULTS

ENGLISH 080

Fall, 1987

Prepared by:

John E. Boyd, Director
The Learning Center

1. THE LEARNING CENTER

Manor Junior College
Jenkintown, PA 19046

EVALUATION

INTRODUCTION: The purpose of English 080 is to raise the level of writing skills of students who score below an acceptable level in the English-related subtests on the placement test (Test of Academic Skills, Level 2).

The established criteria for exempting EN 080 are -

Total English

Grade Equivalent	10.2
Percentile	40
Stanine	5

Rationale: If a student is to be successful in the introductory composition course at the college level, he must possess some basic writing skills. During the late 1970's, a nation-wide movement was started to improve the writing ability of students at all levels of education. Various writing projects were started in various parts of the United States (e.g. the Bay Area Writing Project, the Pennsylvania Writing Project). Terms like "the writing process" and "formula essay" became part of the pedagogical vocabulary. Beginning in 1988, the General Education Development (GED) examination will contain a writing sample. By the time a student reaches tenth grade he should be familiar with the basic writing process and adequate mechanics to write an acceptable essay.

A standardized instrument, such as the Test of Academic Skills, can be used to:

1. Measure the effectiveness of a particular program.
2. Compare a specified group of students to a norm
3. Make other comparison (not done in this study)
4. Provide empirical data for reports, grants, etc.

CAVEAT: The purpose of this study is to provide information and direction. There are a number of weaknesses inherent in this presentation:

1. The population is very small (N = 27)
2. Students from two types of sessions (summer and fall) of two different lengths are being treated as one population.

3. Only one variable is being examined
(difference in pre/post tests)

PURPOSE: To compare the pre- and post Task 2 results in English-related subtests results of students who completed EN 080 during the summer or fall, 1987 semester.

POPULATION: ²⁷ freshman students who completed En 080 during the summer or fall semester of 1987.

INSTRUMENT: Test of Academic Skills, Level 2, Form E
(spelling, English subtests and Total English score)

PROCEDURE: The median score was calculated for the grade equivalent (G.E.), percentile (%-ile), and stanine (S) for the each subtest on the pre- and posttest.

RESULTS: The median gain is described below:

Subtest	PRE			POST		
	G.E.	%-ile	S	G.E.	%-ile	S
Spelling	8.5	21	3	9.3	28	4
English	9.4	38	4	11.0,	47	5
Total English	9.5	34	4	10.5	43	5

Discussion of Results: It would appear that the median gain of the group is approximately one year in one semester.

Gains:

Spelling	+0.8 year gain in Grade Equivalent (G.E.) + 7 gain in percentile points (%-ile) + 1 gain in Stanine (S)
English	+1.6 year gain in Grade Equivalent (G.E.) + 9 gain in percentile points + 1 gain in Stanine
Total Eng.	+1.0 year gain in Grade Equivalent (G.E.) + 9 gain in percentile points + 1 gain in Stanine

Discussion of Results: The largest gain is on the English subtest (editing skills). This probably reflects the work done in writing papers.

GAINS IN INDIVIDUAL SUBTESTS

Spelling

Distribution: Percentage of Students at each Grade Level on the Pre- and Posttest:

Grade Level	Pre		Post	
	No.	%	No.	%
4	1	4	0	0
5	0	0	0	0
6	5	19	2	7

7	5	19	2	7
8	5	19	7	26
9	3	11	5	19

10	6	22	3	11
11	2	7	3	11
12	0	0	0	0

PHS	0	0	5	19

Discussion of Results: There appears to be a gradual rise in the level of spelling ability. However, 40% still scored below a ninth grade level. Some of these students may have learning/spelling disabilities. There appears to be need to teach these students how to compensate for their spelling deficiencies. This does not ^{mean} ~~mean~~ learning words in isolated lists.

Percentile Changes (No. of Students)

Band	Pre	Post
0 - 10	6	2
11 - 20	6	4
21 - 30	6	9
31 - 40	7	4
41 - 50	2	3
51 - 60	0	3
61 - 70	0	2

Discussion of Results: 19 of the students still fall below the 40%-ile on the posttest.



