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ABSTRACT
        The purpose of the Memphis Effective Schools Project
(MESP), first initiated in the fall of 1982, is to help alleviate
educational deficits that black students have acquired over the years
of segregated schooling. The philosophy behind the MESP is that all
students can learn in a conducive learning environment; this study
assesses students' perceptions of their learning environment.
Questionnaires were administered to all seventh, ninth, tenth and
eleventh grade students from 11 Memphis City Schools to determine the
following: (1) the MESP students' perceptions of classroom climate in
relation to 15 measurable class group properties (cohesiveness,
friction, cliqueness, competitiveness, favoritism, democracy,
satisfaction, apathy, diversity, goal direction, disorganization,
difficulty, formality, speed, and environment); and (2) differences
between the MESP and two control groups on each of the 15 class group
properties, and between the grades examined. The following results
were discovered: (1) there are significant differences on class group
properties within the effective schools; (2) MESP students perceived
more cohesiveness, satisfaction, democracy, and formality than did
members of the control groups; (3) there was more cliqueness in the
lower grades, regardless of group; and (4) the innercity students
perceived the subject matter as less difficult and at the same time
perceived more friction in the classroom than did the students in the
more affluent schools. Data are presented on 20 tables and figures. A
105-item Learning Environment Inventory is appended. (BJV)

CLASSROOM CLIMATE PROPERTIES

FOR THE

MEMPHIS EFFECTIVE SCHOOLS PROJECT

ON THE

LEARNING ENVIRONMENT INVENTORY

AUGUST 1987

by

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2

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CLASSROOM CLIMATE PROPERTIES
FOR THE
MEMPHIS EFFECTIVE SCHOOLS PROJECT
ON THE
LEARNING ENVIRONMENT INVENTORY

Introduction

The assessment of the learning environment is an important aspect of the evaluation of the Memphis Effective Schools Project (MESP). Two key components of the evaluation of the learning environment are the professional staffs' perceptions of the learning environment and the students' perceptions of the learning environment. An analyses of the professional staffs' perceptions of the learning environment can be found in two reports titled Memphis Effective Schools Project Interim Report on School Learning Climate (Cervetti, Memphis City Schools, March 1985) and Assessment of School Learning Climate (Cervetti, Memp.,is City Schools, July 1985). This particular report, however deals with the students' perceptions of the learning environment.

As explained by Anderson (1973):
Schools in the twentieth century are comprised largely of classes - groups of children working and learning to-gether. Classes may be formal, structured groups with pupils sitting smartly in rows and all activities prescribed by the teacher; they may be more outwardly complex with pupils coming and going at will, forming small interest groups and simultaneously indulging in a great variety of activities; they may involve persons learning in groups outside the walls of traditional schools. While one can easily observe gross differences in the pupil behaviors associated with different kinds of such curricula, the emotions, feelings, reactions and stresses on pupils are not easily inferred from their behavior alone. The importance of pupil perceptions of their learning environment cannot easily be denied. For once, the collection of pupils who find themselves together on the first day of school begin to interact, they cease to function as individuals and begin to respond as members of the class group. Their reactions and learning behaviors are then tempered by their peers and the rules of the social group of which they are a part.

In this respect, measuring classroom climate is important because it can be used to provide feedback to teachers and administrators to better enable them to evaluate certain affective components of educational programs, and to make inferences about the effects of class group characteristics of pupil learning within the class.

Purpose of the Study

The purposes of this study were twofold. Part I of this study attempted to describe the MESP students' perceptions of classroom climate in relation to 15 measurable class group properties (defined below). Part II of this study attempted to discern if there were any significant differences between the MESP and the two control groups on each of the 15 class group properties and between grades seven, nine, ten, and eleven. In other words, did group membership (MESP, Group A, and Group B) or grade (7, 9, 10, and 11) contribute significantly to how students responded to the questionnaire containing the 15 class group properties.

Methodology

Instrumentation

The instrument used for this study was the Learning Environment Inventory (LEI). This instrument consists of 105 items that measure 15 class group properties as perceived by the pupils in the classroom (see Appendix A). These properties include interpersonal relationships among pupils (cohesiveness, friction, cliqueness, and competitiveness), relationships between pupils and their teacher (favoritism, democratic, and satisfaction), relationships between pupils and both the subject studied and the method of learning (apathy, diversity, goal direction, disorganization, and difficulty), and finally, pupils' perceptions of the structural characteristics of the class (formality, speed, and environment).

2

7

Each of the 105 items on the inventory is listed in Table 1 under the property it has been assigned. There is a total of 7 items per property (15 properties x 7 items = 105). A student's score is computed by adding together the responses of each item for each property. The polarity on some items was reversed when scoring as noted in Table 1. The responses on each item ranged from one to four (strongly disagree to strongly agree, respectively). Students were given approximately 50 minutes to complete the inventory. The highest score one could achieve on each of the class properties was 28 (7 x 4 = 28). The lowest score possible was 7 (7 x 1 = 7). For example, a score of 28 on the cohesiveness property meant that the student felt the class had a very favorable cohesiveness property. However, a score of 7 meant that the student felt the class had a very low cohesiveness factor. One limitation of the study is that the instrument was given to students during their first period class only. Furthermore, because this study addressed group membership (MESP, Group A, and Group B), no control was placed on which particular subject areas received the inventory.

A brief description of each class group property as defined in this study is now presented.

1. Cohesiveness – When several individuals interact for a period of time a feeling of intimacy or cohesiveness may develop.

2. Diversity – The extent to which the class provides for a diversity of pupil interests and activities.

3. Formality – The extent to which behavior within the class is guided by formal rules.

4. Speed – The individual student's perception of how fast the teacher covers the work.

5. Environment – The physical environment of learning.

6. Friction – The individual's perception of the amount of dis- agreement or conflict because of differences in a class.

3

8

7. Goal Direction - The recognition of goals and their sub-sequent acceptance by the class.

8. Favoritism - Indicates whether given pupils have a low academic self concept.

9. Difficulty - Difficulty scores are highly related to measures of cognitive learning with pupils generally learning most in classes perceived as the most dif-ficult.

10. Apathy - This property complements the cohesiveness pro-perty and indicates whether individuals within the class feel no affinity with class activities.

11. Democratic - This property indicates the extent to which students are treated equally.

12. Cliqueness - Indicates the extent to which the class feels there is a small, exclusive circle or circles of people within the class. Subgroups, or cliques within a class can lead to hostility among members of the class. However, in some instances, cliques can be pos-itive in orientation and lead to increased learning for certain pupils.

13. Satisfaction - Whether or not pupils like their class and/or teacher can be expected to affect their learning.

14. Disorganization - The amount of confusion in a class. High disorganization leads to a reduction in pupil learning.

15. Competitiveness - The amount of competition in a class.

Subjects

The subjects for this study consisted of all seventh, ninth, tenth, and eleventh grade students from various Memphis City Schools. The schools were divided into three groups, the MESP schools and two sets of control schools. The MESP group of schools serve virtually all minority, all poor students in the inner city. Group A was the set of control schools whose populations, economic levels, and geographic locations were similar to the MESP schools. It should be mentioned that each Group A school would qualify as a MESP school. Group B consisted of a random

4

sample of the remaining Memphis City Schools minus any optional schools. The three groups of schools are shown in Table 2. The students completed the LEI during the spring of 1985.

Quantitative Analyses

The statistical method used for analyzing Part I of this study - the differences between the MESP students at each school on the 15 class group properties - was the analysis of variance (ANOVA) procedure. The ANOVA procedure was also used for analyzing Part II of the study - the effects of grade (7, 9, 10, and 11) and group membership (MESP, Group A, and Group B) on the 15 class group properties. In analyzing the difference between group membership and grade on the 15 class group properties a two-factor ANOVA was used. Graphs (Figures 1-15) were also used to illustrate interactions between the group and the grade variables.

5

10

Table 1

Learning Environment Inventory Properties and Items

Item	Property

1. Cohesiveness

1. Members of the class do favors for one another.

18. A student has the chance to get to know all other students in the class.

32. Members of the class are personal friends.

56. All students know each other very well.

*R58. Students are not in close enough contact to develop likes or dislikes for one another.

R71. The class is made up of individuals who do not know each other well.

91. Each student knows the other members of the class by their first names.

2. Diversity

4. The class has students with many different interests.

11. Interests vary greatly within the group.

34. Some students are interested in completely different things than other students.

37. Class members tend to pursue different kinds of problems.

72. The class divides its efforts among several purposes.

86. The class is working toward many different goals.

95. Different students vary a great deal regarding which aspects of the class they are interested in.

3. Formality

7. Students who break the rules are penalized.

16. The class has rules to guide its activities.

48. Students are asked to follow strict rules.

R59. The class is rather informal and few rules are imposed.

61. There is a recognized right and wrong way of going about class activities.

68. All classroom procedures are well-established.

81. There is a set of rules for the students to follow.

Table 1 (Continued)

Item	Property

4. Speed

27. The pace of the class is rushed.

R73. The class has plenty of time to cover the prescribed amount of work.

R75. Students do not have to hurry to finish their work.

85. There is little time for day-dreaming.

87. The class members feel rushed to finish their work.

93. The class has difficulty keeping up with its assigned work.

102. The course material is covered quickly.

5. Environment

2. The books and equipment students need or want are easily available to them in the classroom.

12. A good collection of books and magazines is available in the classroom for students to use.

26. The students would be proud to show the classroom to a visitor.

36. The room is bright and comfortable.

55. There are displays around the room.

R57. The classroom is too crowded.

90. There is enough room for both individual and group work.

6. Friction

8. There is constant bickering among class members.

30. Certain students have no respect for other students.

44. There are tensions among certain groups of students that tend to interfere with class activities.

69. Certain students in the class are responsible for petty quarrels.

82. Certain students don't like other students.

88. Certain students are considered uncooperative.

103. There is an undercurrent of feeling among students that tends to pull the class apart.

7

12

Table 1 (Continued)

Item	Property

7. Coal Direction

10.	The class knows exactly what it has to get done.
R23.	The objectives of the class are not clearly recognized.
R60.	Students have little idea of what the class is attempting to accomplish.
65.	The objectives of the class are specific.
67.	Each student knows the goals of the course.
83.	The class realizes exactly how much work it is required to do.
96.	Each student in the class has a clear idea of the class goals.

8. Favoritism

9.	The better students' questions are more sympathetically answered than those of the average students.
R14.	Every member of the class enjoys the same privileges.
22.	The better students are granted special privileges.
24.	Only the good students are given special projects.
49.	The class is controlled by the actions of a few members who are favored.
74.	Students who have past histories of being discipline problems are discriminated against.
98.	Certain students are favored more than the rest.

9. Cliqueness

5.	Certain students work only with their close friends.
R20.	Students cooperate equally well with all class members.
28.	Some students refuse to mix with the rest of the class.
31.	Some groups of students work together regardless of what the rest of the class is doing.
76.	Certain groups of friends tend to sit together.
R97.	Most students cooperate equally with other class members.
100.	Certain students stick together in small groups.

Table 1 (Continued)

Item	Property

10. Satisfaction

6. The students enjoy their class work.

17. Personal dissatisfaction with the class is too small to be a problem.

R21. Many students are dissatisfied with much that the class does.

R38. There is considerable dissatisfaction with the work of the class.

52. The members look forward to coming to class meetings.

63. After the class, the students have a sense of satisfaction.

79. Students are well-satisfied with the work of the class.

11. Disorganization

3. There are long periods during which the class does nothing.

19. The work of the class is frequently interrupted when some students have nothing to do.

R33. The class is well organized.

40. The class is disorganized.

R45. The class is well organized and efficient

70. Many class members are confused during class meetings.

94. There is a great deal of confusion during class meetings.

12. Difficulty

13. The work of the class is difficult.

46. Students are constantly challenged.

R53. The subject studied requires no particular aptitude on the part of the students.

66. Students in the class tend to find the work hard to do.

R78. The subject presentation is too elementary for many students.

R101. Most students consider the subject-matter easy.

104. Many students in the school would have difficulty doing the advanced work of the class.

9

Table 1 (Continued)

Item	Property

13. Apathy

39. Failure of the class would mean little to individual members.

50. Students don't care about the future of the class as a group.

54. Members of the class don't care what the class does.

R84. Students share a common concern for the success of the class.

R89. Most students sincerely want the class to be a success.

92. Failure of the class would mean nothing to most members.

R99. Students have a great concern for the progress of the class.

14. Democratic

25. Class decisions tend to be made by all the students.

29. Decisions affecting the class tend to be made democratically.

R35. Certain students have more influence on the class than others.

R42. Certain students impose their wishes on the whole class.

