

AN EXAMINATION OF THE ACADEMIC PERFORMANCE OF STUDENTS IN THE SECONDARY
EDUCATIONAL PROGRAM AT LARNED STATE HOSPITAL, LARNED, KANSAS:
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by

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Major Professor

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John L. Schmidt

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PART 1: PURPOSE

Students Enrolled in the Secondary Education Program--Larned State Hospital. Students in the secondary educational program at Larned State Hospital, Larned, Kansas, come from three separate living units on the hospital campus. Two of the living units are specifically organized to serve the needs of emotionally disturbed adolescents. Dix Ward serves as the home for approximately thirty-five adolescent girls. Capper Ward contains, at full capacity, forty-five boys ages thirteen to eighteen. In addition to these two wards, there is a unit designated by the State Legislature as a facility for boys, ages sixteen to eighteen, who are Juvenile first offenders declared by the courts to be in need of institutional care. This unit is called Larned's Youth Rehabilitation Center, hereafter referred to as the LYRC Unit. All students attend school classes in the basement of a building referred to as Beers Ward. Therefore, the secondary school population consists of seventy to eighty adolescent boys and girls who have been defined as emotionally disturbed and/or Juvenile Delinquent.

Questions to be Answered in an Examination of Academic Performance. An evaluation of the academic level of achievement of the adolescent population at Larned State Hospital was undertaken to help clarify the following questions:

1. How do the basic academic skills--reading, spelling, and arithmetic--of an emotionally disturbed population compare with a normal public school population?
2. How does the intellectual ability of an emotionally disturbed population compare to an average school population?

3. Is there any difference in achievement of basic academic skills between a population defined as delinquent and a population defined as emotionally disturbed?
4. Is there any difference between the achievement levels of emotionally disturbed boys and girls of the same age?
5. What is the average amount of time a student spends in a special education program at Larned State Hospital?

Reasons for an Academic Examination. The answers to the above questions would be essential in the organization of an effective special education program for the emotionally disturbed in a state hospital setting. Such information is important to help determine what courses of instruction should be made available to meet the needs of the students at Larned State Hospital. Is it necessary to employ instructors to teach the traditional academic courses usually offered in a public school; or are instructors needed to work more on a remedial level in the basic skill subjects of reading, spelling and arithmetic? Of equal importance is the knowledge of the length of stay of students at the hospital to justify an educational program meeting state requirements. If students do not remain in the educational program ninety days for one-half credit or one hundred and eighty days for one credit, effective transfer of the student back into the public school would have to be implemented; or modifications in the existing program would have to be made to allow the student to earn more credit in a shorter period of calendar time.

It was hoped that the information compiled would be helpful for the administration in deciding if the instructors employed needed to have training in working with students with learning disabilities, or if a teacher with ordinary academic training would be sufficient to meet the needs of the hospital population.

Another aim was to collect specific information that would be useful to the individual teachers in the hospital in determining the academic

levels of their students so that effective plans could be made as to how best to teach their classes. The hospital teacher needs specific information concerning their students' ability in order to decide (1) whether to attempt an integrated classroom approach with one lesson plan and unified textbooks, or (2) whether to use an individualized, remedial and developmental approach.

The answers to such questions asked could vary considerably from one psychiatric institution to another. In this instance, information was collected and arranged to clarify the levels of academic performance of the described adolescent population at Larned State Hospital.

PART II: DESCRIPTION OF POPULATION AND PROCEDURE

Geographical Area Served by Larned State Hospital. Larned State Hospital was created to help individuals with emotional problems in a fifty-two county area in western Kansas. This area is basically rural in nature, and many small farming communities are scattered across the flat plains. There are, however, several growing urban centers in the hospital's treatment district. Forty percent of all students admitted into the school program come from Wichita, the largest city in Kansas.

Diagnosis and Description of Behavior of Entering Students. Students entering the educational program at Larned State Hospital are usually diagnosed as "adjustment reaction to adolescence," "run-away reaction to adolescence," or "juvenile first offenders."

According to the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association in 1968, "adjustment reaction to adolescence" is a category that is reserved for more or less transient disorders that occur in individuals without any apparent underlying mental disorders. It usually refers to an acute reaction to overwhelming environmental stress. The student may show extreme irritability and depression associated with school failure and manifested by temper outbursts, brooding, and discouragement.

Individuals diagnosed as "run-away reaction of adolescence" characteristically escape from threatening situations by running away from home without permission. Typically these students are immature and timid. Many of the individuals feel rejected at home, inadequate and without friends. The

emotionally disturbed male students are located on the campus of Larned State Hospital in a building referred to as Capper Ward. Dix Ward is the living unit for the emotionally disturbed girls at Larned State Hospital.

The juvenile who has broken the law is another type of individual that enters the school program. This juvenile has been ordered to the institution by some legal authorities. A rehabilitation center for male juvenile offenders is now in operation at Larned. A juvenile judge may sentence a youth to the treatment program at Larned rather than sentencing the student to Boys' Industrial School. This treatment center at Larned is referred to as the Larned Youth Rehabilitation Center, hereafter referred to as the LYRC Unit.

Description of the Treatment Milieu. The major responsibility for patient care rests with a psychiatrist who acts as chief administrator for the entire youth complex. This complex is composed of all three previously mentioned wards plus a Children's Unit. Each ward is assigned a medical physician who has the responsibility for the physical health and medication of the patients. A nurse who assists the ward doctor has supervisory control over the psychiatric aides.

Psychiatric aides are responsible for supervision of the patient population in their respective wards. In addition to the medical personnel, each ward is also staffed with a psychologist who has the responsibility for mental evaluations and individual or group therapy. Social workers handle communications between parents and patients and their communities. They are responsible for patient placement after hospitalization. A sizable adjunctive therapy staff provides classes in recreation, crafts and ceramics for the patient population. All of these staff members, including the educational staff, comprise the treatment team. Each morning representatives of all disciplines meet in team meetings to discuss the patients and their progress

and problems. They also coordinate the efforts of all team members involved. The complete program is often referred to as a "milieu" and the structure and programs provided as "milieu therapy." Everyone who works at the hospital, from psychiatrist to cook, is involved in creating a corrective environment for the patient.

Description of the Educational Program. The educational program is a relatively new addition to the treatment services available to the population of Larned State Hospital. In 1969, the hospital started a full scale educational program by employing five teachers on a contractual basis from the Fort Larned Unified School District #495. These teachers were to provide academic classes for the adolescent population of Larned State Hospital. Classes were established on a secondary level for eleven months of the year. The curriculum consisted primarily of courses in mathematics, English, social studies, and typing. The staff has grown from a staff of five teachers and one Director of Special Education in five years to include twelve teachers and one Director.

Entrance Educational Tests Administered to Students. After admission to the psychiatric ward, the patient is interviewed by members of the treatment team. If in this meeting the patient is found to be in need of education, the patient is referred to this special education instructor for a series of educational tests. Two tests were given all entering students to help determine class placement. They were the Wide Range Achievement Test and the Peabody Picture Vocabulary Test. The Wide Range Achievement Test is a test of academic achievement in reading, spelling, and arithmetic. The Peabody Picture Vocabulary Test is an intelligence test. A student who scored within two years of his grade level by chronological age was placed in departmentalized academic subjects suitable to his grade placement. If

a student scored two grade levels below his grade placement by chronological age, he was placed in classes that emphasized developmental and remedial work. It was from these testing sessions that the data was compiled for use in the comparisons made in the following evaluation.

Description of the Wide Range Achievement Test. The basic achievement test used was The Wide Range Achievement Test by J. F. Jastak and S. R. Jastak. Hereafter the test will be referred to as the WRAT. The revised edition of the test used was published in 1965 by Guidance Associates, 1526 Gilpin Avenue, Wilmington, Delaware.

The 1965 edition of the WRAT contains three subtests at two different levels, Level I and Level II. Level I is designed for use with children between the ages of five years, two months and eleven years, eleven months. Level II is intended for persons from the age of twelve years, zero months to adulthood. Level II was used exclusively in this study for the comparison of adolescent academic performance.

Each level contains three subtests which take between twenty to thirty minutes to administer. The three subtests are:

1. Reading: recognizing and naming letters and pronouncing words.
2. Spelling: copying marks resembling letters, writing the name, and writing single words to dictation.
3. Arithmetic: counting, reading number symbols, solving oral problems, and performing written computations.

Reasons for Giving the WRAT. The WRAT has been found to be of value in numerous areas of knowledge. The basic reasons for giving the WRAT to all entering patients were:

1. The accurate diagnosis of reading, spelling, and arithmetic disabilities in persons of all ages.
2. The determination of instructional levels in the school population.

3. The assignment of students to instructional groups progressing at similar rates and their transfer to faster or slower groups in keeping with individual learning rates.
4. The comparison between school achievement and other abilities in all individuals, especially those who are disturbed or maladjusted.

Procedure Followed in the Administration of the WRAT. In the administration of the WRAT the subjects were asked first to fill in the personal data on the four lines of the title page of the test blank before the test started. Basic information completed included full name, birthdate, sex, age recorded in years and months, school last attended, and the grade the student was in prior to his admission to Larned State Hospital.

The three subtests were then given in the following order: spelling, reading, and arithmetic. Since most of the adolescents were able to take Level II of the WRAT, instructions were minimal. For the spelling subtest the subjects were told:

This is a spelling test. I would like to see how many of these words you can spell. I will say the word, then read the word again. Write the first word here and go down this way as I say each word.

Words were pronounced until the subject missed ten consecutive words or completed all forty-six words. In dictating the words, approximately fifteen seconds per word was allowed for each student to record his response. In cases of impairment in motor coordination and other physical handicaps, the time limit was extended.