Stanine Changes (No. of Students)

Stanine	Pre	Post
***** Below Average *****		
1	0	0
2	6	2
3	8	7
***** Average *****		
4	11	10
5	2	6
6	0	2

Discussion of Results: 9 students still fall into the Below Average range on the posttest.

Distribution: English

Percentage of students at each grade level on the Pre- and Posttest.

Grade Level	Pre		Post	
	No.	%	No.	%
6	2	7	2	7

7	5	19	2	7
8	2	7	2	7
9	7	26	4	15

10	5	19	5	19
11	3	11	2	7
12	2	7	0	0

PHS	1	4	10	37

Discussion of Results: On the pretest, about 50% of the students functioned at the junior high school level. On the posttest, this had dropped to 29%.

Percentile Changes (No. of Students)

Band	Pre	Post
11 - 20	2	2
21 - 30	6	3
31 - 40	8	5
41 - 50	5	5
51 - 60	5	2
61 - 70	1	3
71 - 80	0	4
81 - 90	0	3

Discussion of Results: There is a general, gradual upward movement. However, there are still a number of students at the lower end of the percentile band.

Stanine Changes (No. of Students)

Stanine	PRE	POST
*****Below Average*****		
1	0	0
2	0	0
3	5	3
*****AVERAGE*****		
4	11	7
5	8	7
6	3	3
*****Above Average*****		
7	0	7

Discussion of Results: On the pretest, 5 students were in the below average range and 0 students were in the above average range. On the posttest, 3 students were in the below average range while 7 were in the above average range.

Distribution: Total English (score)

Percentage of students at each grade level on the Pre-and Posttest.

Grade Level	Pre		Post	
	No	%	No	%
6	1	4	0	0

7	6	22	3	11
8	5	19	6	22
9	8	30	3	11

10	7	26	3	11
11	0	0	6	22
12	0	0	2	7

PHS	0	0	4	15

Discussion of Results: On the pretest, 74% of the students scored at or below a junior high school level. On the posttest, 55% scored at least at a tenth grade level. This clearly shows an upward trend.

Percentile Change: Number of Students

Band	Pre	Post
0 - 10	1	0
11 - 20	6	3
21 - 30	5	7
31 - 40	15	2
41 - 50	0	5
51 - 60	0	5
61 - 70	0	4
71 - 80	0	1

Discussion of Results: There is a general upward trend. Only 12 students are in the below average range on the posttest.

Stanine Changes: Number of Students

Stanine	Pre	Post
*****Below Average*****		
1	0	0
2	1	0
3	6	3
*****Average*****		
4	18	9
5	2	10
6	0	5

Discussion of Results: On the posttest, only 3 students remain in the below average range. However, none of the students fell in the above average range.

DISCUSSION

Standardized test results (empirical data) strongly suggests that EN 080 provides a valuable service to 'marginal' students. This report is a measure of the collective instructors' skill than an evaluation of the program. There is no formal program that can be evaluated.

Gains in English reflect an improvement in the editing skills of most of the students. However, the median level is still 1.5 years below the entering college level. Some students are still functioning at an elementary school or low junior high school level in this area. It would appear that the needs of these students are greater than can be met in one semester. It may not be possible to ever meet their needs in a college setting.

The area in which the least gains were observed is Spelling. Obviously, some students have serious spelling deficits. Spelling is learned, rote skill that correlates more with visual memory than with anyother skill or ability. It is important

to recognize that some students have spelling deficiencies but teaching them to compensate for the problem is far more valuable than attempting to teach them to spell isolated words. Typical methods of instruction do not often work with atypical students. Without a formal program, spelling is dealt with at the discretion of the instructor.

The Total English gain places the majority of students in the average range for junior college students. It must be remembered that these students are in the 'highest' risk' category. It is highly unlikely that many would have survived in a regular college freshman English course. Forty-four percent still remain below a tenth grade level. Whether these students will show appreciable gains after a second semester (e.g. EN 090) will require further study.

To this point, no writing sample is included in the post-testing. The instructor evaluates the written work of the students and makes the final judgment as to whether the student should go on to EN 090 or EN 101.