51. Each member of the class has as much influence as any other member.

62. What the class does is determined by all the students.

R80. A few members of the class have much greater influence than the other members.

15. Competitiveness

15. Most students want their work to be better than their friends' work.

41. Students compete to see who can do the best work.

43. A few of the class members always try to do better than the others.

47. Students feel left out unless they compete with their classmates.

R64. Most students cooperate rather than compete with one another.

77. There is much competition in the class.

R105. Students seldom compete with one another.

*R denotes an item with reverse polarity.

Table 2

Secondary Schools Participating in LEI Study

MESP	Group A	Group B
Location 1 (7-9)	Location 6 (7-9)	Location 9 (7-9)
Location 2 (7-9)	Location 7 (7-12)	Location 10 (10-12)
Location 3 (7-9)	Location 8 (9-12)	Location 11 (7-12)
Location 4 (9-12)		
Location 5 (7-8)		

Results

The results for Part I of the study are presented in Tables 3 and 4. Again, Part I attempted to describe the MESP students' perceptions of classroom climate in relation to the 15 class group properties for each of the junior and senior highs in the MESP. Table 3 presents the means of the 15 class group properties for each of the MESP schools and indicates whether those means are significantly different. The means of diversity, speed, environment, difficulty, and competitiveness showed no differences. However, the means on cohesiveness, formality, friction, goal direction, favoritism, satisfaction, disorganization, apathy, and democratic showed significant differences. Duncan's multiple range test was used to indicate exactly which means were significantly different. Table 4 shows the results of Duncan's multiple range tests.

For the cohesiveness property, it can be seen that differences existed in the perception of cohesiveness between the students at Location 1 and Location 2 (.8), Location 1 and Location 5 (.7), Location 1 and Location 3 (.7), Location 2 and Location 5 (1.5), Location 2 and Location 4 (.8), Location 5 and Location 3 (1.4), Location 5 and Location 4 (.7), and Location 3 and Location 4 (.7).

11

16

The largest difference in means existed between Location 2 and Location 5 (1.5), with Location 2 having the highest mean cohesiveness (20.2) and Locatic 5 having the lowest mean cohesiveness (18.7). For the diversity property there was no significant differences found between any of the means. Location 2 had the highest diversity property (20.1) and Location 4 had the lowest (19.4).

Only one pair of schools differed on the formality property, Location 2 and Location 4 had a mean formality of 19.5. There were no significant differences found between any of the schools on the speed and environment properties. Location 5 had the highest speed mean (17.1) and Location 2 had the highest environment mean (20.0). Location 2 had the lowest speed mean (16.6) and Location 5 had the lowest environment mean (19.4).

For friction, Location 1 differed from Location 3 (1.3), Location 2 differed from Location 3 (1.1), and Location 5 differed from both Location 3 (1.8) and Location 4 (1.0). The students indicated that the most friction existed at Location 5, with a mean of 19.9 and the lowest friction was at Location 3, with a mean of 18.1. Only two pairs of schools differed on the goal direction property, Location 2 and Location 5 (1.1) and Location 3 and Location 5 (.9). Location 2 had the largest goal direction mean (19.9) and Location 5 had the smallest (18.8).

On the favoritism property, Location 1 differed from both Location 5 (.9) and Location 3 (1.0). Location 2 differed from Location 5 (1.5) and Location 5 differed from both Location 3 (1.9) and Location 4 (1.3). Location 5 had the highest favoritism mean (17.7) and Location 3 had the low·st (15.8). Only one pair of schools differed on the cliqueness

12

property, Location 5 and Location 3 (1.0). Location 5 had the highest cliqueness mean at 19.5 and Location 3 had a mean of 18.5 for the lowest.

Location 2 and Location 5 (.9) and Location 3 and Location 5 (.9) had significant differences on the satisfaction property. Location 3 and Location 2 had the highest satisfaction property at 17.9 and Location 5 had the lowest at 17.0. The significant differences on the disorganization property existed between Location 2 and Location 5 (1.1), Location 2 and Location 4 (1.0), Location 5 and Location 3 (1.6), and Location 4 and Location 3 (1.5). Disorganization was ranked highest at Location 5 (17.0) and lowest at Location 3 (15.4). There were no significant differences found between the MESP schools on the difficulty property.

The highest mean on the apathy property was found at Location 5 (17.5). The least class apathy was at Location 2 (16.1) and Location 3 (16.1). The significant differences were found between Location 1 and Location 5 (1.1), Location 2 and Location 5 (1.4), Location 2 and Location 4 (.9), Location 3 and Location 5 (1.4), and Location 3 and Location 4 (.9). The largest democratic mean was found at Location 2 (17.7), the smallest democratic mean was found at Location 4 (16.9). Location 2 and Location 3 (.7) and Location 2 and Location 4 (.8) had significant differences. Finally, there were no significant differences between the schools on the competitiveness property. Location 2 students indicated the highest competitiveness (18.6). Location 3 students indicated the lowest competitiveness (18.1).

Part II of the study determined if there were any significant differences between groups (MESP, Group A, and Group B) and grades (7, 9, 10, and 11) on each of the 15 class group properties. The results of these analyses are presented in Table 5. As with the variables in Part I, if

13

any significant differences did exist, a Duncan's multiple range test was used to find exactly which means were significantly different.

From Table 5, for the cohesiveness property, there was a significant difference between the MESP mean (19.6) and Group B mean (19.2). Also, grade 7 was found to be significantly different from grades 9 and 11 (19.1 vs. 19.5 and 19.7, respectively). There was no significant difference on the diversity property. However, the highest mean diversity was found in grades 9 and 11, (both 20.0), and Group B (20.0). The lowest mean diversity was in grade 7 (19.7) and in the MESP and Group A (19.8). The formality property indicated that the MESP had a significiantly higher mean than both Group A and Group B (20.0 vs. 19.6 and 19.5, respectively). Grade 7 had a significantly higher mean than both grades 10 and 11 (19.9 vs. 19.4 and 19.6, respectively).

The MESP had a significantly lower speed property than groups A and B (16.8 vs. 17.2 and 17.5, respectively) and a significantly higher environment property than groups A and B (19.6 vs. 19.1 and 19.0, respectively). Grade 9 had a significantly lower mean speed than grades 10 and 11 (19.9 vs. 17.5 and 17.4, respectively). On the environment property, grade 7 had a significantly lower mean than grade 11 (19.0 vs. 19.5).

For the friction property, a significant interaction occurred. Because of the interaction, the group and grade main effects must be ignored, even though they were significant. Using Duncan's post hoc analysis again, the only significant difference occurred in grade 10, with Group B having a lower mean than the MESP and Group A (18.2 vs. 19.1 and 18.9, respectively). The MESP had a significantly higher mean than Group A and Group B on the goal direction property (19.5 vs. 19.0 and 19.2, respectively). There was no difference indicated on the grade main effects.

14

The results of the analyses for favoritism indicated a significant difference on both group and grade. Group A differed from Group B (16.8 vs. 16.3) and Grade 7 differed from both grades 10 and 11 (17.1 vs. 16.2 and 16.2, respectively). On the cliqueness property, there was a significant effect on grade. Grade 9 differed from grades 10 and 11 (19.2 vs. 18.8 and 18.6).

For the satisfaction property, the MESP had a significantly higher mean (17.6) than Group A and Group B (both with 17.2). Furthermore, grade 11 was significantly higher than grades 7 and 10 (17.6 vs. 17.2 and 17.2, respectively). Disorganization also had significant differences on group and grade. Group A differed from group B (16.5 vs. 16.0, respectively) and grade 7 differed from grade 11 (16.5 vs 15.9, respectively). The difficulty property had a significant interaction. The interaction showed that at grade 10, Group B differed from the MESP and Group A (18.8 vs. 17.8 and 17.8, respectively).

The analyses indicated no difference between group and grade on the apathy property. Finally, on the democratic and competitiveness properties, a significant difference existed between groups. The MESP (17.2) had a higher mean than Group B (16.8) on the democratic property and Group B indicated less competitiveness than the MESP and Group A (17.7 vs. 18.3 and 18.2, respectively). Figures 1-15 illustrate the graphs of each of the analyses in Part II. Figures 6 and 12 are especially interesting to view because it allows one to more easily see and interpret the interactions on the friction and difficulty properties.

Table 3

Classroom Climate Properties for MESP Students

Properties	Positive	Location 1 (n=258)	Location 2 (n=321)	Location 5 (n=213)	Location 3 (n=213)	Location 4 (n=164)
Cohesiveness*	high	19.4	20.2	18.7	20.1	19.4
Diversity	high	19.7	20.1	20.0	19.8	19.4
Formality*	high	20.0	20.4	20.1	19.9	19.5
Speed	high	16.7	16.6	17.1	17.0	17.0
Environment	high	19.5	20.0	19.4	19.9	19.2
Friction*	low	19.4	19.2	19.9	18.1	18.9
Goal Direction*	high	19.6	19.9	18.8	19.7	19.4
Favoritism*	low	16.8	16.2	17.7	15.8	16.4
Cliqueness*	low	18.8	19.0	19.5	18.5	19.2
Satisfaction*	high	17.5	17.9	17.0	17.9	17.5
Disorganization*	low	16.2	15.9	17.0	15.4	16.9
Difficulty	high	17.5	17.5	17.3	17.8	17.9
Apathy*	low	16.4	16.1	17.5	16.1	17.0
Democratic*	high	17.2	17.7	17.2	17.0	16.9
Competitiveness	low	18.2	18.6	18.3	18.1	18.2

*Significant difference found at .01 level.

16

Table 4

ANOVA Results of Classroom Climate
Properties for MESP Schools

		Cohesiveness				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	19.4	20.2	18.7	20.1	19.4
Location 1	19.4		.8*	.7*	.7*	.0
Location 2	20.2			1.5*	.1	.8*
Location 5	18.7				1.4*	.7*
Location 3	20.1					.7*
Location 4	19.4					

		Diversity				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	19.7	20.1	20.0	19.8	19.4
Location 1	19.7		.4	.3	.1	.3
Location 2	20.1			.1	.3	.7
Location 5	20.0				.2	.6
Location 3	19.8					.4
Location 4	19.4					

		Formality				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	20.0	20.4	20.1	19.9	19.5
Location 1	20.0		.4	.1	.1	.5
Location 2	20.4			.3	.5	.9*
Location 5	20.1				.2	.6
Location 3	19.9					.4
Location 4	19.5					

*Indicates significant difference using Duncan's Multiple-Range Test for difference between means.

17

Table 4 (Continued)

| | | Speed | | | | |
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	16.7	16.6	17.1	17.0	17.0
Location 1	16.7		.1	.4	.3	.3
Location 2	16.6			.5	.4	.4
Location 5	17.1				.1	.1
Location 3	17.0					.0
Location 4	17.0					

| | | Environment | | | | |
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	19.5	20.0	19.4	19.9	19.2
Location 1	19.5		.5	.1	.4	.3
Location 2	20.0			.6	.1	.8
Location 5	19.4				.5	.2
Location 3	19.9					.7
Location 4	19.2					

| | | Friction | | | | |
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	19.4	19.2	19.9	18.1	18.9
Location 1	19.4		.2	.5	1.3*	.5
Location 2	19.2			.7	1.1*	.3
Location 5	19.9				1.8*	1.0*
Location 3	18.1					.8
Location 4	18.9					

*Indicates significant difference using Duncan's Multiple-Range Test for difference between means.

18
23

Table 4 (Continued)

		Goal Direction				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	19.6	19.9	18.8	19.7	19.4
Location 1	19.6		.3	.8	.1	.2
Location 2	19.9			1.1*	.2	.5
Location 5	18.8				.9*	.6
Location 3	19.7					.3
Location 4	19.4					

		Favoritism				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	16.8	16.2	17.7	15.8	16.4
Location 1	16.8		.6	.9*	1.0*	.4
Location 2	16.2			1.5*	.4	.2
Location 5	17.7				1.9*	1.3*
Location 3	15.8					.6
Location 4	16.4					

		Cliqueness				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	18.8	19.0	19.5	18.5	19.2
Location 1	18.8		.2	.7	.3	.4
Location 2	19.0			.5	.5	.2
Location 5	19.5				1.0*	.3
Location 3	18.5					.7
Location 4	19.2					

*Indicates significant difference using Duncan's Multiple-Range Test for difference between means.