Each word spelled correctly was scored by a circle. One point was given for each correct word. The total number of correct words was tallied to form a raw score. On each spelling subtest there was a table from which a grade placement was obtained from the raw score as well as a standard score and percentile rank. In this comparison, only grade placement scores were used for standardization in evaluating academic achievement.

The reading subtest consisted of seventy-four words that each subject had to pronounce. The examiner used a pronunciation guide found in the WRAT manual for consistency in scoring the student's responses.

The directions given for the reading subtest were:

Look at each word carefully and say it aloud. Begin here and read the words across the page so I can hear you. When you finish the first line, go on to the next line and then the next.

The time limit for each word was approximately ten seconds. The first time an error was made the subject was asked to repeat the word. His response was scored as correct if he corrected himself on his second trial. From then on the response was scored as either right or wrong, unless the subject spontaneously corrected the error he had made. The testing limit was twelve consecutive failures.

As in the spelling subtest, each correct answer was tallied and converted into a raw score. Using a conversion table the raw score was then turned into a grade placement score.

The arithmetic Level II subtest consisted of forty-six computation problems. Each student was told:

Turn to page three, where it says Arithmetic, Level II, written part, and look at the problems printed below the heavy line. I'd like to know how many of the problems on this page you can figure out. Look at each problem carefully to see what you are supposed to do--add, subtract, multiply, or divide--and then put down your answer in the space on or under the lines. Should you wish to figure on the paper, you may use the empty spaces or the margins to write on. First do the top row, then the second row, then the third row, and etc. The problems get more difficult as you go down the page. Don't spend too much time on any one problem. You can skip a problem if it is too difficult for you, but do as many as you can one by one. You will have ten minutes. You may begin now.

As indicated in the above instructions this subtest was timed. Each subject was allowed only ten minutes to work as many problems as possible. Again the raw score, consisting of the number of problems worked correctly, was

converted into a grade placement score with the use of the key printed at the bottom of the test blank.

Description of the Peabody Picture Vocabulary Test. The second test given to all entering students was the Peabody Picture Vocabulary Test, hereafter referred to as the PPVT, by Lloyd M. Dunn, Ph. D., published by American Guidance Service, Inc., in 1965.

The PPVT was given for its ease in administration and the desire of the examiner to have a general idea of the intellectual level of the population.

The test kit includes: (1) a spiral-bound book containing 150 numbered plates preceded by three example plates, (2) a Manual, and (3) separate individual test records for forms A and B. The individual record listed stimulus words and keys to correct responses.

Procedure Followed in the Administration of the PPVT. Each subject was shown the spiral-bound book of numbered plates and was told:

I want to find out how large your vocabulary is. See, there are four pictures on this page. Each of them is numbered. I will say a word then I want you to tell me the number of (or point to) the picture which best tells me the meaning of the word. Let us try this one. Tell me the number of the picture which best tells the meaning of "crib."

Now I am going to show you some other pictures. Each time I say a word, you tell the number of the picture which best tells the meaning of the word. As we advance through the book you may not be sure of the meaning of some of the words, but I want you to look carefully at all of the pictures anyway and choose the one you think is right. What number is _____?

The basal level was determined when a subject scored a total of eight consecutive responses. From this starting point testing was continued until the subject made six errors in any eight consecutive presentations. When a student missed six out of eight consecutive items, his last response was considered to be the upper limits of his ability. This item is referred to as a ceiling score. All errors were subtracted from this ceiling score

leaving a raw score. The subject's intelligence quotient was then found in the manual according to his raw score in relationship to his chronological age. The test usually took twenty to thirty minutes to administer.

Summary of the Procedures Followed. Thus each entering student was given the Wide Range Achievement Test to determine academic levels of performance and the Peabody Picture Vocabulary Test for levels of intellectual ability. The student was then placed into an academic program. When a student was dismissed from the hospital before the end of the school year, he was again given the WRAT. All students in the school program at the end of the 1971-72 school year were also once again given the WRAT. Each student's grade placement was determined by his school transcript. The number of days each student was in attendance in the educational program was obtained from the director's official attendance record.

Thus levels of academic achievement, intelligence test scores, and number of days present in the educational program were available for the student population at Larned State Hospital.

PART III: INTERPRETATION OF THE DATA

Grade Placement by School Transcripts: Table 1. A transcript of past academic work was secured for all entering students in the hospital educational program. From the information contained in the transcripts all students enrolled in the educational program were found to be enrolled in grades seven through twelve. Table 1 shows the distribution of students as to grade placement by school transcripts. It is seen in Table 1 that most students are enrolled in grades eight, nine, and ten. Eighty-five percent of ninety-four students were enrolled in grades eight through ten with the largest enrollment being in the ninth grade. Seven students were found to be enrolled in the eleventh grade, while only three students were placed in the twelfth grade.

Distribution of Intelligence Test Scores for the Student Population, Spring Semester 1972: Table 2. In Table 2 the distribution of students' scores on the Peabody Picture Vocabulary Intelligence test is shown. The scores varied from below an I.Q. of 70 to 130. The frequency of test scores was noted for each living unit on the campus. The I.Q. scores for all living units were found to be quite similar. The column showing the combined range of scores indicated that out of ninety-four students, five were classified as retarded, thirteen borderline, twenty-three below average, thirty-nine average, seven high average, and eight superior students. The mean I.Q. was 94, slightly below the mean expected in a normal distribution. The standard deviation was found to be sixteen points, which reflects a wide range of ability in the population being studied. Two-thirds of the student population was within one standard deviation above and below the mean. This study indicated a slight

variation from normal distribution. There were more below average students and more superior students than one would expect to find in a normal population.

TABLE 1

DISTRIBUTION OF STUDENTS BY GRADE PLACEMENT ACCORDING TO SCHOOL TRANSCRIPTS

Grade Level	No. of Students	Dix (Female) N = 34		Capper (Male) N = 40		LYRC (Male) N = 20		Combined (Male and Female) N = 94	
		Grade Level	No. of Students	Grade Level	No. of Students	Grade Level	No. of Students	Grade Level	No. of Students
7	2	7	2	7	0	7	4		
8	8	8	11	8	1	8	20		
9	9	9	16	9	6	9	31		
10	12	10	9	10	8	10	29		
11	2	11	2	11	3	11	7		
12	1	12	0	12	2	12	3		

TABLE 2

DISTRIBUTION OF INTELLIGENCE TEST SCORES FOR
STUDENT POPULATION, SPRING SEMESTER 1972

I.Q.	Adolescent Girls Dix	Adolescent Boys Capper	LYRC Boys	Total Population
	No.	No.	No.	No.
70	1 (Retarded)	3	1	5 (5)
72	1	0	0	1
74	1	2	0	3
76	2 (Borderline)	0	1	3 (13)
78	2	2	0	4
80	1	1	0	2
82	1	2	2	5
84	1	3	2	6
86	2 (Low Range)	2	0	4 (23)
88	1	2	3	6
90	2	1	2	5
92	1	0	1	2
94	1	3	1	5
96	2	1	0	3
98	3	1	1	5
100	4 (Average)	0	1	5 (39)
102	2	0	2	4
104	2	1	1	4
106	1	2	0	3
108	1	0	1	2
110	0	1	0	1
112	1	1	0	2
114	6	1	0	1
116	2 (High Range)	2	0	4 (7)
118	0	0	0	0
120	0	0	0	0
122	0	1	0	1
124	0	0	1	1
126	1 (Superior)	0	0	1 (8)
128	0	1	0	1
130	4	0	0	4

Achievement of Adolescent Girls in Reading: Figure 1. During the second semester of the 1971-72 school year, ninety-four students were given the Wide Range Achievement Test upon entering and leaving the educational program at Larned State Hospital. Figure 1 presents a summary of the test results in reading for the female population studied. Figure 1 shows the distribution of the WRAT reading test scores by grade placement upon entrance into the educational program. Also shown are the test scores upon leaving the program and grade placement by school records.

The solid line in Figure 1 represents grade placement by school records. This line shows that two girls were seventh graders, eight were eighth graders, nine were ninth graders, twelve were tenth graders, two were eleventh graders, and one was a twelfth grader. It was the writer's assumption that the students enrolled in the hospital educational program should be achieving on the WRAT test at or near to their grade placement by school records. The WRAT score presents a comparison to a large population. For example, a seventh grader would be performing near to an average level in reading if he would score at or near the seventh grade level on the WRAT reading subtest.

The actual grade level of adolescent girls is shown in Figure 1 by a broken line. Achievement scores were rounded off to the nearest half grade. It was found that the female students were actually achieving from the 2.5 grade level to the 12.5 grade level. Four students scored at 6.5 and 8.5 grade level. The mean grade placement by achievement upon entrance into the school program was 7.82. The mean grade placement by school transcripts was 9.30. Thus girls were, on the average, reading almost a year and a half below what could normally be expected.

A solid red line represents the grade placement by achievement upon leaving the school program. The adolescent girls improved their mean score in reading

from a grade level of 7.82 to 8.46, which indicates an improvement of .64 per grade.

Identical symbols, namely, (a) a solid black line for grade placement by school transcripts, (b) a broken black line for entrance test scores, and (c) a red line for post test scores, were used on all of the following figures.

Achievement of Adolescent Girls in Spelling: Figure 2. In Figure 2 the achievement of adolescent girls based upon the WRAT spelling subtest was depicted. The mean grade placement by achievement upon entrance into the school program was 6.78. Entrance levels of achievement varied from a 2.5 grade level to an 11.0 grade level. Seven students scored at a 7.0 grade level. The mean grade level upon leaving the school program was found to be 7.36. The female students, upon entering the educational program, were functioning on an average of 2.42 grade levels lower than their peers. They improved on an average of a .48 grade level while at Larned State Hospital.