RECOMMENDATIONS

1. There should be a standard written curriculum for EN 080. The scope, sequence, methods of evaluation, and time frame should be defined. This provides a definite framework and allows for evaluation and modification.
2. Unless there are very extenuating circumstances, no student should be permitted to take EN 101 until the original placement criteria are met.
3. The curriculum should be written, taught, and then continually modified and revised to meet the needs of in-coming freshmen.
4. Although a summer session might improve the skills of some students who have deficiencies, those with the **greatest needs** should have the benefit of a full 15 week program.

It may never be possible to remediate every entering freshman but it is important to continue to work to find the most appropriate program to meet the needs of as many of the students as possible.

THE LEARNING CENTER
Manor Junior College
Jenkintown, PA

1/11/88

COMPARISON
OF
PRE/POSTTEST RESULTS

ENGLISH 070

Fall, 1987

Prepared by:

John E. Boyd, Director
The Learning Center

THE LEARNING CENTER
Manor Junior College
Jenkintown, PA 19046

EVALUATION

INTRODUCTION: The purpose of the English 070 is to raise the level of reading skills of students who score below an acceptable level in Total-Reading on the placement test (Test of Academic Skills, Level 2).

The established criteria for exempting EN 070 are-

Grade Equivalent	11.2
Percentile	54
Stanine	5

Rationale: One accepted definition of a remedial reader is that he is reading at least 2 years below grade level. A person entering college should be at the 13.0 level.

A standardized instrument, such as the Test of Academic Skills, can be used to:

1. Measure the effectiveness of a particular program.
2. Compare a specified group of students to a norm
3. Make other comparison (not done in this study)
4. Provide empirical data for reports, grants, etc.

CAVEAT: The purpose of this study is to provide information and direction. There are a number of weaknesses inherent in this presentation:

1. The population is very small.
2. Students from two types of sessions (summer and fall) of different length are being treated in the same population.
3. Only one variable is being examined (difference in pre/post tests)

PURPOSE: To compare the pre/post TASK 2 results of students who have completed EN 070.

POPULATION: Test results of 36 students who completed EN 070 between 7/87 and 12/87

[INSTRUMENT: Test of Academic Skills, Level 2, Form E
(Vocabulary, Reading Comprehension, and Total Reading scores)

PROCEDURE: The median score was calculated for the grade equivalent (G.E.), percentile (%-ile), and stanine (S) for each of the three areas on the pre- and posttest.

RESULTS: The median gain in each area is described below:

Subtest	<u>PRE</u>			<u>POST</u>		
	G.E.	%-ile	S	G.E.	%-ile	S
Vocabulary	9.6	40	5	10.5	47	5
Read. Comp.	8.9	37	4	11.9	58	6
Total Reading	9.2	38	4	11.0	54	5

Gains:

Vocabulary	+1.9 year gain in Grade Equivalent (G.E.) +7 gain in percentile points (%-ile) No gain in Stanine (S)
Read. Comp.	+3.0 years gain in Grade Equivalent (G.E.) +21 gain in percentile points (%-ile) +2 gain in stanine (S)
Total Read.	+1.8 years gain in Grade Equivalent (G.E.) +16 gain in percentile points (%-ile) +1 gain in Stanine (S)

Distribution Vocabulary

Percentage of Students at each Grade Level on the Pre- and Posttest:

Grade Level	Pre		Post	
	No.	%	No.	%
5	0	0	2	6
6	4	11	2	6
7	5	14	2	6
8	4	11	2	6
9	9	25	3	8
10	8	22	10	28
11	3	8	6	14
12	2	6	2	6
PHS	1	3	7	19

Percentile Changes (No. of Students)

Band	PRE	POST
0 - 10	0	0
11 - 20	3	4
21 - 30	9	9
31 - 40	10	4
41 - 50	8	10
51 - 60	5	8
61 - 70	1	3
71 - 80	0	4

Stanine Changes (No. of Students)

Stanine	PRE	POST
1	0	0
2	0	0
3	4	4
4	12	5
5	19	20
6	1	5
7	0	2

Discussion of Results (Vocabulary): There is a general increase in the development of 'general' vocabulary. However, for these students, it is still below the college level. Attention should be paid to vocabulary development in EN 070 but through the use of wide reading experiences, instruction in the use of context clues, class discussion, and dictionary/thesaurus usage NOT through the use of isolated vocabulary drills. General vocabulary development will probably continue to be a problem in future years.