19

Table 4 (Continued)

		Satisfaction				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	17.5	17.9	17.0	17.9	17.5
Location 1	17.5		.4	.5	.4	.0
Location 2	17.9			.9*	.0	.4
Location 5	17.0				.9*	.5
Location 3	17.9					.4
Location 4	17.5					

		Disorganization				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	16.2	15.9	17.0	15.4	16.9
Location 1	16.2		.3	.8	.8	.7
Location 2	15.9			1.1*	.5	1.0*
Location 5	17.0				1.6*	.1
Location 3	15.4					1.5*
Location 4	16.9					

		Difficulty				
		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	17.5	17.5	17.3	17.8	17.9
Location 1	17.5		.0	.2	.3	.4
Location 2	17.5			.2	.3	.4
Location 5	17.3				.5	.6
Location 3	17.8					.1
Location 4	17.9					

*Indicates significant difference using Duncan's Multiple-Range Test for difference between means.

Table 4 (Continued)

Apathy

		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	16.4	16.1	17.5	16.1	17.0
Location 1	16.4		.3	1.1*	.3	.6
Location 2	16.1			1.4*	.0	.9*
Location 5	17.5				1.4*	.5
Location 3	16.?					.9
Location 4	17.0					

Democratic

		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	17.2	17.7	17.2	17.0	16.9
Location 1	17.2		.5	.0	.2	.3
Location 2	17.7			.5	.7*	.8*
Location 5	17.2				.2	.3
Location 3	17.0					.1
Location 4	16.9					

Competitiveness

		Location 1	Location 2	Location 5	Location 3	Location 4
	Mean	18.2	18.6	18.3	18.1	18.2
Location 1	18.2		.4	.1	.1	.0
Location 2	18.6			.3	.5	.4
Location 5	18.3				.2	.1
Location 3	18.1					.1
Location 4	18.2					

*Indicates significant difference using Duncan's Multiple-Range Test for difference between means.

21

Table 5

ANOVA Results for Each Grade on Each
Climate Property Scale

Cohesiveness

	Grade 7	Grade 9	Grade 10	Grade 11	Group
MESP	19.3	19.7	19.7	20.0	19.6
Group A	19.0	19.5	19.4	19.6	19.4
Group B	18.7	19.3	19.1	19.5	19.2
Grade	19.1	19.5	19.4	19.7	

	F-Ratio	Probability	Significant
Group	8.99	.0001	Yes*
Grade	8.33	.0001	Yes**
Group X Grade	0.13	.9928	No

*Significant difference between MESP vs. Group B.

**Sign: 'cant difference between Grade 7 vs. Grades 9 and 11.

Diversity

	Grade 7	Grade 9	Grade 10	Grade 11	Group
MESP	19.9	19.8	19.8	19.5	19.8
Group A	19.4	20.1	19.7	20.0	19.8
Group B	19.6	20.0	20.3	20.1	20.0
Grade	19.7	20.0	19.9	20.0	

	F-Ratio	Probability	Significant
Group	2.76	.0637	No
Grade	2.92	.0323	No
Group X Grade	2.65	.0143	No

Table 5 (Continued)

Formality

	7	9	10	11	Group
Grade					
MESP	20.2	19.9	19.4	20.1	20.0
Group A	19.9	19.7	19.2	19.5	19.6
Group B	19.6	19.5	19.6	19.3	19.5
Grade	19.9	19.7	19.4	19.6	

	F-Ratio	Probability	Significant
Group	6.78	.0011	Yes*
Grade	4.10	.0067	Yes**
Group X Grade	1.77	.1015	No

*Significant difference between MESP vs. Groups A and B.

**Significant difference between Grade 7 vs. grades 10 and 11.

Speed

	7	9	10	11	Group
Grade					
MESP	16.8	16.7	17.1	16.7	16.8
Group A	17.0	17.2	17.2	17.3	17.2
Group B	17.5	16.9	17.9	17.7	17.5
Grade	17.1	16.9	17.5	17.4	

	F-Ratio	Probability	Significant
Group	13.04	.0001	Yes*
Grade	4.47	.0041	Yes**
Group X Grade	1.76	.1023	No

*Significant difference between MESP vs. Groups A and B.

**Significant difference between Grade 9 vs. Grades 10 and 11.

23

Table 5 (Continued)

Environment

	7	9	10	11	Group
			Grade		
MESP	19.5	19.7	19.4	19.9	19.6
Group A	18.6	19.1	19.3	19.5	19.1
Group B	18.6	18.6	19.2	19.4	19.0
Grade	19.0	19.2	19.3	19.5	

	F-Ratio	Probability	Significant
Group	15.61	.0001	Yes*
Grade	7.07	.0001	Yes**
Group X Grade	1.59	.1455	No

*Significant difference between MESP vs. Groups A and B.
**Significant differences between grades 7 and 11.

Friction

	7	9	10	11	Group
			Grade		
MESP	19.6	19.0	18.9	17.8	19.1
Group A	19.0	19.2	18.7	18.4	18.9
Group B	18.8	19.2	17.5	17.4	18.2
Grade	19.2	19.1	18.3	17.8	

	F-Ratio	Probability	Significant
Group	9.7ᴄ	.0001	Yes
Grade	22.64	.0001	Yes
Group X Grade	3.64	.0013	Yes*

*Significant difference in grade 10 between Group B vs. MESP
and Group A.

24

Table 5 (Continued)

Goal Direction

	Grade				
	7	9	10	11	Group
MESP	19.3	19.8	19.3	19.9	19.5
Group A	18.8	18.9	19.0	19.2	19.0
Group B	18.7	19.3	19.3	19.3	19.2
Grade	19.0	19.3	19.2	19.4	

	F-Ratio	Probability	Significant
Group	9.56	.0001	Yes*
Grade	3.79	0.01	No
Grcup X Grade	0.71	.6385	NO

*Significant difference between MESP vs. Groups A and B.

Favoritism

	Grade				
	7	9	10	11	Group
MESP	17.1	16.4	16.3	15.8	16.6
Group A	17.3	16.9	16.7	16.3	16.8
Group B	16.8	16.6	15.8	16.2	16.3
Grade	17.1	16.6	16.2	16.2	

	F-Ratio	Probability	Significant
Group	5.34	.0048	Yes*
Grade	11.30	.0001	Yes**
Group X Grade	1.29	.2584	No

*Significant difference between Group A and Group B.

**Significant difference between Grade 7 vs. Grader 10 and 11.

25

Table 5 (Continued)

Cliqueness

	7	Grade 9	10	11	Group
MESP	19.0	18.9	19.2	18.8	19.0
Group A	19.0	19.4	19.0	18.9	19.1
Group B	18.8	19.6	18.4	18.3	18.8
Grade	19.0	19.3	18.8	18.6	

	F-Ratio	Probability	Significant
Group	2.77	.0630	No
Grade	6.29	.0004	Yes*
Group X Grade	2.79	.0104	No

**Significant differences between grade 9 vs. grades 10 and 11.

Satisfaction

	7	Grade 9	10	11	Group
MESP	17.5	17.5	17.4	18.0	17.6
Group A	16.9	17.2	17.0	17.5	17.2
Group B	16.8	17.3	17.1	17.5	17.2
Grade	17.2	17.3	17.1	17.6	

	F-Ratio	Probability	Significant
Group	7.20	.0008	Yes*
Grade	5.67	.0008	Yes**
Group X Grade	.57	.7548	No

*Significant difference between MESP vs. Groups A and B.

**Significant difference between Grade 11 vs. Grades 7 and 10.

26

Table 5 (Continued)

Disorganization

	Grade				
	7	9	10	11	Group
MESP	16.4	16.3	16.4	15.5	16.3
Group A	16.8	16.7	16.5	16.0	16.5
Group B	16.4	16.1	15.5	16.0	16.0
Grade	16.5	16.4	16.1	15.9	

	F-Ratio	Probability	Significant
Group	5.16	.0058	Yes*
Grade	5.52	.0010	Yes**
Group X Grade	1.85	.0853	NO

*Significant difference between Group A and Group B.
**Significant differences between grades 7 and 11.

Difficulty

	Grade				
	7	9	10	11	Group
MESP	17.2	17.7	17.8	18.3	17.6
Group A	17.2	17.8	17.8	18.1	17.7
Group B	17.3	17.5	18.8	18.5	18.1
Grade	17.2	17.7	18.2	18.3	

	F-Ratio	Probability	Significant
Group	4.29	.0138	No
Grade	25.54	.0001	Yes
Group X Grade	3.75	.0010	Yes*

**Significant difference at grade 10 between Group B vs. MESP and Group A.

27

Table 5 (Continued)

Apathy

	Grade 7	9	10	11	Group
MESP	16.7	16.6	16.7	16.0	16.6
Group A	16.6	16.9	16.8	16.5	16.7
Group B	17.0	16.9	16.5	16.7	16.7
Grade	16.7	16.8	16.6	16.5	

	F-Ratio	Probability	Significant
Group	1.46	.2319	No
Grade	2.10	.0963	No
Group X Grade	1.10	.360ℓ	No

Democratic

	Grade 7	9	10	11	Group
MESP	17.5	17.2	16.8	17.2	17.2
Group A	17.2	16.7	17.1	17.0	17.0
Group B	16.6	16.8	16.8	16.9	16.8
Grade	17.2	16.9	16.9	17.0	

	F-Ratio	Probability	Significant
Group	6.01	.0025	Yes*
Grade	1.32	.2662	No
Group X Grade	2.42	.0248	No

*Significant difference between MESP vs. Group B.

28

Table 5 (Continued)

Competitiveness

	Grade				
	7	9	10	11	Group
MESP	18.3	18.2	18.3	18.2	18.3
Group A	18.1	18.3	18.1	18.5	18.2
Group B	17.6	17.9	17.5	17.7	17.7
Grade	18.1	18.2	17.9	18.1	

	F-Ratio	Probability	Significant
Group	14.51	.0001	Yes*
Grade	1.13	.3364	No
Group X Grade	0.40	.8822	No