Achievement of Adolescent Girls in Arithmetic: Figure 3. Girls performed, on an average, lower in mathematics than in reading and spelling. Figure 3 shows the achievement of adolescent girls in mathematics. Upon entrance into the school program, girls were computing mathematics at a 5.78 grade level. This is 3.43 grade levels lower than their grade placement by school records. The highest grade placement by achievement upon entrance into the school program was 9.5. The mean grade placement by achievement upon leaving the school program was 6.33. The girls showed improvement at an average of .55 of a grade level during the spring semester of 1972.

ACHIEVEMENT OF ADOLESCENT GIRLS IN READING

Based Upon Pre & Post WRAT Test Scores

of students
N = 34

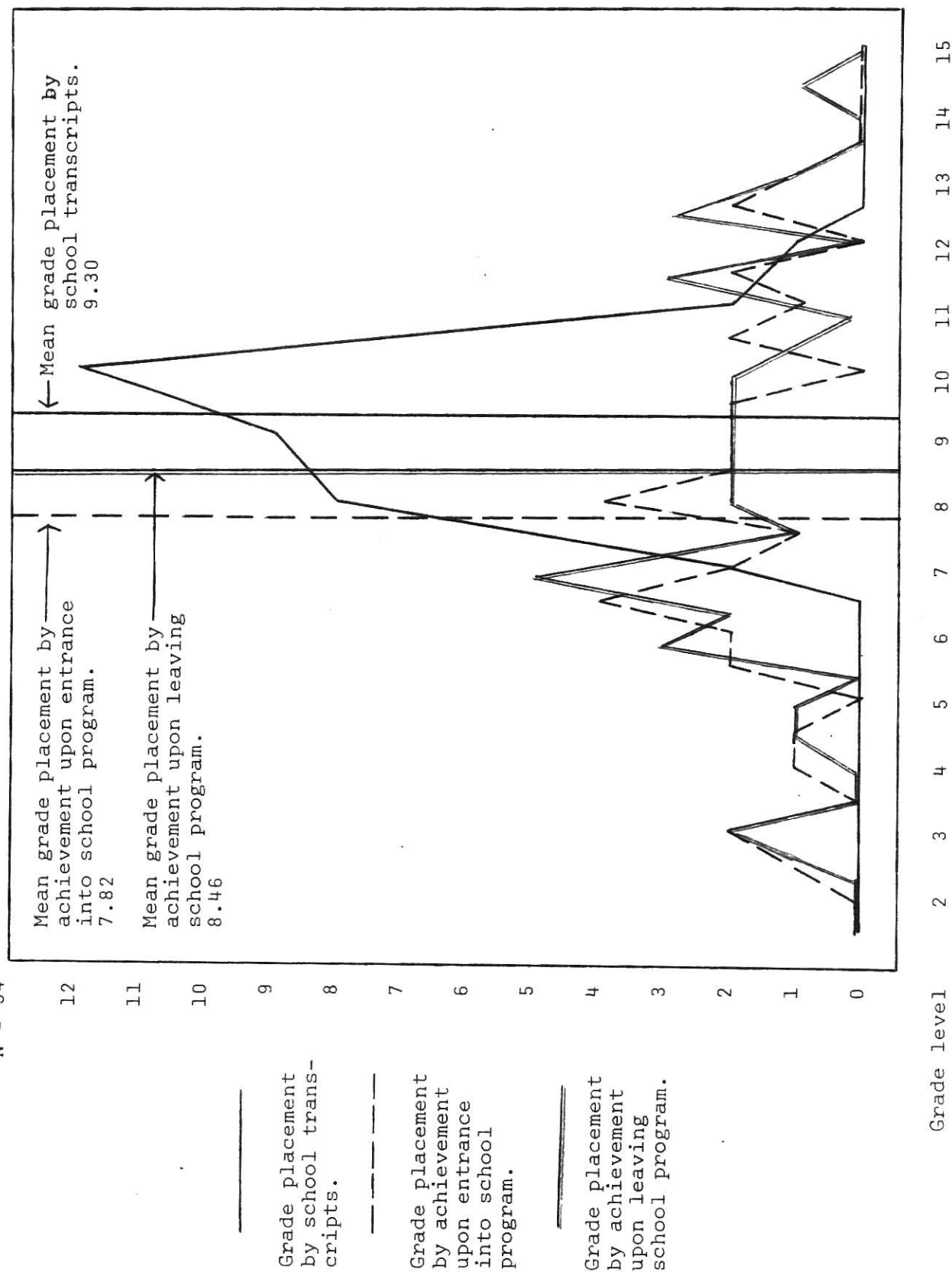


FIGURE 1

ACHIEVEMENT OF ADOLESCENT GIRLS IN SPELLING

Based Upon Pre & Post WRAT Test Scores

of students
N = 34

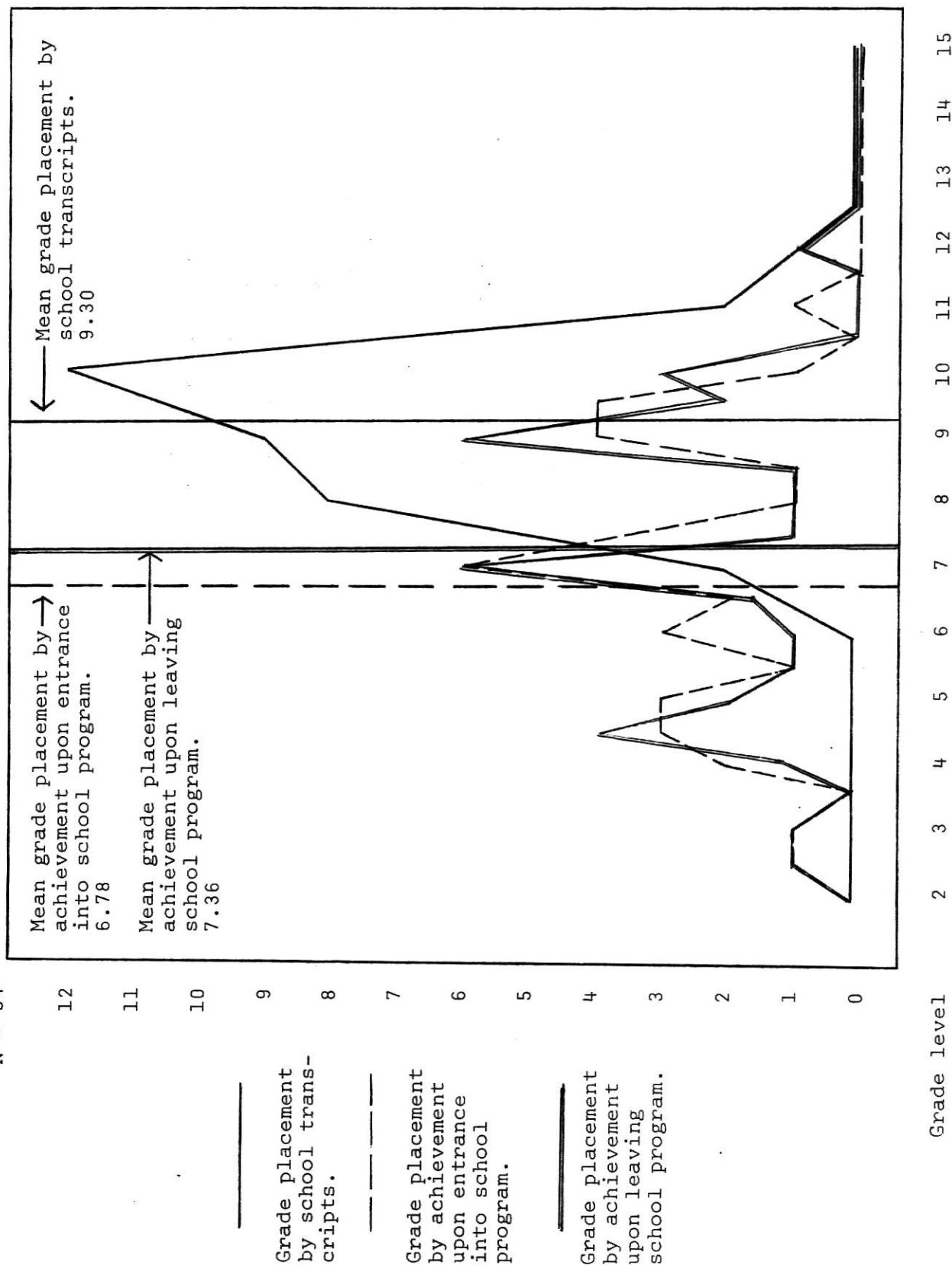
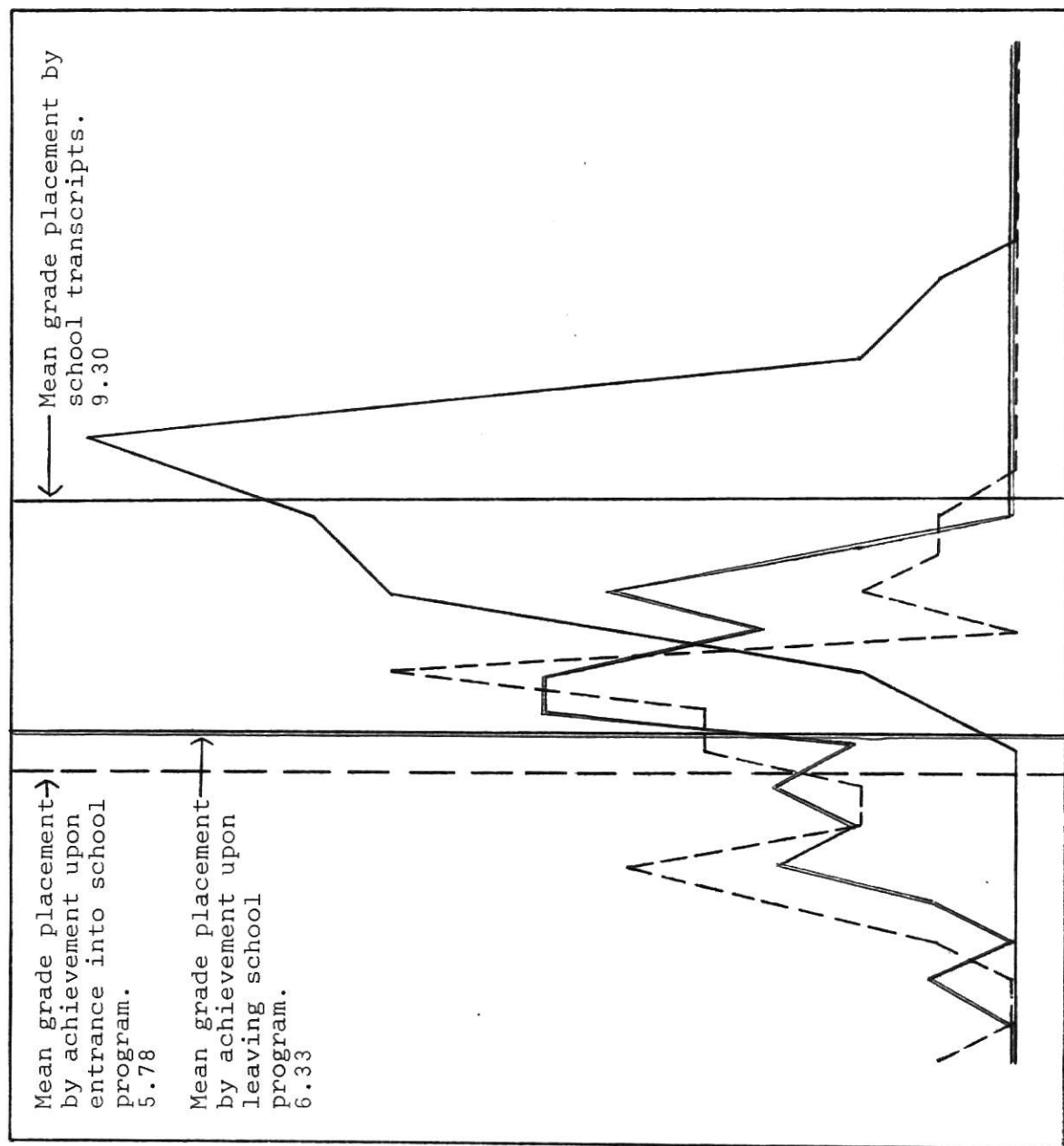