Distribution: Reading Comprehension

Percentage of Students at each Grade Level on the Pre- and Posttest.

Grade Level	Pre		Post	
	No.	%	No.	%
5	2	6	0	0
6	2	6	2	6
7	5	14	2	6
8	9	25	3	8
9	10	28	8	22
10	3	8	1	3
11	4	11	2	6
12	0	0	5	14
PHS	1	3	13	36

Percentile Changes (No. of Students)

Band	PRE	POST
0 - 10	1	0
11 - 20	3	2
21 - 30	6	2
31 - 40	11	5
41 - 50	10	7
51 - 60	4	5
61 - 70	1	9
71 - 80	0	2
81 - 90	0	1
91 - 99	0	2

Stanine Changes (No. of Students)

Stanine	PRE	POST
1	0	0
2	1	0
3	5	3
4	15	7
5	14	9
6	1	15
7	0	1
8	0	2

Discussion of Results (Reading Comprehension): There is a marked improvement in the area of reading comprehension as measured by this instrument. 56% of these marginal students scored at at least an 11.0 level. Comprehension is the main focus of EN 070 and is attaining its objective. It would be unrealistic to expect students with scores at an elementary or low junior high school level to raise their scores to a more acceptable level in one semester.

Distribution: Total Reading

The Total Reading Score is arrived at by adding the Vocabulary subtest raw score and the Reading Comprehension subtest raw score.

Grade Level	Pre		Post	
	No.	%	No.	%
5	2	6	0	0
6	0	0	2	6
7	8	22	1	3
8	5	14	3	8
9	11	31	8	22
10	9	25	3	11
11	1	3	5	14
12	0	0	8	22
PHS	0	0	6	17

Percentile Changes (No. of Students)

Band	PRE	POST
0 - 10	0	0
10 - 20	2	2
21 - 30	11	3
31 - 40	6	6
41 - 50	13	5
51 - 60	4	6
61 - 70	0	9
71 - 80	0	2
81 - 90	0	3

Stanine Changes (No. of Students)

Stanine	PRE	POST
1	0	0
2	0	0
3	3	2
4	16	9
5	17	11
6	0	10
7	0	4

Discussion of Results: 52% of the students attained the Placement Test criteria. 17% attained the Post High School Level but 6% still appear to function at an elementary school level. It would be unrealistic to expect that students who are reading at an elementary school or low junior high school level to be able to read at an acceptable college level after only one semester's work.

DISCUSSION

Available empirical data strongly suggests that EN 070 provides a valuable service to 'marginal' students. Those students who score at the elementary or low junior high school level on the Placement Test cannot realistically be expected to raise their reading scores to an acceptable level in one semester.

Students who show no appreciable gain in scores between the pre- and posttest may have reached their capacity level. The acceptance of students with elementary level reading skills is questionable. Further study is necessary to determine what might be the base level in reading skills for acceptance. Current results suggest 9.0. On the other hand, a few students may have not utilized their reading skills (e.g. in high school) and, under present conditions, have been able to make some dramatic gains. This is the exception rather than the rule.

Since retention is a major concern, it is now possible to evaluate the entry level basic skills of the 1987 - 88 freshman

class to help to determine whether basic academic weaknesses or other factors are the reason for withdrawal.

RECOMMENDATIONS

1. There should be a standard written curriculum for EN 070. At the present time, an evaluation of EN 070 is essentially an evaluation of the instructors. Without a planned, organized program, it is not possible to evaluate its effectiveness.
2. Faculty and administration should be made aware of the available empirical information (e.g. reading levels of students) and its value in the instructional program. It is unrealistic to expect a student reading at a junior high school level to independently utilize a text written at a much higher readability level.
3. Minimal reading levels should be established for admittance into the college. It has been recommended to the Admissions Committee that any students with a verbal Scholastic Aptitude Test score below 300 be given the Placement Test prior to acceptance.
4. The current level for exemption from EN 070 should be validated as to whether it is acceptable.
5. This data should be used for further, more sophisticated research.