*Significant difference between Group B vs. MESP and Group A.
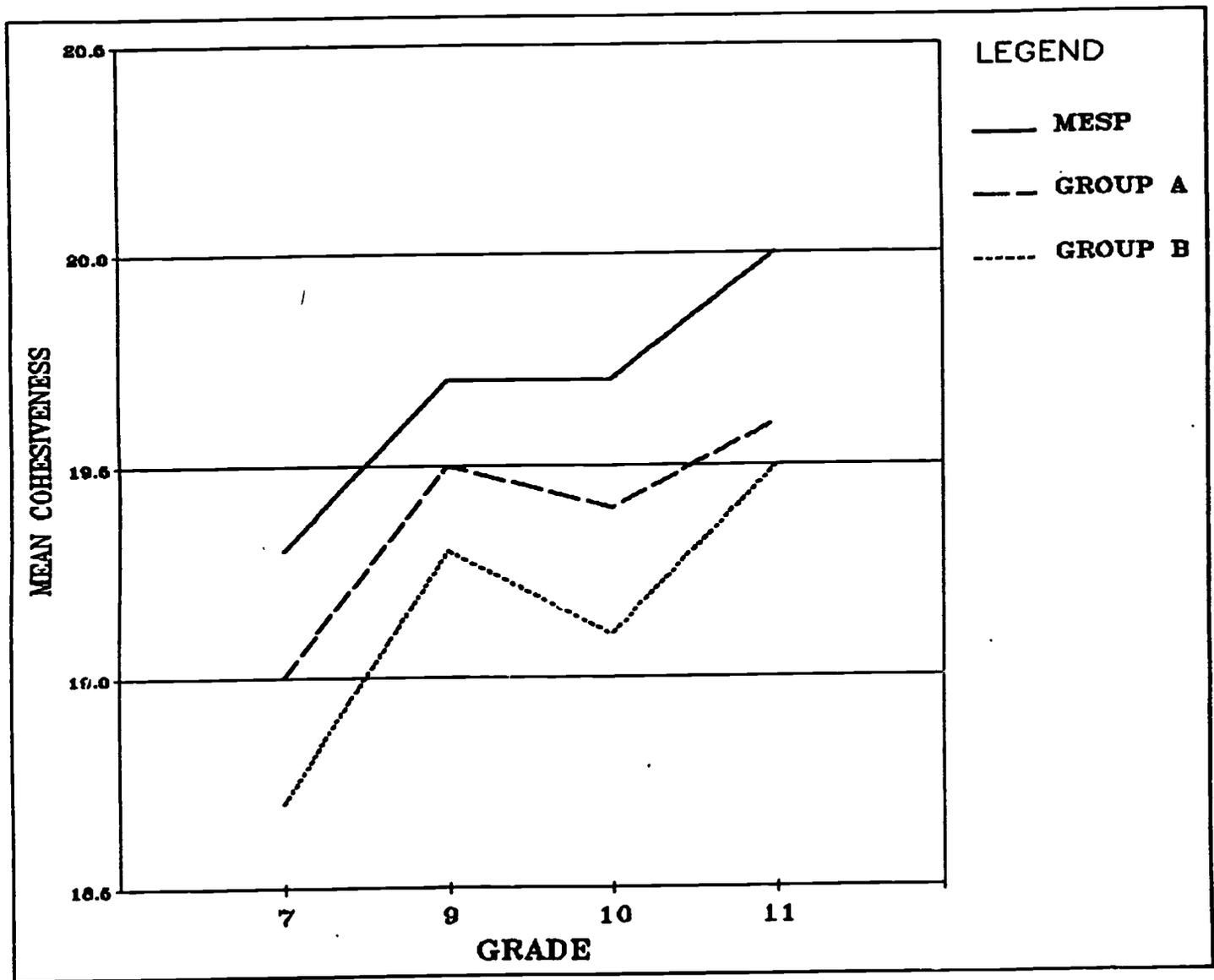
Figure 1. Mean Cohesiveness Property by Grade for MESP, Group A, and Group B.
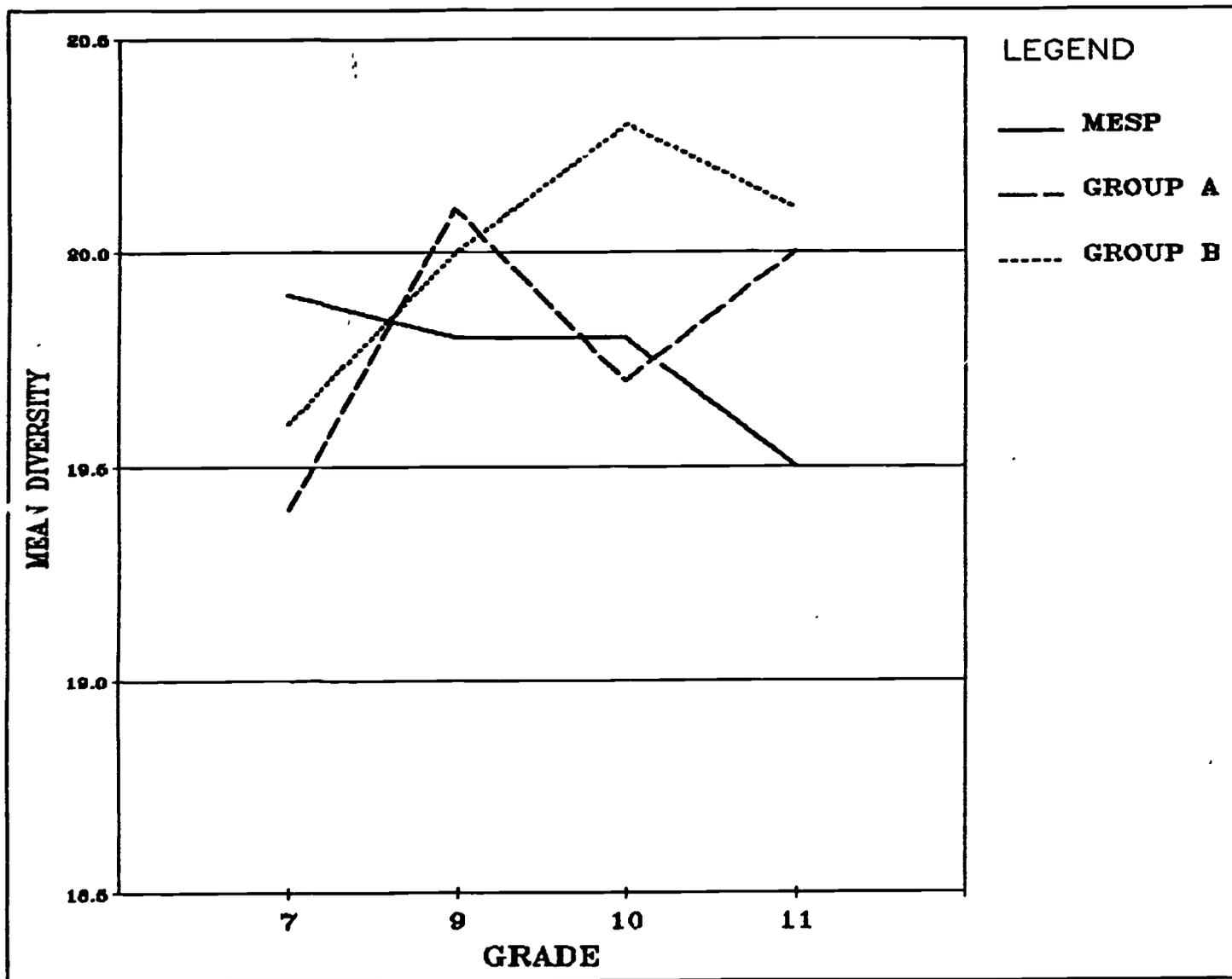
Figure 2. Mean Diversity Property by Grade for MESP, Group A, and Group B.
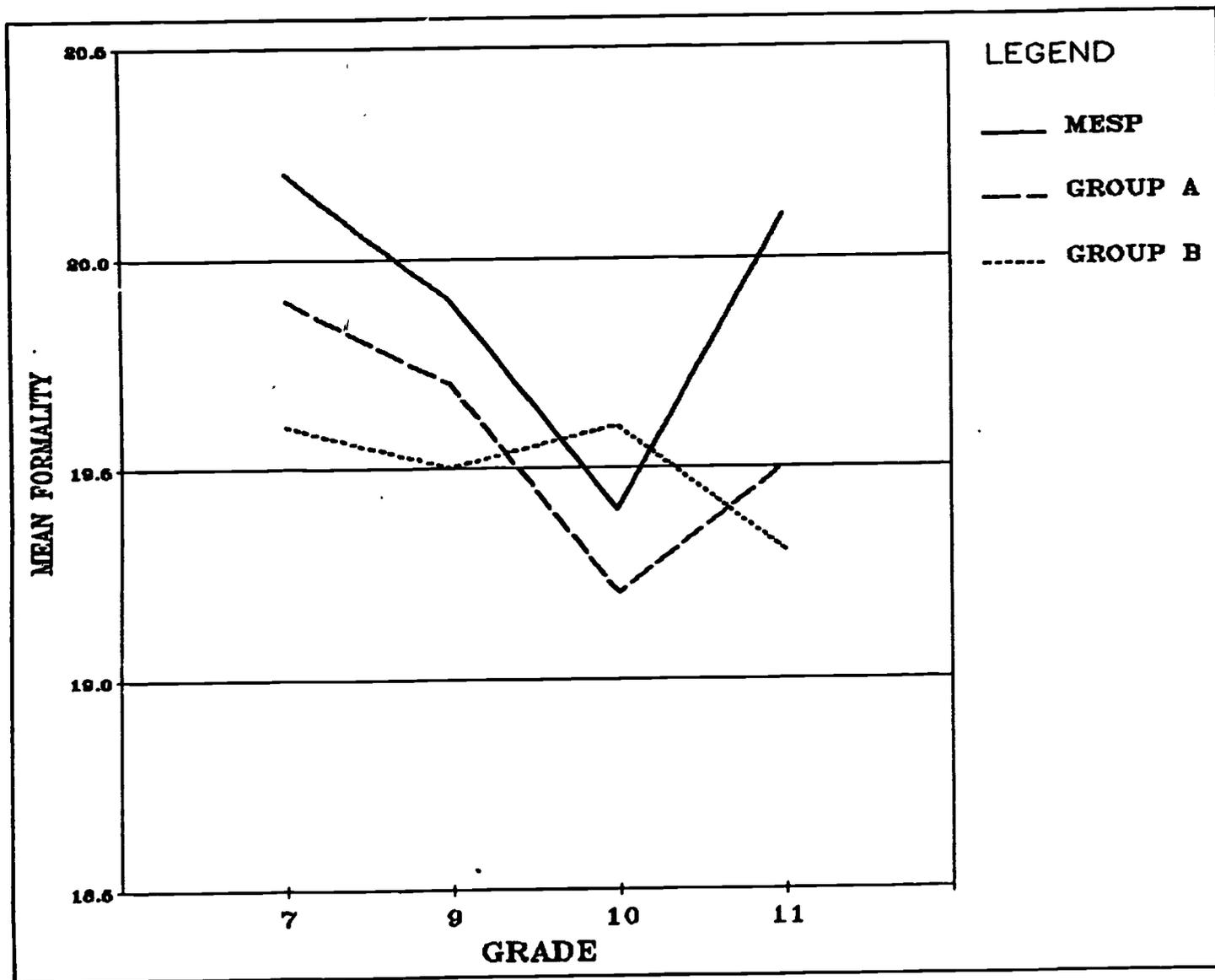
Figure 3. Mean Formality Property by Grade for MESP, Group A, and Group B.
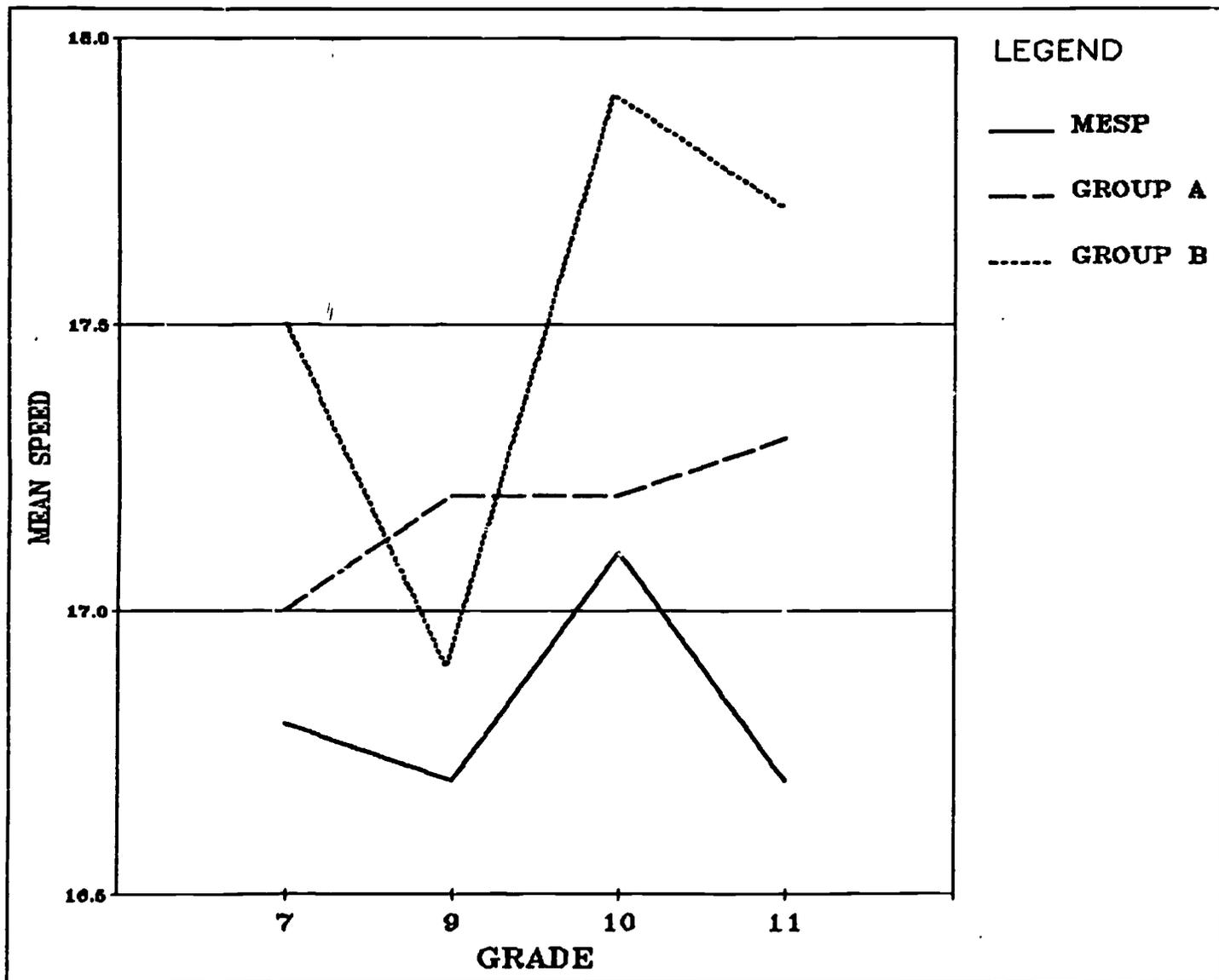
Figure 4. Mean Speed Property by Grade for MESP, Group A, and Group B.
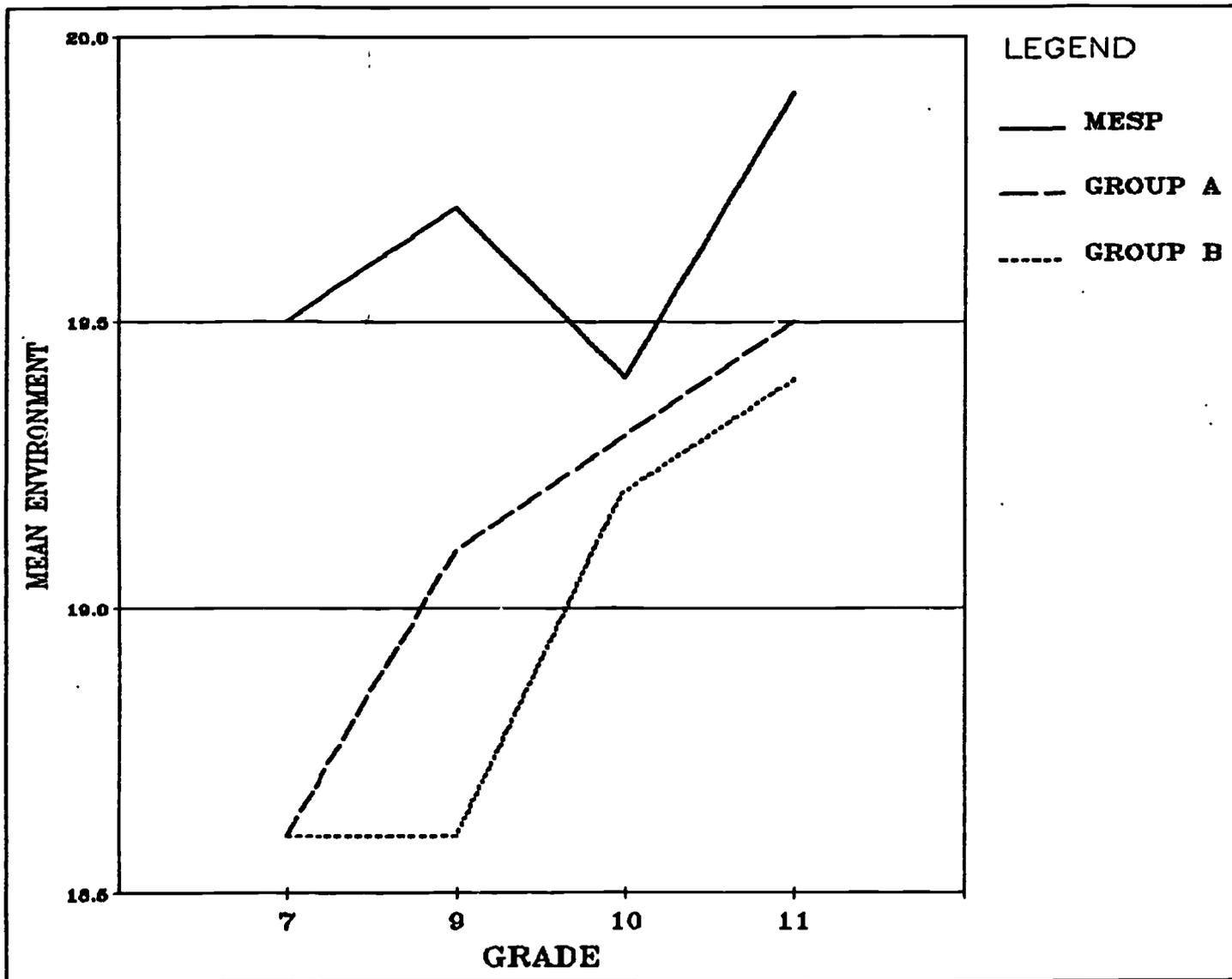
Figure 5. Mean Environment Property by Grade for MESP, Group A, and Group B.
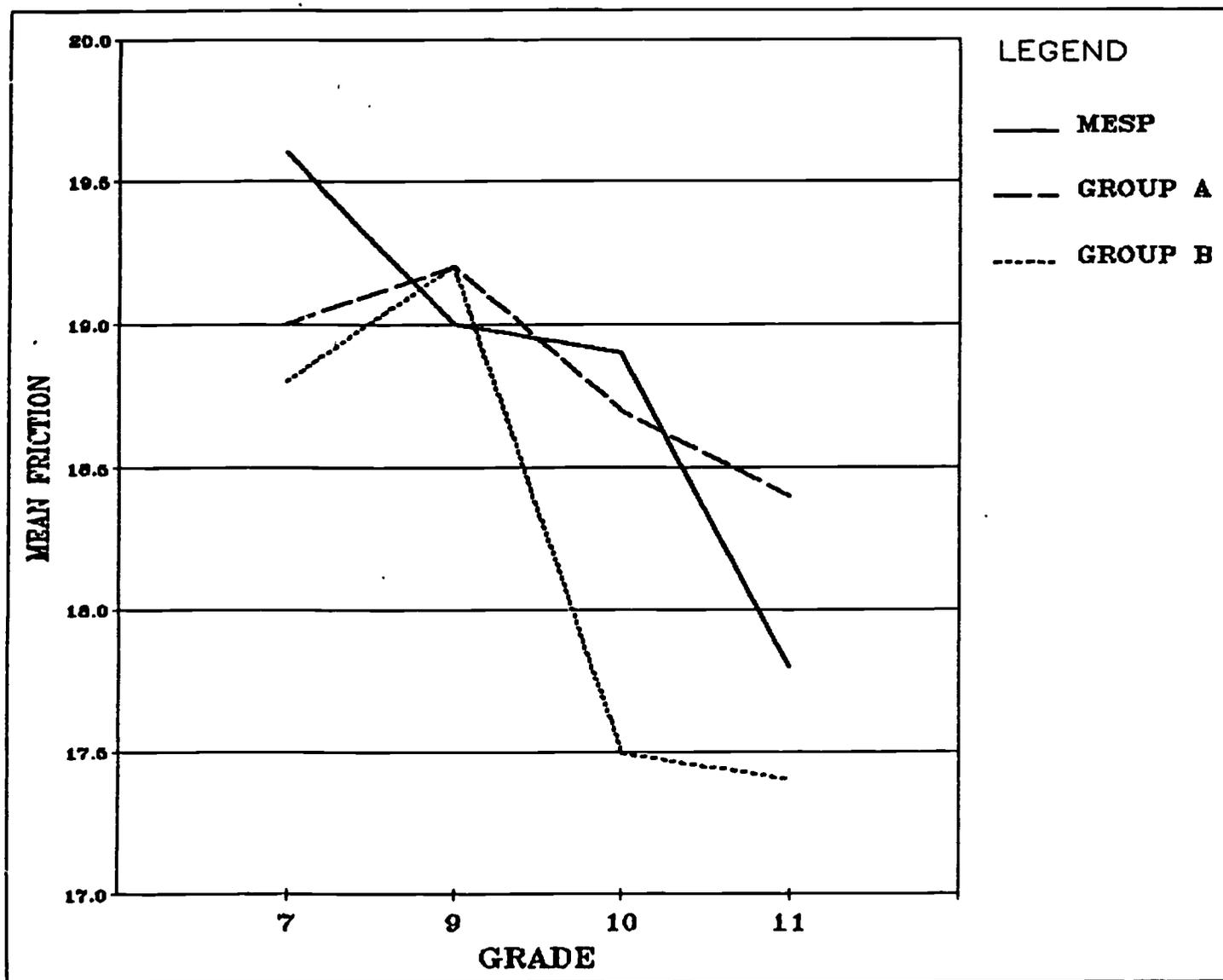
Figure 6. Mean Friction Property by Grade for MESP, Group A, and Group B.