FIGURE 2

ACHIEVEMENT OF ADOLESCENT GIRLS IN MATH

Based Upon Pre & Post WRAT Test Scores

of students
N = 34



Grade placement by school transcripts.

Grade placement by achievement upon entrance into school program.

Grade placement by achievement upon leaving school program.

FIGURE 3

Grade level

Academic Achievement of Adolescent Boys--Capper Ward--in Reading:

Figure 4. Figure 4 depicts the academic achievement in reading of the male students living on the psychiatric ward named Capper. These students were placed by school records in the following grades: two in the seventh grade, eleven in the eighth grade, sixteen in the ninth grade, nine in the tenth grade, two in the eleventh grade, and none in the twelfth grade. The mean grade level portrayed by school transcripts was 9.20. Capper boys were functioning, according to the WRAT subtest in reading, at a mean grade level of 8.04 upon entrance into the school program. The mean grade level upon leaving the school program was 8.76. Thus the Capper boys were nearly reading at the level indicated by their school records. Figure 4 showed that five boys had a superior reading skill and were reading at a level of most first-year college students. This graph also shows the wide range of ability of the forty boys on the reading subtest of the WRAT.

Academic Achievement of Adolescent Boys--Capper Ward--in Spelling:

Figure 5. The forty adolescent boys living on Capper Ward entered the school program spelling at a 6.44 grade level. As shown in Figure 5, this was 2.76 grade levels lower than their mean grade level of 9.20 as determined by school transcripts. The mean grade level upon leaving the school program was 6.68. These male students improved their mean grade level in spelling by .24 of a grade.

Academic Achievement of Adolescent Boys--Capper Ward--in Arithmetic:

Figure 6. The adolescent boys, as girls, performed at a lower grade level in mathematics than on any of the WRAT subtests. Figure 6 shows that the mean grade level in mathematics upon entrance into the school program was 5.95. When compared to a mean grade level of 9.20 as shown by school transcripts, it is seen that the adolescent boys were functioning at 3.25 grade levels lower than the norms established by the WRAT. The boys did improve

their academic ability to a mean grade level of 6.60. This was an increase of .65 of a grade level.