THE LEARNING CENTER

Evaluation of Basic Skills Courses

Spring, 1988

Report submitted by:

John E. Boyd, Director
The Learning Center

I. Language Development (EN 090) - The purpose of this course is to provide further support to students who have completed EN 070 (Reading) and/or EN 080 (Writing) but need further help in developing their basic skills. Also, new spring semester students who fall below the placement test criteria in reading and/or writing are scheduled into this course

A. Students are scheduled into EN 090 for individual tutoring sessions (in each area of weakness) three times per week during the semester.

B. At the end of the semester, each student is given Test of Academic Skills, Level 2, Form E and the results of each student are compared with the original placement test results.

C. Population Breakdown

1. 7 students had reading alone
2. 4 students had reading and writing
3. 1 student had writing alone

D. Results - Since the number for each area is so small, the individual progress of each student is listed in percentile gains:

READING

(V. = Vocabulary; C. = Reading Comprehension; T.R. = Total Reading)

Student	Pre %-ile			Post %-ile			Gain		
	V.	C.	T.R.	V.	C.	T.R.	V.	C.	T.R.
* Baldo, D.	76	19	24	47	55	54	-22	+36	+30
Clark, D.	47	32	39	63	60	65	+16	+28	+26
Clemens, C.	51	38	45	59	60	63	+ 8	+22	+18
Grant, T.	24	21	22	30	72	54	+ 6	+51	+34
* Mirabelli, E.	36	65	54	68	52	80	+32	-13	+26
Morris, J.	30	20	6	43	52	49	+13	+32	+43
Possinger, J.	27	41	33	33	82	59	+ 6	+41	+26
Staten, C.	40	55	49	59	77	72	+19	+22	+23
Strauch, L.	34	38	30	30	60	45	- 4	+22	+15
Thomas, V.	16	11	11	14	20	15	- 2	+ 9	+ 4
Tippett, D.	36	26	30	43	55	49	+ 7	+29	+29
Wells, C.	24	35	29	33	55	43	+ 9	+20	+14

* new student, Spring '88

MEDIAN GAINS IN PERCENTILE

Subtest	Pre %-ile	Post %-ile	Gains
Vocabulary	33	45	+22
Reading Comprehension	34	58	+24
Total Reading	30	54	+24

E. Conclusions

1. 11 of the 12 students showed substantial gains, particularly in the area of reading comprehension.
2. Some students need more than one semester of basic skill work before they can raise their level of achievement to an acceptable level
3. Many students still fall below the 50th-%ile in vocabulary.

F. Implications

1. Although eleven students have demonstrated that they can perform at (at least) an eleventh grade level, there is no assurance that they can read/comprehend their texts. No studies have been done on the readability of the textbooks.
2. Unless efforts are made to match materials to the students' reading levels, the students may still fail

WRITING

(S. = Spelling; E. = English; T.E. = Total English)

Student	Pre %-ile			Post %-ile			Gains		
	S.	E.	T.E.	S.	E.	T.E.	S.	E.	T.E.
* Baldo, D.	46	32	31	61	72	71	+15	+40	+40
* Mirabelli, E.	26	26	34	83	68	77	+37	+42	+43
* Perpetua, S.	26	32	29	73	83	82	+47	+51	+53
Possinger, J.	6	19	10	11	42	24	+ 5	+23	+14
Thomas, V.	4	22	16	21	14	16	+17	- 8	0
* new student									

Number is too small for median scores to have any significance.

A. The number is too small to draw any conclusions

B. Implications - Although the number is small, the growth sustained by 4 of the 5 students is a positive sign.

II. Basic Math (MH 080) - The purpose of MH 080 is to help students improve basic math skills and prepare them for college algebra.

A. MH 080 operates in a large group instructional setting in the class room and (at least) one hour of individual work per week in the Learning Center.

B. At the end of the semester, each student is given the Test of Academic Skills, Level 2, Form E and the results are compared with the pretest results.