40
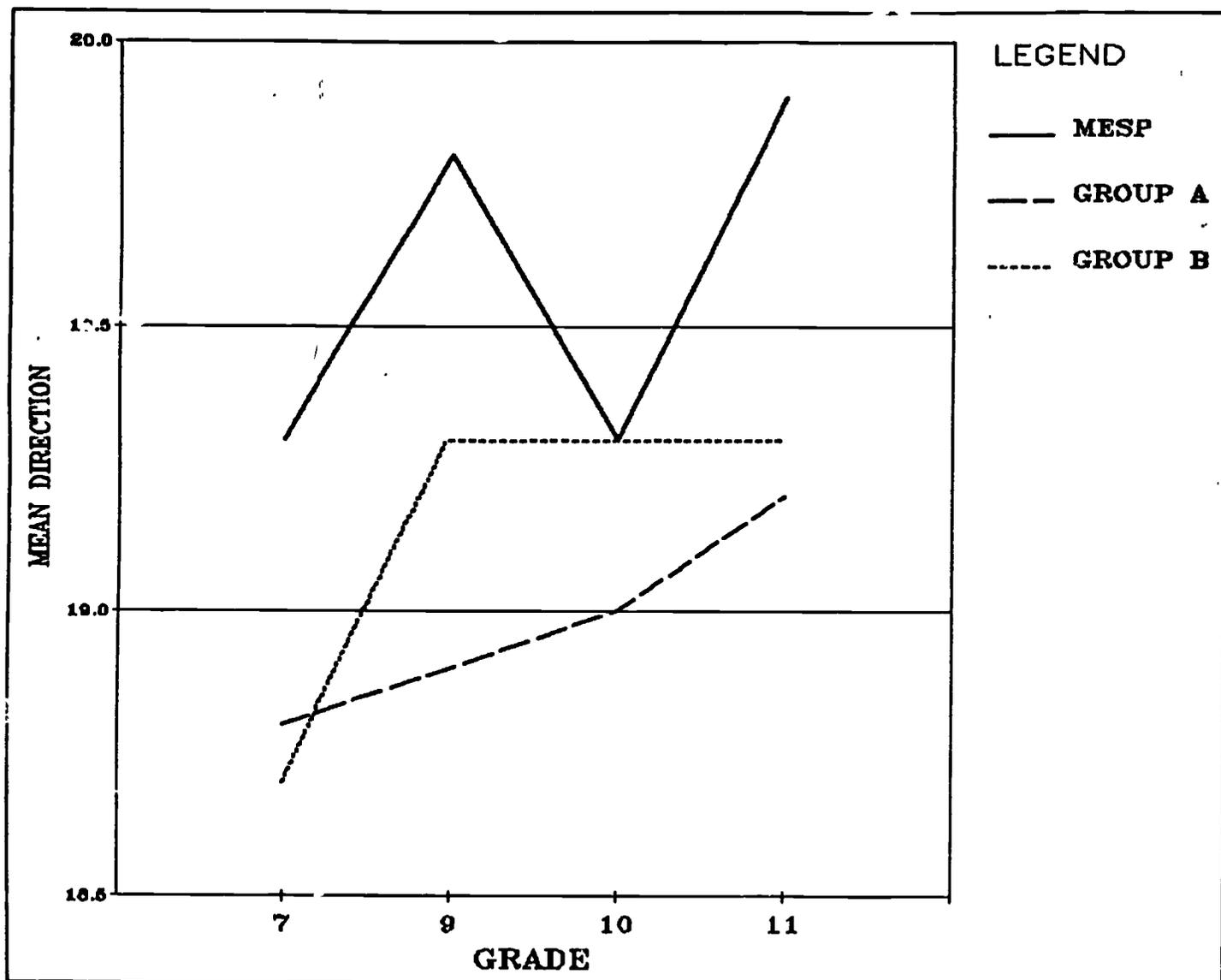
Figure 7. Mean Direction Property by Grade for MESP, Group A, and Group B.