ACHIEVEMENT OF ADOLESCENT BOYS IN READING

Based Upon Pre & Post WRAT Test Scores

of students
N = 40

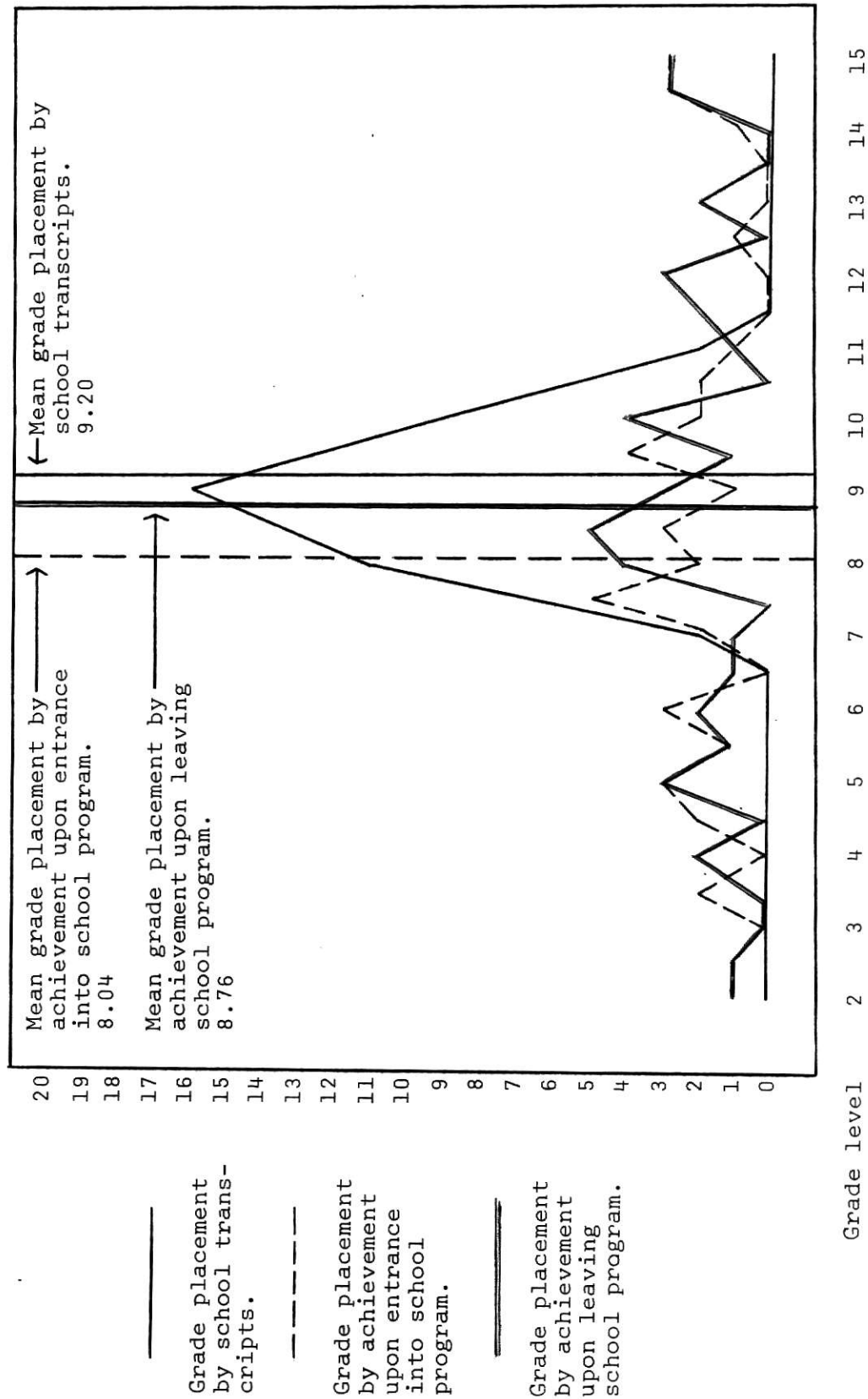


FIGURE 4

ACHIEVEMENT OF ADOLESCENT BOYS IN SPELLING

Based Upon Pre & Post WRAT Test Scores

of students
N = 40

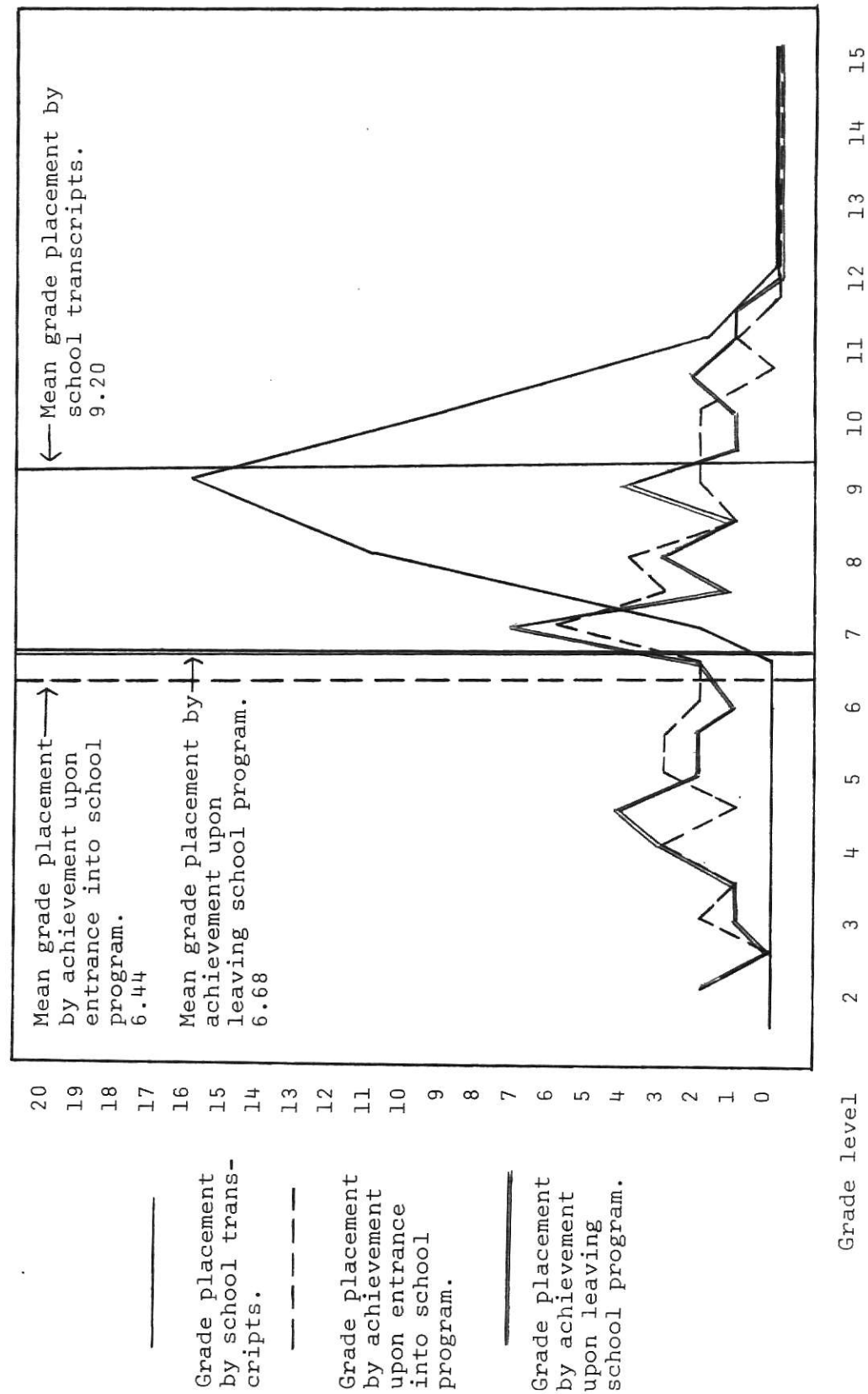


FIGURE 5

ACHIEVEMENT OF ADOLESCENT BOYS IN MATH

Based Upon Pre & Post WRAT Test Scores

of students
N = 40

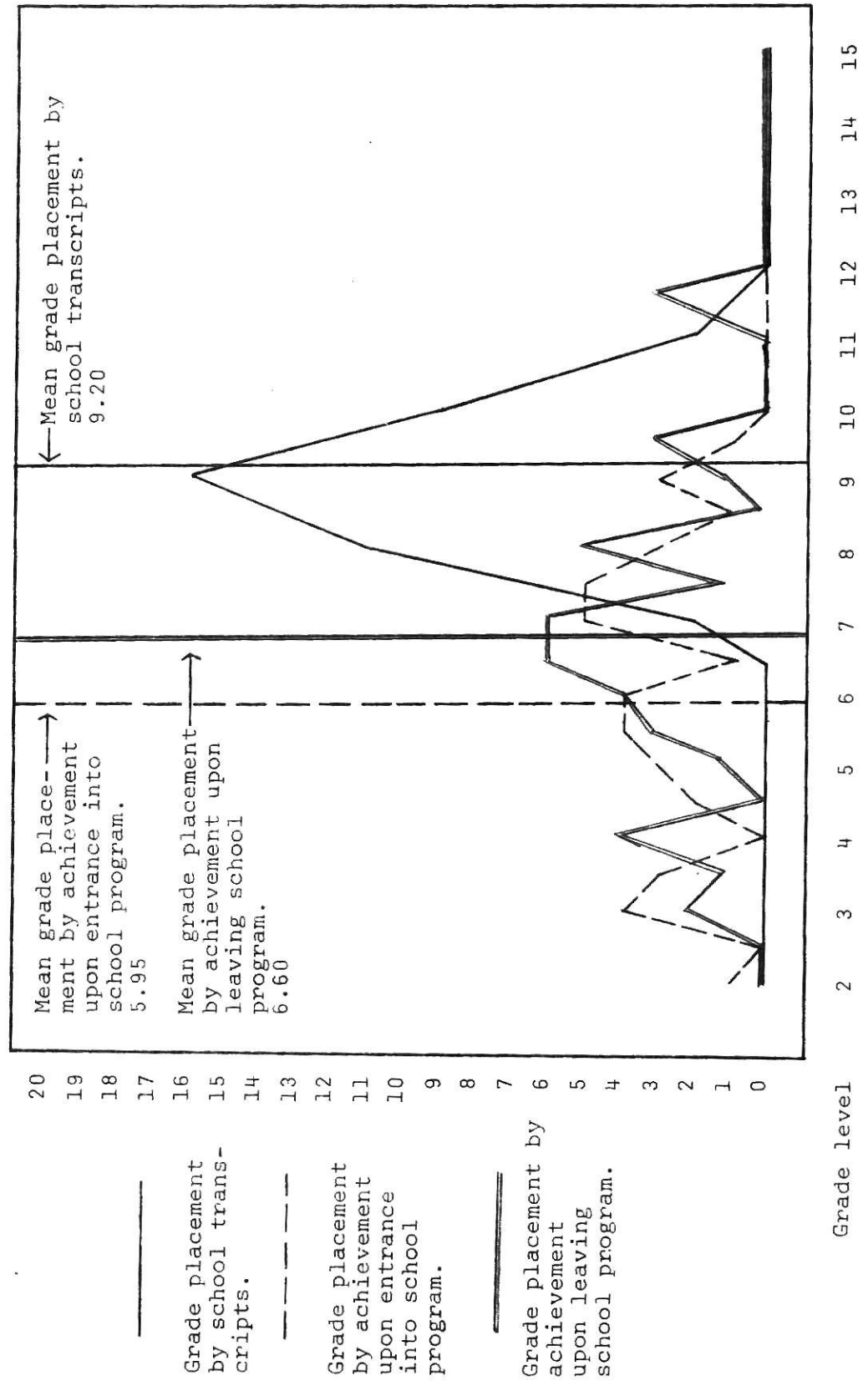


FIGURE 6

Achievement of LYRC Students in Reading: Figure 7. Figure 7 presents a summary of the LYRC students in reading. The mean grade placement by school transcripts was the tenth grade. The reading level upon entrance into the school program of the twenty LYRC students was 7.60. The mean grade level by achievement upon leaving the school program was 8.70. Thus, the LYRC students showed more improvement in reading than any other ward. Their improvement was 1.10 grade levels. This group was, however, slightly older than the other populations studied. As seen in Figure 7, the LYRC students were, at the end of the spring semester, still functioning at an average of 1.3 grade levels below their grade placement by school records. As seen in all WRAT subtests, there was a wide range in the reading ability among all of the students.