MATH SUBTEST

Student	Pre %-ile	Post %-ile	Gains
Assatourian, A.	37	42	+5
Bender, J.	29	50	+21
Mirabelli, E.	44	42	-2
Pinkerton, M.	41	24	-17
Strauch, L.	42	63	+21

C. The number is too small to draw any conclusions

D. Although the results are somewhat disappointing, the use of the model will be continued with a larger population.

OBSERVATIONS

The Stanford Test of Academic Skills, Level 2 provides empirical data that can be used to evaluate the effectiveness of the basic skills programs, diagnose specific and general areas of weakness, and assist in further refining the program.

The information can have longer, far-reaching effects in the educational program if the faculty is made aware of the data.

RECOMMENDATIONS

I would time at the faculty meeting before the fall semester to explain the Placement Testing program and how to interpret standardized test information.

Mady S.

THE LEARNING CENTER
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Informal Research

PURPOSE OF THE STUDY: To examine the relationship between the number of sessions spent in individual, guided practice in the Learning Center and reading achievement as measured by a standardized instrument.

RATIONALE: There is large body of research that suggests that many students learn the fundamentals of reading in the early grades but do little to refine them while in high school. This is reflected in the fact that 85% of the colleges and universities in the United States have some form of academic support center (e.g. tutoring center, learning center). Because the advent of extensive academic support services is a relatively new phenomenon at the college level, it is important to apply the known research-based knowledge to the program to bring about the best chance for success. This knowledge includes the following:

1. A person improves his reading skills through organized, consistent, guided and independent practice. One gets better in reading by reading.
2. Students who begin at a level at which success is likely to occur will show sustained progress.
3. Immediate feedback and directed self-correction will help the student to improve his reading skills.
4. A variety of materials better meets student's needs.
5. A positive, non-threatening climate is conducive to better performance.

LIMITATIONS: The purpose of this study is to investigate the relationship between the amount of time spent in the Learning Center and increased reading comprehension achievement. A number of factors were not considered, including:

1. The effect of other reading done by the students (e.g. textbooks, recreational reading).
2. The student's level of ability.
3. Self-motivation on the pre and post test.

4. The lack of a control group.

5. Only reading comprehension was assessed because comprehension development was the focus of the program.

POPULATION: 30 entering freshmen who scored below the 50th-percentile on the comprehension subtest of the Task 2, Form E (Psychological Corp.) instrument.

MATERIALS:

Pre/Post Test: Task 2 Form E

Comprehension subtest

Instructional Materials:

Be A Better Reader (Prentice Hall, various editions)
College Reading Program (Science Research Associates, 1968)

Macmillan Reading Series (Macmillan, 1987)

Materials from Jamestown Press

Stories of Youth and Action (Allyn & Bacon, 1977)

Stories to Enjoy (Macmillan, 1974)

Vocabulary Building Zaner Bloser, 1988)

RESULTS:

The results are reported in terms of percentile (%-ile) gains.

<u>No. of Sessions</u>	<u>No. of Students</u>	<u>Average %-ile Gains</u>
14 - 16	8	17.3
12 - 13	8	13.1
10 - 11	9	18.5
0 - 9	5	8.2

Other information:

Mean +15 percentile points
Median +15 percentile points
Greatest Gain +74 percentile points
Least Gain -20 percentile points

CONCLUSIONS:

Within the limitations of this study, it would appear that there is a direct, positive relationship between the number of sessions and comprehension gains. Ten sessions appears to be the minimum number needed to make a significant gain. There is a definite, sharp decline after that point.

OBSERVATIONS:

1. 83.3% of the students attended at least 10 sessions. Attendance was not a major problem. This suggests a great deal of self-motivation on the part of the students.
2. Further study would be needed to determine why the students who attended 10 - 11 sessions showed greater gains than those who attended 12 or more.
3. Further study would be needed to determine why 17% of the students attended 9 sessions or less (e.g. lack of motivation, lack of ability, other factors).
4. If the students who attended less than 10 sessions could be regarded as a 'control group', it might be added credence to the effectiveness of the individual, guided reading practice.

SUGGESTIONS FOR FURTHER STUDY

1. A more sophisticated, empirical study could be used to verify the effectiveness of individual guided practice
2. Other questions could be investigated.

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