41
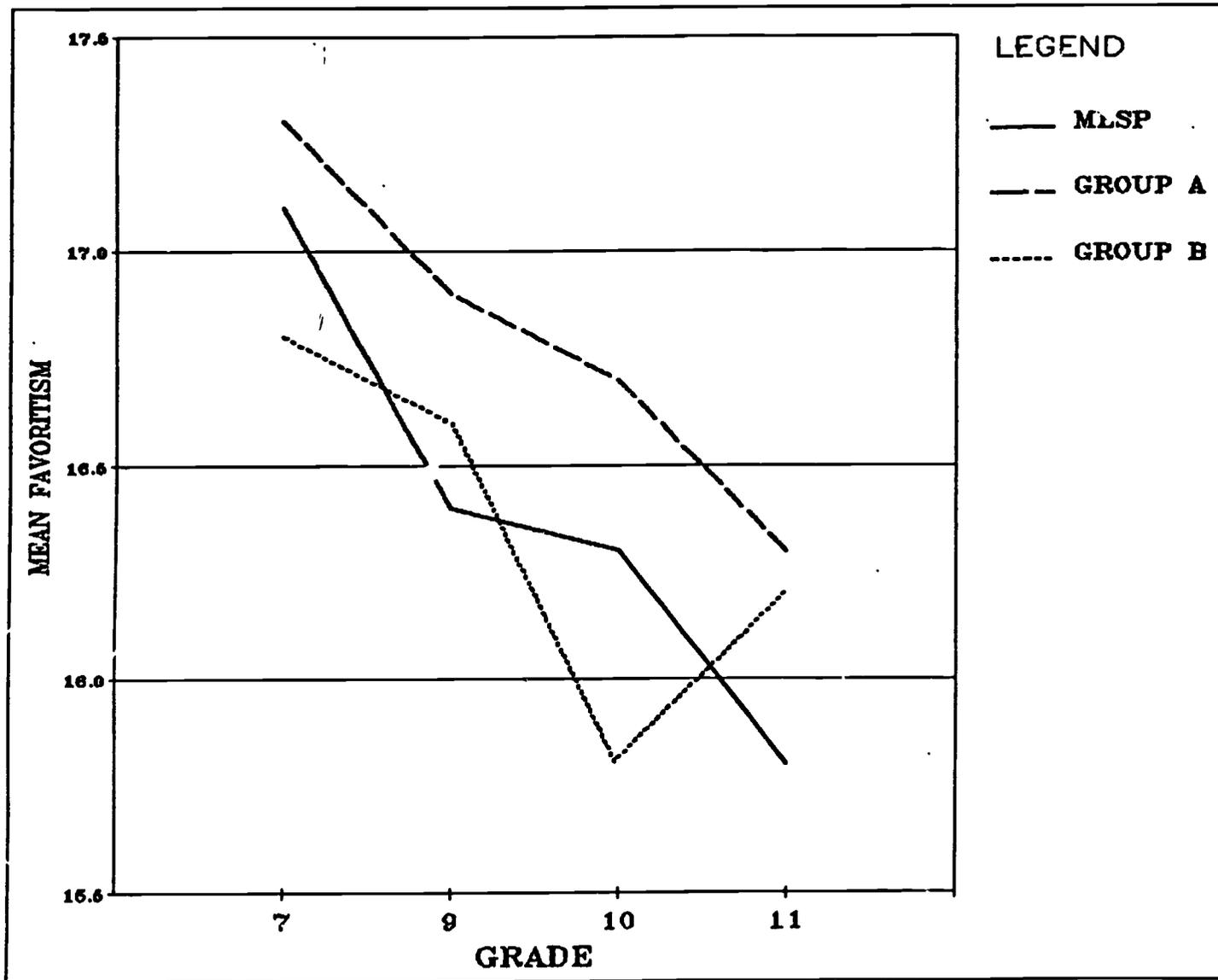
Figure 8. Mean Favoritism Property by Grade for MESP, Group A, and Group B.
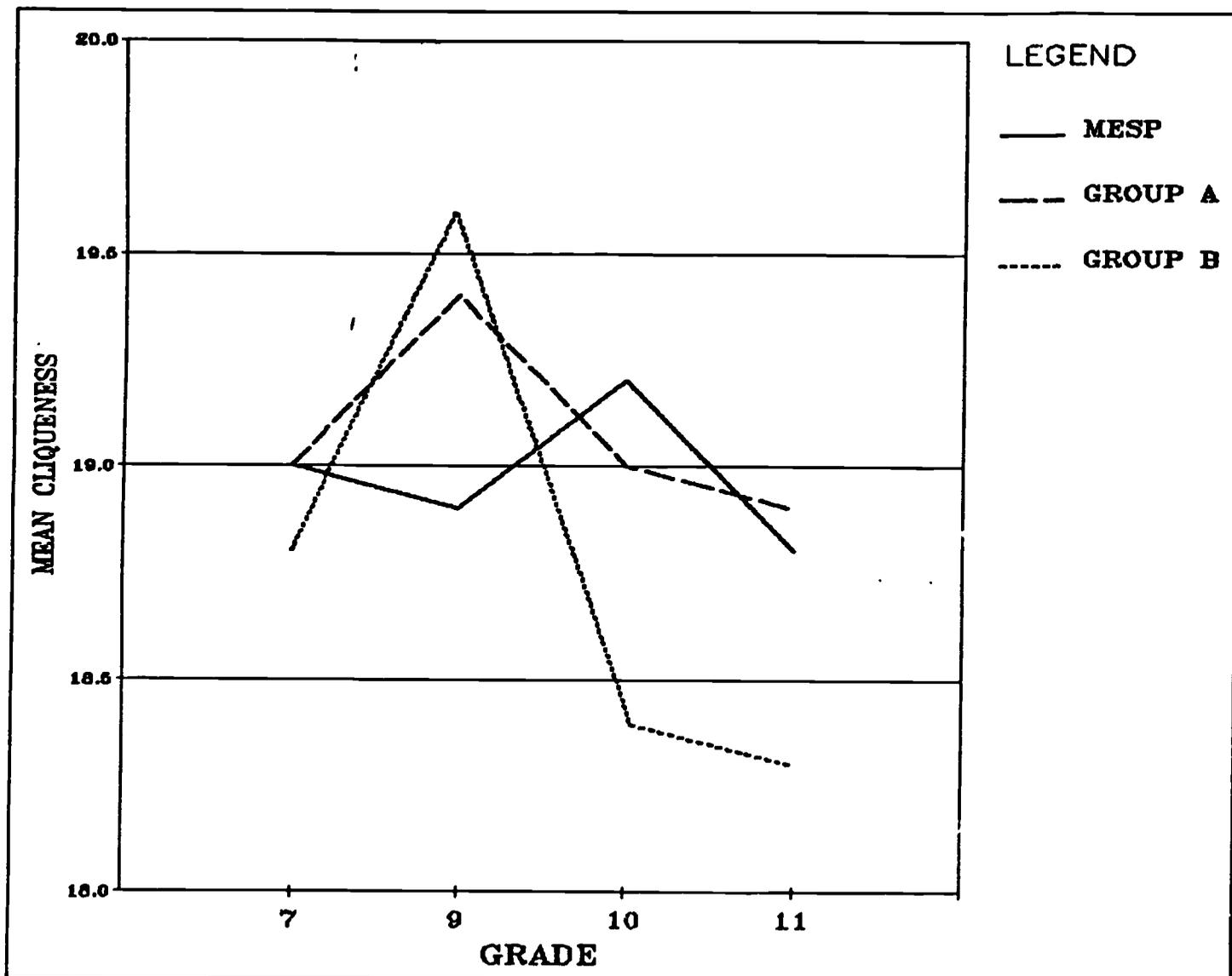
Figure 9. Mean Cliqueness Property by Grade for MESP, Group A, and Group B.