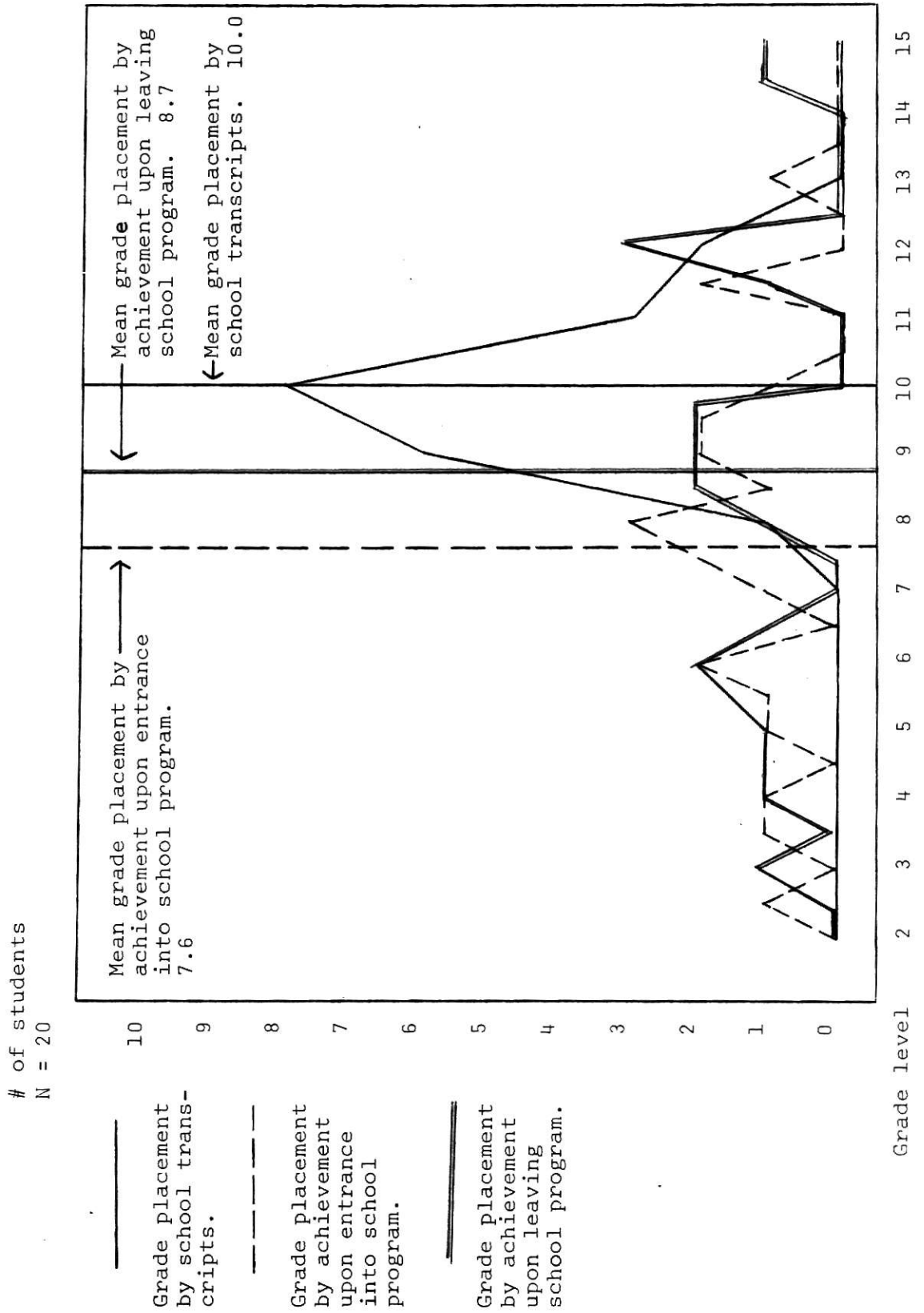
Achievement of LYRC Students in Spelling: Figure 8. In Figure 8 the achievement of LYRC students in spelling is presented. The twenty LYRC boys entered the school program spelling at a mean grade level of 6.30 and left the school program spelling at a mean grade level of 6.93. This reflects an improvement of .63 of a grade level. The average performance of a LYRC student was 3.07 of a grade level lower than that shown by school records.

Achievement of LYRC Students in Arithmetic: Figure 9. Most students performed consistently poorer in arithmetic than in spelling and reading. As shown in Figure 9, students on the LYRC unit entered the school program with a mean grade placement of 5.93. They left the school program with a mean grade placement of 6.80, or an average improvement of .84 of a grade level. They were still performing 2.20 grade levels lower than the mean grade placement by school transcripts.

FIGURE 7

ACHIEVEMENT OF LYRC STUDENTS IN READING

Based Upon Pre & Post WRAT Test Scores



ACHIEVEMENT OF LYRC STUDENTS IN SPELLING

Based Upon Pre & Post WRAT Test Scores

of students
N = 20

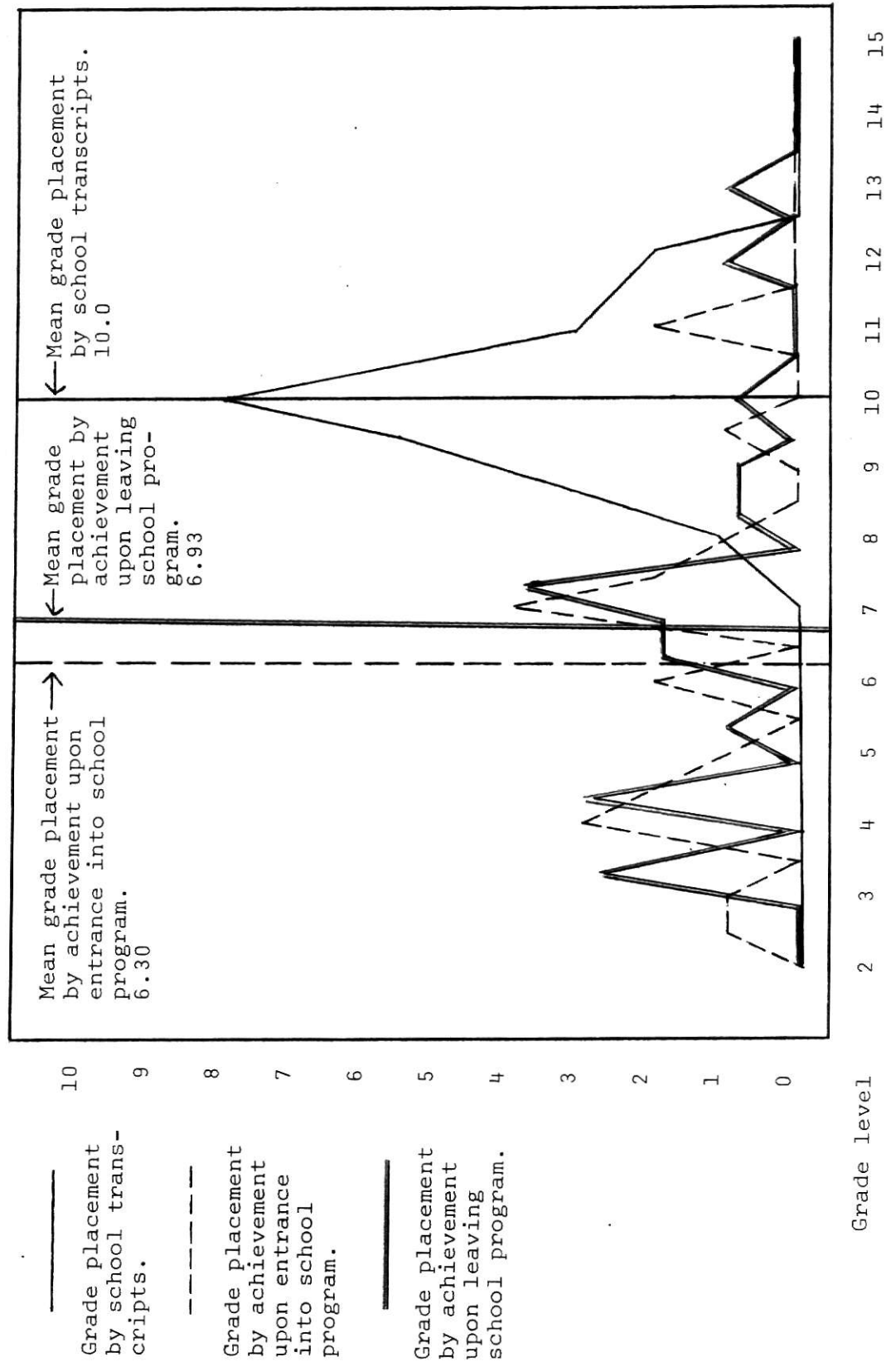
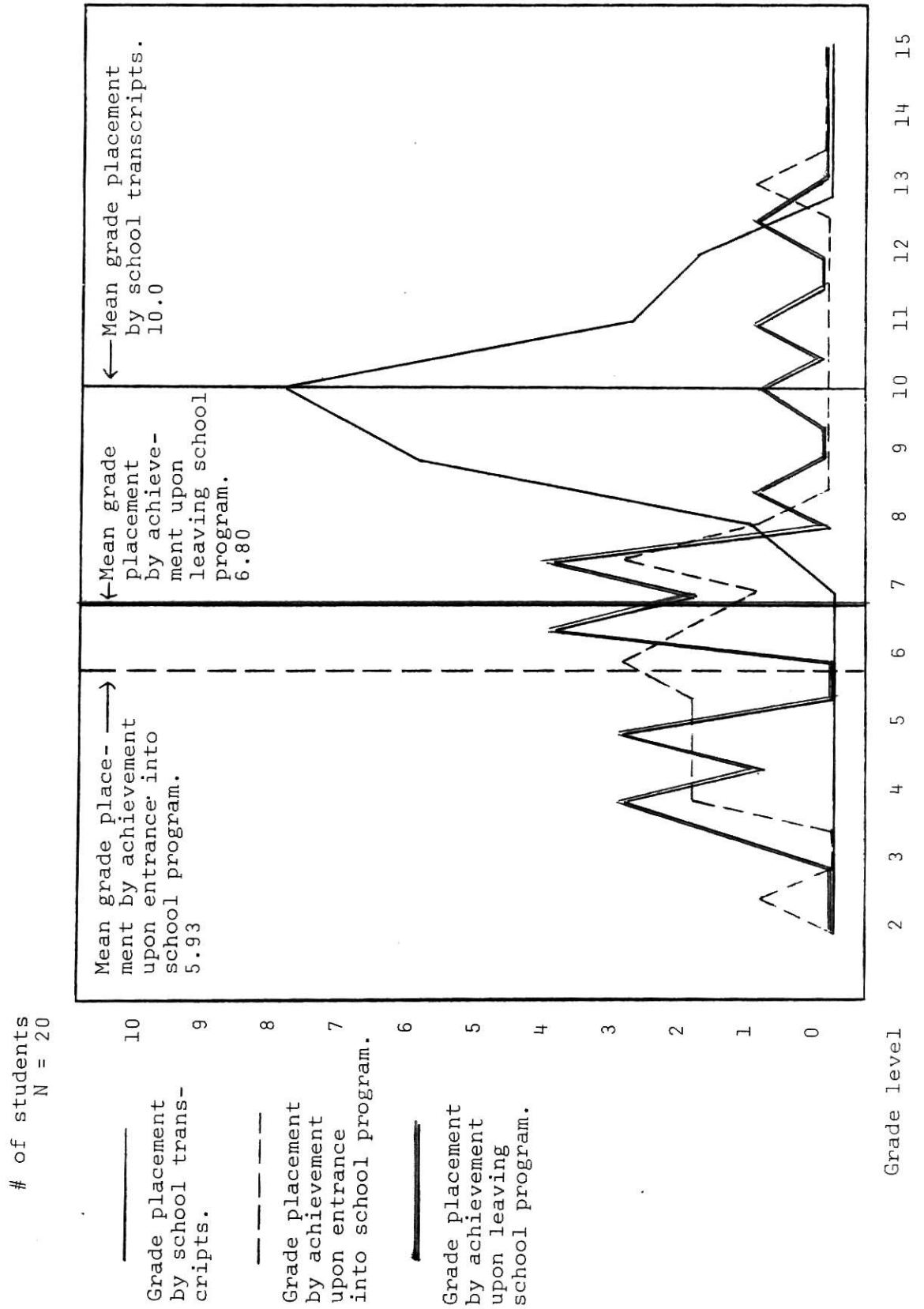