43
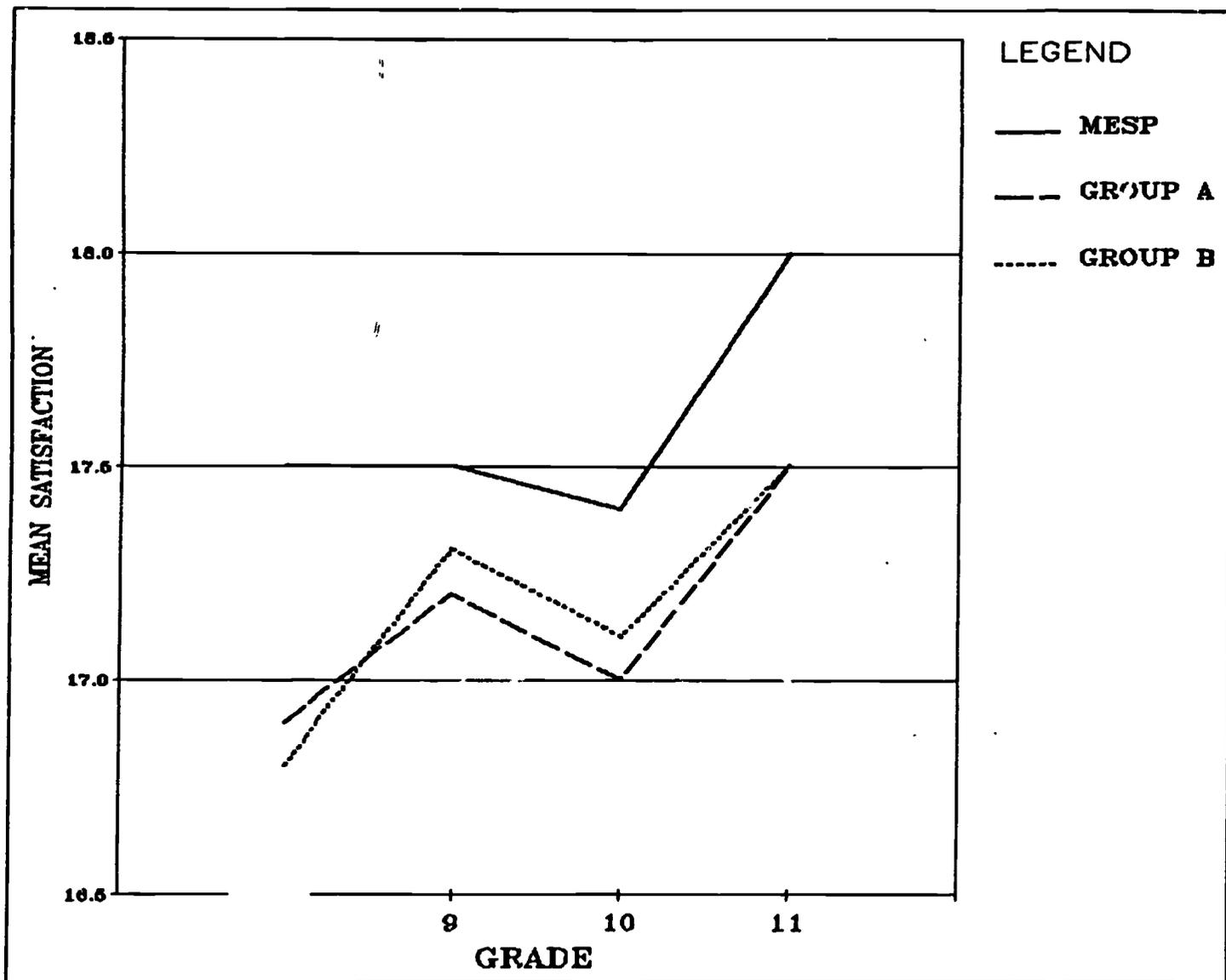
Figure 10. Mean Satisfaction Property by Grade for MESP, Group A, and Group B.
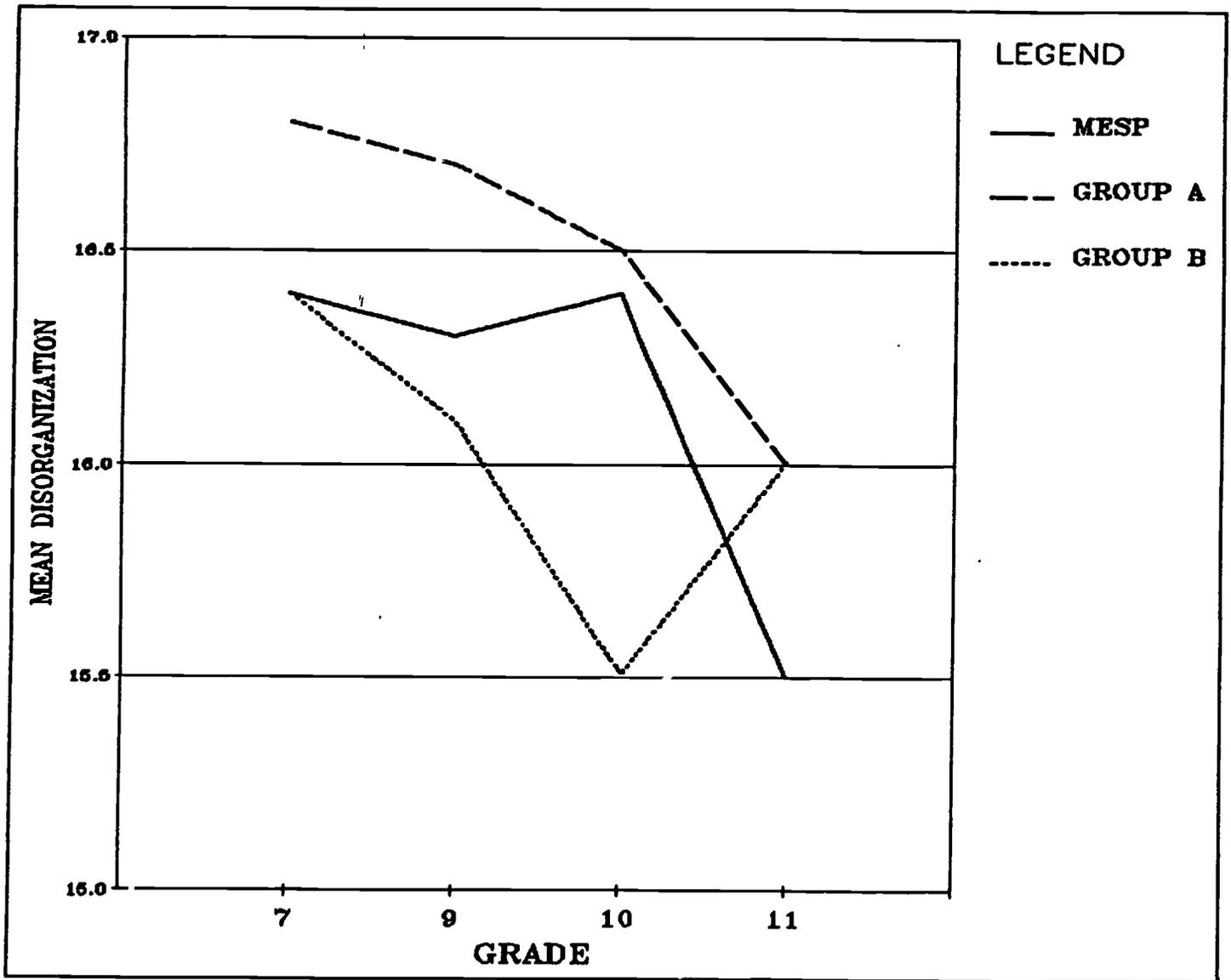
Figure 11.   Mean Disorganization Property by Grade for MESP. Group A, and Group B.
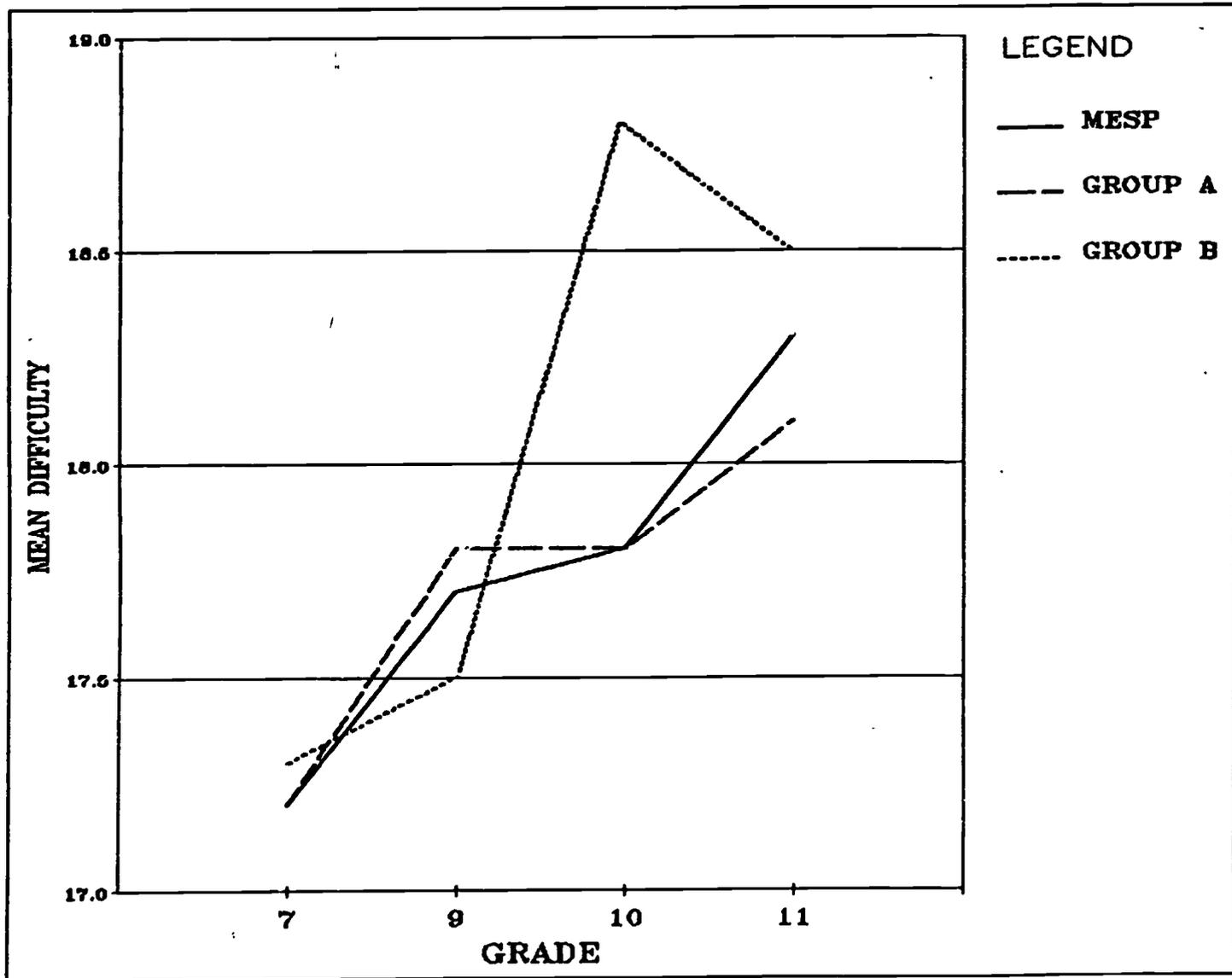
Figure 12. Mean Difficulty Property by Grade for MESP, Group A. and Group B.
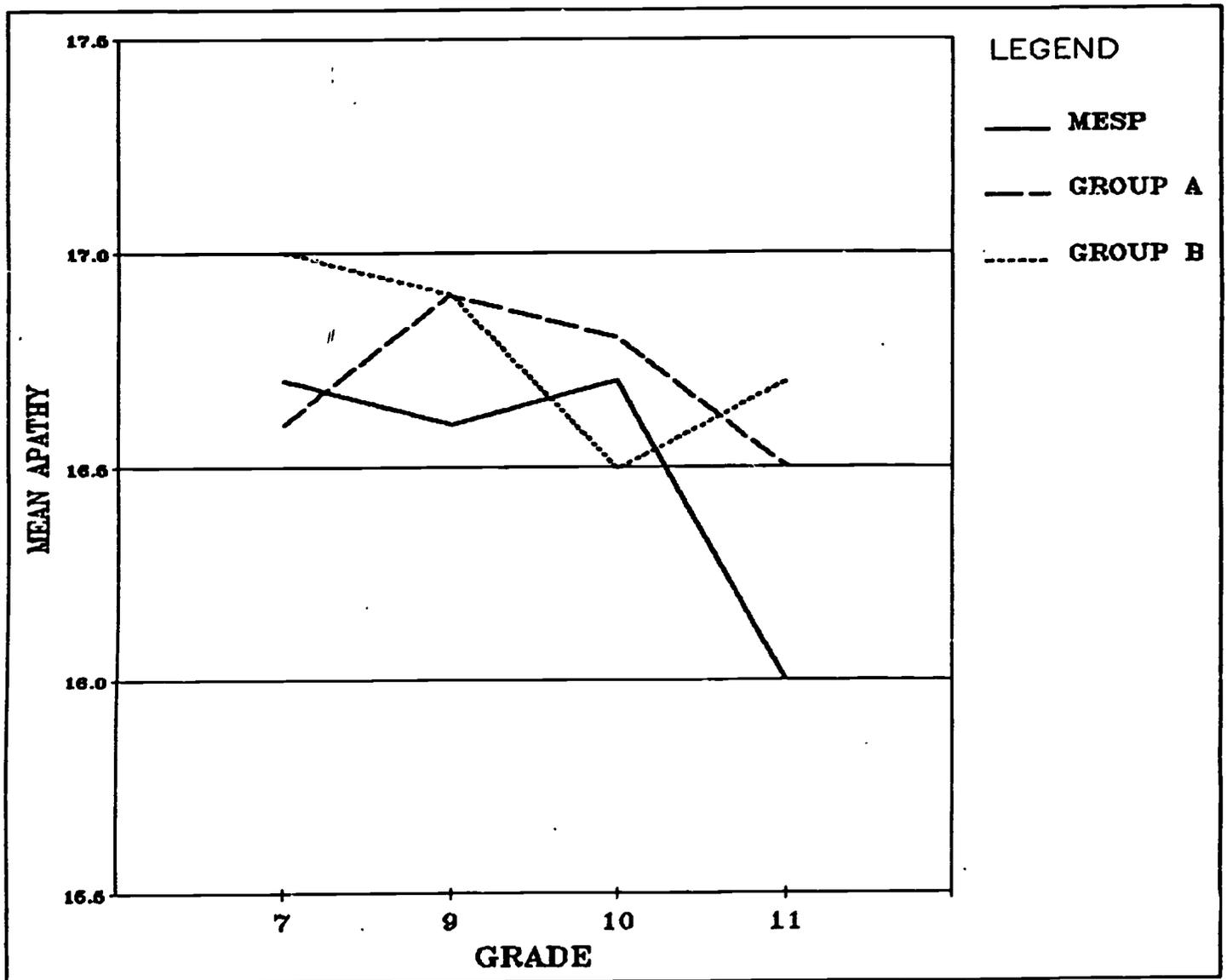
Figure 13. Mean Apathy Property by Grade for MESP, Group A, and Group B.