FIGURE 8

FIGURE 9

ACHIEVEMENT OF LYRC STUDENTS IN MATH
Based Upon Pre & Post WRAT Test Scores



Distribution of Students According to the Number of Days Present in the Educational Program: Figure 10. Figure 10 shows the distribution of the attendance of all of the ninety-four students in the educational program. Twenty-six students stayed in school between sixteen and thirty days. Fourteen students remained in school between thirty-one and forty-five days. This graph reflects the very high turn over rate in the student population at Larned State Hospital. Seven out of the ninety-four students enrolled in school for the spring semester completed one full year or were enrolled in classes for a period of over 160 days.

Summary of Academic Achievement, Average Intelligence, and Average Days Present by Living Units: Table 3. Table 3 is a summary of all of the collected data. Some striking similarity in all of the test scores can be seen in this table. The data indicates that the hospital population achieved at an average grade level considerably lower than that recorded by school records. Based on the WRAT scores the mean grade levels of the combined population upon leaving the educational program at Larned State Hospital were: Reading--8.60, Spelling--6.98, and Arithmetic--6.59. The average I.Q. was 94, and the average days present was sixty-two.

FIGURE 10

DISTRIBUTION OF STUDENTS ACCORDING TO THE
NUMBER OF DAYS PRESENT IN THE EDUCATIONAL PROGRAM

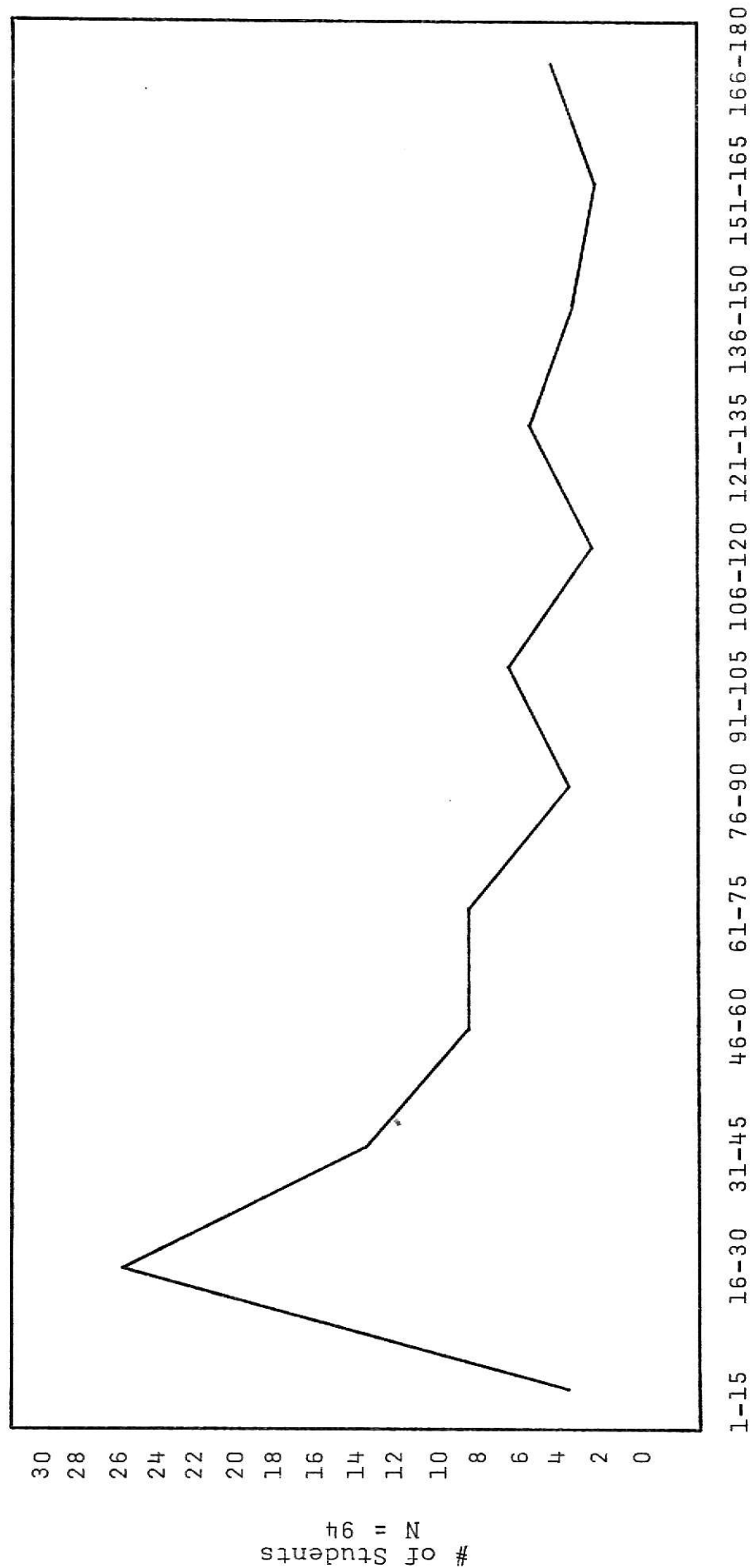


TABLE 3

SUMMARY OF WRAT PRE-TEST AND POST-TEST SCORES

AVERAGE I.Q. AND AVERAGE DAYS PRESENT

WARD	WRAT Pre-test Averages	WRAT Post-test Averages	Average Gain	Average I.Q.	Average Days Present
DIX					
Reading	7.82	8.46	+.64	91.88	69.70
Spelling	6.78	7.36	+.58		
Arithmetic	5.78	6.33	+.55		
CAPPER					
Reading	8.03	8.76	+.73	96.95	56.59
Spelling	6.44	6.68	+.24		
Arithmetic	5.95	6.70	+.75		
LYRC					
Reading	7.61	8.71	+1.10	91.60	70.35
Spelling	6.30	6.93	+.63		
Arithmetic	5.96	6.80	+.94		
Combined Mean					
Reading	7.86	8.60	+.74	93.69	62.16
Spelling	6.54	6.98	+.44		
Arithmetic	5.99	6.59	+.60		

PART IV: CONCLUSIONS, INTERPRETATIONS, AND RECOMMENDATIONS

Comparison of Academic Ability to a Public School Population. In examining the levels of academic achievement of the students at Larned State Hospital and comparing their scores with a normal school population, it appears that the students at Larned have a greater range of ability than one would normally expect to find in the public schools. The scores of the students in the hospital varied from the second grade to the twelfth grade and above in all of the WRAT subtests. Public classroom teachers tend to be somewhat aware of individual differences. The hospital instructor must be acutely aware of the range of abilities present in his classroom. It could conceivably become an overwhelming problem if proper orientation were not provided to the possibility.

Based upon the average grade placement on both pre- and post-test WRAT scores, the hospital student population is academically behind a normal population. A ninth grade instructor would, on the average, find his class reading as well as most eighth graders, spelling as most seventh graders, and working mathematics as most sixth graders. Thus, the hospital population is achieving from a half to three grade levels below an average student in the same grade.

Comparison of Intellectual Ability. The intellectual ability of the students in this study followed, in general, that of a normal population. The mean I.Q. for all of the students was 94, slightly lower than average. This may be a result of cultural economic factors or emotional instability. It is this examiner's opinion that the lower mean I.Q. of the population

being studied would only in part explain the degree of academic retardation found in this population.

Relationship Between an Emotionally Disturbed Population and a Delinquent Population. When the LYRC program was started at Larned State Hospital, this examiner was told that this population would be an asset to his classroom. It was assumed that the delinquent student would be more alert and would achieve at a higher level than the emotionally disturbed student. Based upon the WRAT and PPVT scores this was not substantiated. The average level of academic ability was found in all the subjects to be almost identical as determined by the WRAT tests. Regardless of a legal (Juvenile Delinquent) or psychological (emotionally disturbed) label, the educational achievement and problems of both groups were very similar. It can also be surmised that one educational program could effectively meet most of the needs of both populations.

Differences in Achievement in Relationship to Subject's Sex. In the population being studied, boys outnumbered the girls almost two to one. It was found that the sixty boys and thirty-four girls in this study were very similar in their basic academic abilities. Boys were slightly better in reading and mathematics than girls, while the girls were slightly better in spelling than the boys. In all three subtests of the WRAT, there was no more than half of a grade level difference in the average level of achievement. Therefore, in this study there seemed to be no significant differences in academic ability between boys and girls.

Average Number of Days Spent in an Educational Program. A classroom instructor at Larned State Hospital must adjust to a constantly changing student population. Students do not wait for convenient breaks in the traditional school calendar to enter and leave a state hospital. The average number of days a student is enrolled in the special education program at

Larned was only sixty-two days, or slightly more than two six weeks. It is an expressed goal of the special education program to prepare the hospitalized student for entrance into the public school system to compete as satisfactorily as possible with his peers. This implies that the hospitalized student would have to improve on the average of at least a year and a half in his basic skills in only sixty-two days. Even for the most adjusted student this is an unrealistic goal.

Recommendations Concerning Curriculum. From the information obtained in this study, this writer has formulated several suggestions to help meet the needs of the students at Larned State Hospital. Most students are functioning academically at a junior high school level. The average grade placement by school transcripts is the ninth grade. However, the instructors at Larned have organized the curriculum to meet the needs of a high school population. Eight out of ten instructors are certified primarily to teach academic high school subjects. Only three teachers are specifically teaching remedial and developmental courses. The curriculum needs to be shifted downward to meet the needs of students who are working at an eighth, ninth, and tenth grade level. Added emphasis should be placed on grouping six to eight students by ability to spend a block of time each day with one teacher. In this class all of the basic subjects could be taught and the emphasis would be on the improvement of basic academic skill subjects.

At the secondary level a core approach could be utilized to advantage. One instructor would then have more time to work on developmental skills, and more credit could be given to students lacking in the requirements for graduation. If secondary classes were taught for two periods a day, the amount of credit earned by each student could be increased. For example, if a student stayed in the program only sixty days, he would have earned at least a semester's credit. It would also be helpful to give quarter units of credit because of

the rapid student turn over. Mini-courses should also be developed and labeled specifically so that students could receive credit for successfully completing units of designated areas of knowledge in the various disciplines.

Recommendations Concerning Personnel. It is also recommended that several additional staff members be employed to serve in roles that are unique to a hospital setting. One staff member should work coordinating the efforts of the educational department with the psychiatric sections of the hospital. As a part of his duties, educational placement and diagnostic tests could be given to all entering students. All admission meetings would be attended to help determine the educational aspects of the treatment program for each student. Such a person would facilitate the flow of information from the educational program to the psychiatric teams, and from the psychiatric department to the educational staff. Studies could be undertaken by this staff member to continually evaluate the effectiveness of the special education program.

An additional educational staff member could be employed to help place the students back into their communities. Because of the large number of students entering and leaving the educational program, communication with the community schools is quite brief and sporadic. Frequently, students return to Larned's program because of difficulties that could be prevented were the public classroom teacher aware of the techniques used at the hospital. This educational staff member would specifically serve as a liason between the hospital school and the community school. It would partially be this staff member's job to follow up and counsel with the student, making maximum effort to keep the student from returning to a hospital situation. Public classroom teachers could be informed of techniques and attitudes that would help the emotionally disturbed student in the public school setting, thus carrying out a factor in preventing future problems.

Instructors teaching the students at Larned State Hospital should utilize techniques in their classroom to meet a wide range of individual levels of performance. Individual assignments, programmed instruction, behavior modification, and other approaches should be used so that learning will occur in spite of the student's emotional difficulties. Emphasis in all classes should be placed on developing the basic academic skills of reading, writing, and arithmetic.

Summary. A comparison of academic performance in reading, spelling, and arithmetic of the adolescent population upon entering and leaving the educational program at Larned State Hospital has presented evidence of the great range in level of academic ability. Students varied in their ability from the second grade to the twelfth grade level on all subtests of the WRAT. Students, on the average, entered the hospital school program reading at a 7.86 grade level, spelling at a 6.54 grade level, and computing math problems at a 5.99 grade level. Upon dismissal from the institution, students had, on an average, improved the mean scores as follows: reading--8.60, spelling--6.98, and arithmetic--6.59. As the average grade placement by chronological age is slightly above the ninth grade, it appears that especially in spelling and arithmetic the students at Larned lag significantly behind their peers in the public schools.

The degree of academic retardation is not quite so pronounced when compared to the average intellectual ability of the hospital population. The mean intelligence quotient was 94, and forty-one students were functioning below an I.Q. of 90. In general, however, the distribution of intelligence test scores followed a normal distribution curve.

The WRAT test scores showed a remarkable similarity in academic achievement between those students on the psychiatric wards and the students who had been judged delinquent. Male students' mean scores from the psychiatric ward

upon dismissal were: reading--8.76, spelling--6.68, and arithmetic--6.70. LYRC students' mean scores were: reading--8.71, spelling--6.93, and arithmetic--6.80. Compared to their entrance test scores in reading, the LYRC students did improve more than the boys on the psychiatric ward. However, the LYRC students were enrolled for a slightly longer period of time in the educational program.

Although boys outnumbered girls almost two to one, there was no significant difference in their grade placement, intellectual ability, and academic achievement in reading, spelling, and arithmetic.

The average number of days students were enrolled in the special education program was sixty-two days. Students from the LYRC and the girls from Dix Ward were enrolled on an average of seventy days, where the boys on Capper stayed only an average of fifty-seven days.

It was recommended that a curriculum be developed to more adequately meet the needs of a population primarily enrolled in grades seven, eight, nine, and ten rather than stress the last years of high school. Instruction in courses offered for credit should be taught for longer periods each day so that more credit could be given in a shorter amount of calendar time.

Additional personnel could be utilized to help meet several unique problems found in an institutional setting. One staff member could be used to facilitate communication between the various hospital disciplines and facilitate the placement of students in an educational program at the hospital. A second staff member should be valuable in improving the movement of the student into the community and in helping the emotionally disturbed student in his community school.

The classroom teacher at the hospital should be made aware of the academic ability of his students and then proceed to use individual instruction and

assignments, programmed learning, behavior modification, and other techniques to facilitate the students' academic growth and eventual return to a normal school setting.

AN EXAMINATION OF THE ACADEMIC PERFORMANCE OF STUDENTS IN THE SECONDARY
EDUCATIONAL PROGRAM AT LARNED STATE HOSPITAL, LARNED, KANSAS:
SPRING SEMESTER 1972

by

John L. Schmidt

B. S., Kansas State University, 1963

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1972

PART I: PURPOSE

An evaluation of the academic levels of achievement of the adolescent population at Larned State Hospital, Larned, Kansas, was undertaken to clarify the following questions:

1. How does the basic academic skills--reading, spelling, and arithmetic--of an emotionally disturbed population compare with a normal public school population?
2. How does the intellectual ability of an emotionally disturbed population compare to a normal school population?
3. Is there any difference in achievement of basic academic skills between a population defined as delinquent and a population defined as emotionally disturbed?
4. Is there any difference between the achievement levels of emotionally disturbed boys and girls of the same age?
5. What is the average amount of time a student spends in a special education program at Larned State Hospital?

PART II: DESCRIPTION OF POPULATION AND PROCEDURE

Larned State Hospital is a psychiatric institution for the care and treatment of the mentally ill in western Kansas. A therapeutic milieu is maintained at the institution to help the patient gain sufficient stability to be accepted by society. The special education program is one part of this milieu. In this examination of academic performance of the students in the secondary educational program at Larned State Hospital, two main tests were administered. The Wide Range Achievement Test was given all students upon entering and leaving the educational program to obtain grade placement scores in reading, spelling, and arithmetic. The Peabody Picture Vocabulary Test was given all entering students to obtain a level of intellectual ability

for all students. Grade placement for each student was obtained from school transcripts. The number of days each student was present in school was obtained from school attendance reports.

PART III: INTERPRETATION OF THE DATA

The data collected were presented and explained by tables and figures. Tables were used to show the distribution of I.Q. scores for all students, the distribution of grade placement for boys and girls, and a summary of pre- and post-test scores for the Wide Range Achievement Test. Figures were presented that showed the distribution of pre- and post-test WRAT scores in relationship to grade placement by school transcripts. Figure 10 showed the distribution of students in relationship to the number of days in the school program.

PART IV: CONCLUSIONS, INTERPRETATIONS, AND RECOMMENDATIONS

It was found that the hospitalized students varied in academic ability from the second grade level to the twelfth grade level. Students, on the average, entered the hospital reading at a 7.86 grade level, spelling at a 6.54 grade level, and computing math at a 5.99 grade level. Upon dismissal from the institution students had, on an average, improved their scores as follows: reading--8.60, spelling--6.98, and arithmetic--6.59. The mean I.Q. for the student population was 94. In general, however, the distribution of intelligence test scores followed a normal distribution. Sixty-two days were the average number of days present in the education program.

It was recommended that a curriculum be developed to more adequately meet the needs of a population primarily enrolled in grades seven, eight, nine, and ten rather than stress the last years of high school. Two additional

staff members could be utilized: (1) to facilitate communication between the hospital team, (2) to place the student into a hospital educational program, and (3) to improve the movement of the student back into the community. The classroom teacher should be aware of the academic ability of his students and proceed to facilitate the student's academic growth and eventual return to a normal school setting.