47
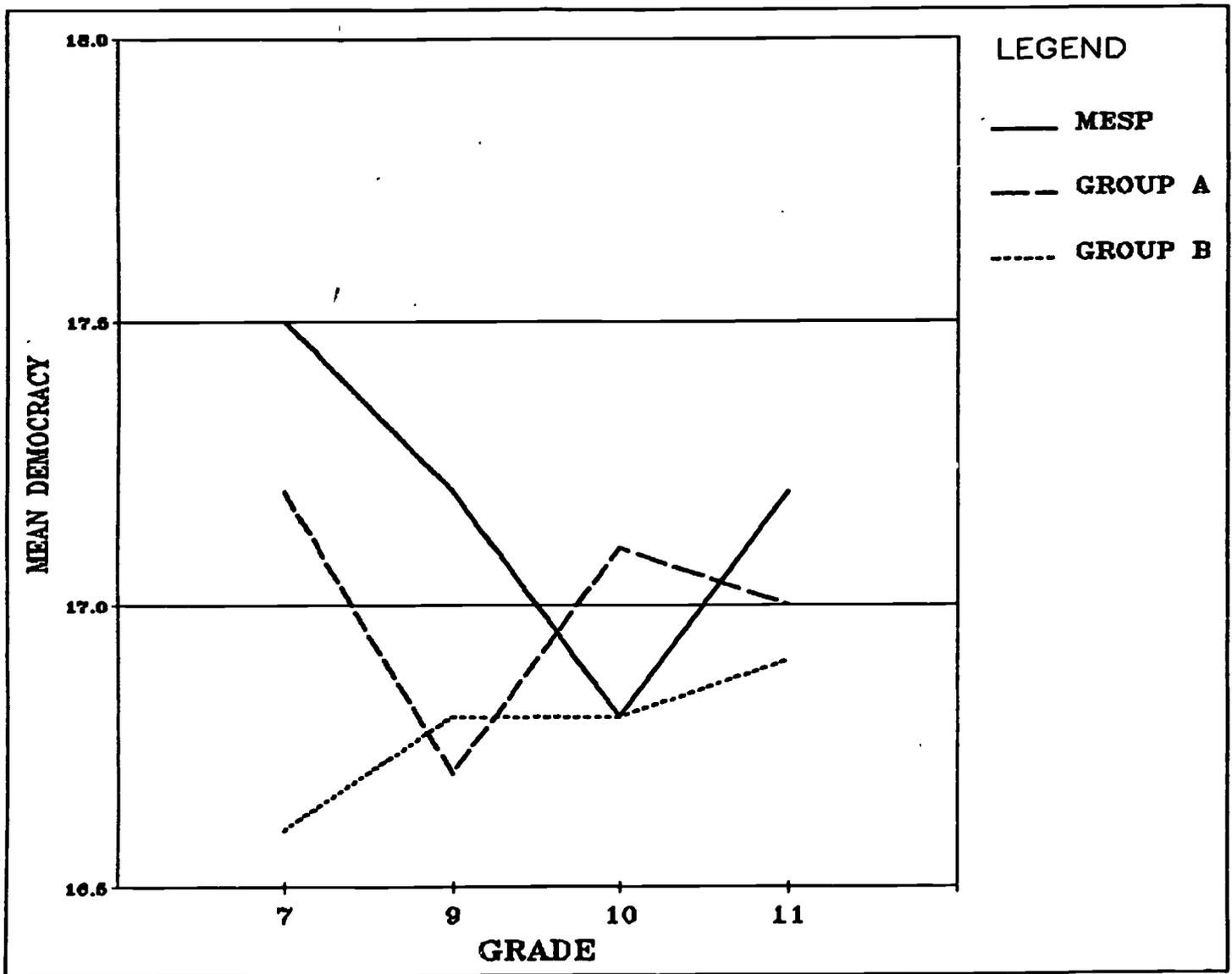
Figure 14. Mean Democracy Property by Grade for MESP, Group A, and Group B.
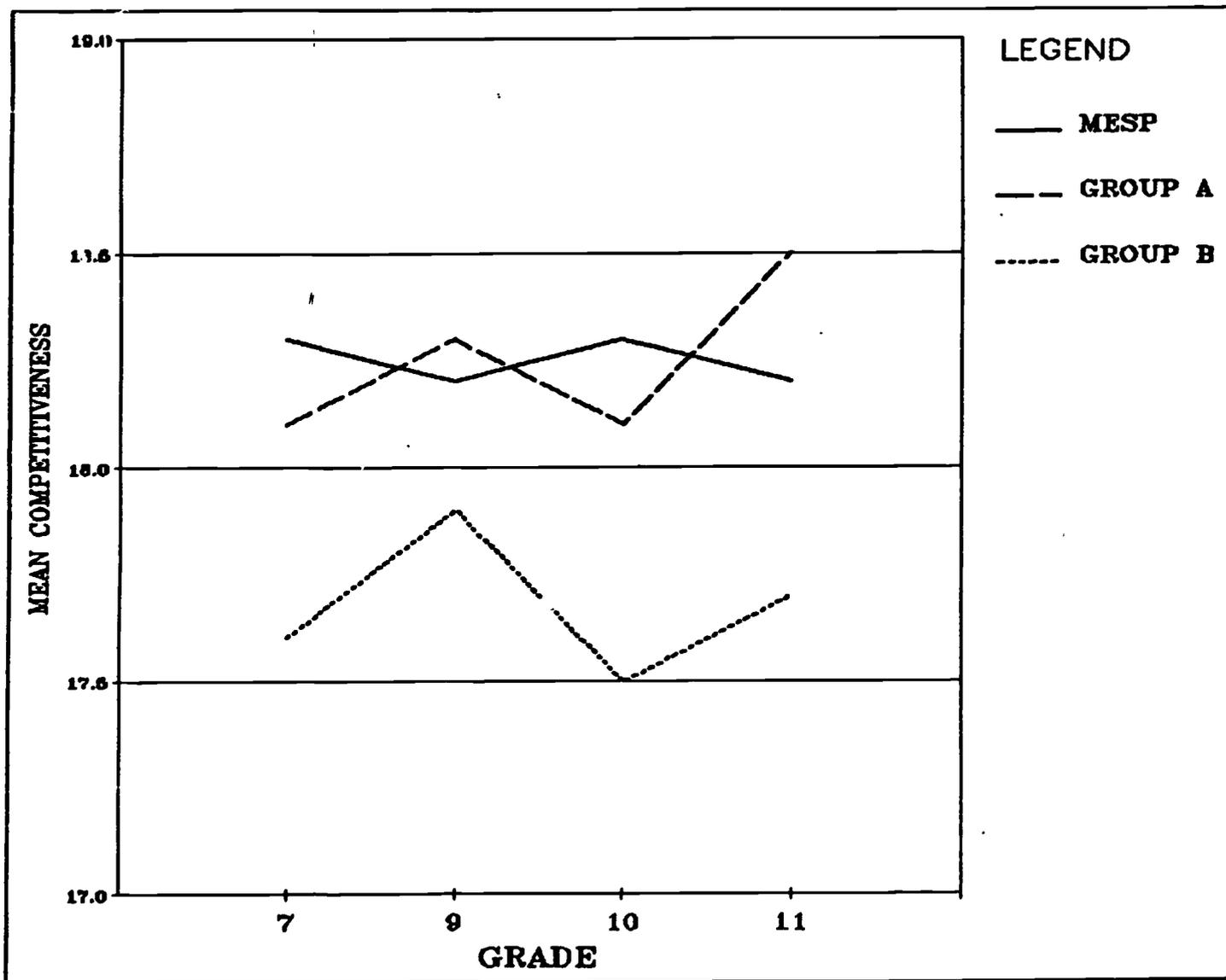
Figure 15.   Mean Compettiveness Property by Grade for MESP, Group A, and Group B.

Summary

These data indicate that, from the students' point of view, Location 5 has less cohesiveness, more friction, less goal direction, more favoritism, more cliqueness, less satisfaction, more disorganization, and more apathy than most of the other schools in the MESP. At the same time, Location 2 has more cohesiveness, more formality, more goal direction, less favoritism, more satisfaction, less disorganization, less apathy, and more democracy than most of the other schools in the MESP. In other words, these data indicate that the students at Location 2 feel more positive about their school and their classes than the students at Location 5. The other schools more or less fluctuate on how students feel about the social climate of their classes. Location 5 and Location 2 were mentioned just because they seem to represent the extreme ends of the spectrum on most of the 15 class group properties.

When comparing the MESP with the two control groups, there was no difference indicated on diversity, cliqueness, and apathy. However, the students in the MESP did indicate more cohesiveness, more formality, more satisfaction, more democracy, and more competitiveness. Another note of interest is that the MESP students perceive that teachers cover the class material with less speed than do students in the other two groups.

One special property was cliqueness, which was not effected by group membership but instead by grade. There was a higher cliqueness measured in grade 9 than for the other three grades. Furthermore, as concerns the grade variable, younger students tended to rank their classes with more cohesiveness, more formality, less speed, more favoritism, and more dis-organization than the older students.

Finally, the two interactions suggest that the inner city students (MESP and Group A) in grade 10 perceive the class material to be less difficult and at the same time perceive more friction in the classroom. This is interesting because it reflects on what Wilbur Brookover, an expert on effective schools, states in an article in 1984, "schools have not provided equality of education for all kids. The greatest danger to the effective school movement is that any educator who has a special program will call it an effective school project and that it will continue to foster the inequalities of the educational system".

Not to say that this is so with the MESP. There is only a slight hint of it in grades 10 and 11. However, it is something that needs closer scrutiny, especially to protect students that plan to attend college.

46

References

Anderson, Gary J. The Assessment of Learning Environment. Halifax, Nova Scotia, Canada. September, 1973.

Memphis City Schools. Assessment of School Learning Climate. Prepared by Michael J. Cervetti. July, 1985.

Memphis City Schools. Memphis Effective Schools Project Interim Report on School Learning Climate. Prepared by Michael J. Cervetti. March, 1985.

The Effective School Report. An interview with Wilbur B. Brookover. Vol. 2 No. 3, March, 1984.

Appendix A

Learning Environment Inventory

LEARNING ENVIRONMENT INVENTORY

DIRECTIONS

The purpose of the questions in this booklet is to find out what your class is like. This is not a "test." You are asked to give your honest, frank opinions about the <u>class which you are now attending</u>.

Record your answer to each of the questions on the General Purpose Answer Sheet provided. Please make no marks on the booklet itself. Answer every question.

In answering each question go through the following steps:

1. Read the statement carefully.

2. Think about how well the statement describes the class you have first period of this semester.

3. Find the number on the answer sheet that corresponds to the statement you are considering.

4. Blacken one space only on the answer sheet according to the following instructions:

   If you <u>strongly disagree</u> with the statement, blacken space <u>1</u>.
   If you <u>disagree</u> with the statement, blacken space <u>2</u>.
   If you <u>agree</u> with the statement, blacken space <u>3</u>.
   If you <u>strongly agree</u> with the statement, blacken space <u>4</u>.

5. You will have approximately <u>50</u> minutes to complete the 105 questions in the booklet. Be sure the number on the answer card corresponds to the number of the statement being answered in the booklet.

49

1. Members of the class do favors for one another.

2. The books and equipment students need or want are easily available to them in the classroom.

3. There are long periods during which the class does nothing.

4. The class has student with many different interests.

5. Certain students work only with their close friends.

6. The students enjoy their class work.

7. Students who break the rules are penalized.

8. There is constant bickering among class members.

9. The better students' questions are more sympathetically answered than those of the average students.

10. The class knows exactly what it has to get done.

11. Interest vary greatly within the group.

12. A good collection of books and magazines is available in the school for student to use.

13. The work of the class is difficult.

14. Every member of the class enjoys the same privileges.

15 Most students want their work to be better than their friends' work.

16. The class has rules to guide its activities.

17. Personal dissatisfaction with the class is too small to be a problem.

18. A student has the chance to get to know all other students in the class.

19. The work of the class is frequently interrupted when some students have nothing to do.

20. Students cooperate equally with all class members.

21. Many students are dissatisfied with much that the class does.

22. The better students are granted special privileges.

23. The objectives of the class are not clearly recognized.

24. Only the good students are given special projects.

25. Class decisions tend to be made by all the students.

26. The students would be proud to show the classroom to a visitor.

27. The pace of the class is rushed.

28. Some students refuse to mix with the rest of the class.

29. Decisions affecting the class tend to be made democratically.

30. Certain students have no respect for other students.

31. Some groups of students work together regardless of what the rest of the class is doing.

32. Members of the class are personal friends.

33. The class is well organized.

34. Some students are interested in things completely different from other students.

35. Certain students have more influence on the class than others.

36. The room is bright and comfortable.

37. Class members tend to pursue different kinds of problems.

38. There is considerable dissatisfaction with the work of the class.

39. Failure of the class would mean little to individual members.

40. The class is disorganized.

41. Students compete to see who can do the best work.

42. Certain students impose their wishes on the whole class.

43. A few of the class members always try to do better than the others.

44. There are tensions among certain groups of students that tend to interfere with class activities.

45. The class is well-organized and efficient.

46. Students are constantly challenged.

47. Students feel left out unless they compete with their classmates.

48. Students are asked to follow strict rules.

49. The class is controlled by the actions of a few members who are favored.

50. Students don't care about the future of the class as a group.

51. Each member of class has as much influence as any other member.

52. The members look forward to coming to class meetings.

53. The subject studied requires no particular aptitude on the part of the students.

54. Members of the class don't care what he class does.

55. There are displays around the room.

56. All students know each other very well.

57. The classroom is too crowded.

58. Students are not in close enough contact to develop likes or dislikes for one another.

59. The class is rather informal and few rules are imposed.

60. Students have little idea of what the class is attempting to accomplish.

61. There is a recognized right and wrong way of going about class activities.

62. What the class does is determined by all the students.

63. After the class, the students have a sense of satisfaction.

64. Most students cooperate rather than compete with one another.

65. The objectives of the class are specific.

66. Students in the class tend to find the work hard to do.

67. Each student knows the goals of the course.

68. All classroom procedures are well established.

69. Certain students in the class are responsible for petty quarrels.

70. Many class members are confused by what goes on in class.

71. The class is made up of individuals who do not know each other well.

72. The class members are con.used by what goes on in class.

73. The class has plenty of time to cover the prescribed amount of work.

74. Students who have past histories of being discipline problems are discriminated against.

75. Students do not have to hurry to finish their work.

76. Certain groups of friends tend to sit together.

77. There is much competition in the class.

78. The subject presentation is too elementary for many students.

79. Students are well satisfied with the work of the class.

80. A few members of the class have much greater influence than the other members.

81. There is a set of rules for the students to follow.

82. Certain students don't like other students.

83. The class realizes exactly how much work it has to do.

84. Students share a common concern for the success of the class.

85. There is little time for daydreaming.

86. The class is working toward many different goals.

87. The class members feel rushed to finish their work.

88. Certain students are considered uncooperative.

89. Most students sincerely want the class to be a success.

90. There is enough room for both individual and group work.

91. Each student knows the other members of the class by their first names.

92. Failure of the class would mean nothing to most members.

93. The class has difficulty keeping up with its assigned work.

94. There is a great deal of confusion during class meetings.

95. Different students vary a great deal regarding which aspect of the class they are interested in.

96. Each student in the class has a clear idea of the class goals.

97. Most students cooperate equally with other class members.

98. Certain students are favored more than the rest.

99. Students have a great concern for the progress of the class.

100. Certain students stick together in small groups.

101. Most students consider the subject matter easy.

102. The course material is covered quickly.

103. There is an undercurrent of feeling among students that tends to pull the class apart.

104. Many students in the school would have difficulty doing the advanced work of the class.

105. Students seldom compete with one another.