

CHAPTER 3

PRESENTATION OF RESULTS

All the results presented here are based on the statistical methods mentioned in the previous chapter. The intercorrelation between individual within each group of subjects indicates whether there is any agreement among subjects in each group in their sortings. The cluster analysis illustrates the grouping of the sorters into clusters according to their intercorrelations based on the responses they gave in their sort. The t test between mean of each intercorrelation matrix indicates whether the differences in the average amount of intersubject agreement between each of the group is significant or not. The mean score for each statement indicates the approximate location, relative to the other statements, on the continuum of statements referring to the student-teacher relationship ranging from the most to the least ideal.

Now consider the intercorrelations of each group separately, Table 1. shows the intercorrelations among students at the Demonstration School, which is considered to be the first group. The range of the intercorrelation is from .90 to .26 and the average correlation is .70. There are fourteen correlations which are below .50, the rest are higher. Individual 4 has higher correlations on the average with others in the group than does any other

TABLE 1
INTERCORRELATIONS OF Q-SORTS AMONG MS. 3 STUDENTS

Sorters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	-	.71	.78	.88	.74	.67	.75	.71	.59	.75	.63	.76	.45	.52	.75
2		-	.80	.87	.78	.74	.80	.68	.71	.76	.65	.76	.48	.63	.73
3			-	.89	.85	.78	.61	.71	.68	.80	.69	.77	.48	.66	.70
4				-	.85	.87	.87	.80	.86	.87	.75	.90	.62	.66	.82
5					-	.77	.80	.76	.74	.80	.65	.63	.43	.58	.61
6						-	.84	.79	.83	.71	.53	.90	.28	.59	.72
7							-	.73	.49	.74	.69	.73	.42	.55	.53
8								-	.62	.65	.75	.68	.52	.49	.75
9									-	.70	.66	.65	.45	.54	.64
10										-	.69	.77	.40	.57	.73
11											-	.55	.35	.46	.65
12												-	.54	.66	.72
13													-	.26	.45
14														-	.52
15															-

subject. Sorters 13 and 14 correlate very low with other raters. Their correlations are all below average. Observation of the individual subjects during their Q-sort operation showed that sorter 14 spent 25 minutes in sorting the cards (the average time for sorting the cards for this group was 20 minutes each), but he did it wrongly

so the investigator had to re-explain the instructions and he spent another 15 minutes in his sorting. This time he seemed to display a little annoyance. Sorter 13 sorted the cards by spending only 10 minutes because her car was waiting for her outside the school so she was in a hurry. These conditions in the sorting period may have affected the sorters' performance. Thus their correlations are lower than others and the results got from these two sorters may not be very reliable. Information was obtained from the teacher that sorter 4 is a smart girl who learns well in class; this may be a reason while she correlated highly with others. Nothing reveals about the effect of sexes of sorters upon the correlations. (Sorter 2, sorter 3, sorter 5, sorter 6, sorter 8, sorter 9, sorter 10, sorter 14, sorter 15, are boys). Correlations between the same sex and between different sexes are equally high. Because all the correlations found in this table are quite high it indicates that the agreement among sorters is high.



TABLE 2

INTERCORRELATIONS OF Q-SORTS AMONG EDUCATION STUDENTS

Sorters	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	-	.78	.87	.79	.83	.82	.91	.80	.82	.76	.62	.82	.65	.75	.79
2		-	.77	.84	.74	.72	.85	.65	.77	.72	.57	.76	.85	.77	.80
3			-	.68	.71	.90	.92	.78	.81	.67	.52	.78	.77	.75	.79
4				-	.81	.90	.95	.65	.77	.78	.55	.83	.85	.80	.75
5					-	.86	.94	.79	.70	.86	.53	.69	.77	.79	.73
6						-	.85	.84	.96	.77	.66	.87	.93	.95	.93
7							-	.93	.83	.87	.69	.95	.78	.85	.79
8								-	.79	.74	.63	.83	.70	.76	.67
9									-	.74	.51	.83	.81	.75	.87
10										-	.52	.75	.73	.56	.69
11											-	.52	.55	.50	.53
12												-	.80	.70	.76
13													-	.78	.82
14														-	.76
15															-

The mean score for Table 2 is 0.79, its' range is from .96-.50. This is the highest mean score and also the smallest range of correlations among the three groups. The average time for the sorting by each person was 30 minutes. This larger average mean score compared to the other groups suggests more agreement among sorters in this group than in other groups. Sorter 7 has a higher average

correlation with all other subjects than does any other individual in the group. Sorter 11 has the lowest correlation, the average correlation with other in the group was lower than for any other individual subject. Observation revealed that she, (sorter 11) did not quite understand the instructions and questioned the investigator all the time during performance. It was noticed that sorters in this group devoted more attention, interest and concentration during their performance than any other groups and this may have resulted in the higher mean score than the other groups.

TABLE 3
INTERCORRELATIONS OF Q-SORTS AMONG TEACHERS

Sorters	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	-	.75	.63	.71	.72	.70	.66	.73	.75	.65	.53	.72	.75	.76
2		-	.75	.69	.75	.70	.74	.75	.76	.85	.73	.78	.75	.79
3			-	.70	.67	.65	.66	.74	.68	.67	.65	.70	.73	.62
4				-	.75	.64	.73	.68	.76	.64	.55	.73	.75	.71
5					-	.79	.77	.76	.82	.74	.63	.79	.75	.56
6						-	.68	.71	.73	.66	.53	.67	.67	.66
7							-	.79	.86	.81	.63	.79	.75	.70
8								-	.85	.75	.61	.81	.74	.67
9									-	.79	.61	.81	.81	.74
10										-	.45	.77	.67	.79
11											-	.56	.58	.28
12												-	.64	.71
13													-	.75
14														-

The mean intercorrelation in Table 3 is .71, with the range from .86-.28. The average correlation of each person with all of the other subjects is not very different between subjects. The lowest average correlation with others was shown by sorter 11. It may be noted that the pack of cards together with the instructions were sent to her (sorter 11) for two weeks but she did not do it.

Only after she had been requested many times to comply did she do so, so the investigator is not sure whether she did the sorting voluntarily or just did it because she was annoyed by the persistent requests the investigator made to her. This may be why her sorting has low average correlation compared with other subjects. Nevertheless, the mean of .71 shows that the sorters agreed quite highly in their sortings.

Because the mean intersubject correlation for each group is high, it can be said that the agreements between raters are also high. Results from applying the t test to the different pairs of means reveal that there is no significant difference at all among the means of each correlation matrix (t value is less than 1.50). Thus, it can be concluded that the agreement among sorters within each group is equally high.

A cluster analysis of the correlations reveals no cluster at all in the three groups. Most of the B-coefficients found are below 1.30. The B-coefficient is the ratio of the average intercorrelation of the variables (in this case, the sorters) in a trial cluster to their average correlation with the variables not included in the cluster.¹ Holzinger and Harmond² have arbitrarily

¹Fruchter, op.cit., p. 14.

²Ibid., p. 27.

set the minimum significant value of a B-coefficient at 1.30. If a B-coefficient is found to be less than 1.30, it means that the variables (sorters) in the trial cluster correlate no more highly among themselves than among others outside the cluster and so indicate no cluster at all. Since the B-coefficients of the Education students and the teachers are all below 1.30, the conclusion is drawn that all of the sorters in each of these groups sorted the statements in the same general pattern and thus their ways of perceiving all the statements are similar and go together as one group-no subgroup is in them. For the Demonstration School students, the B-coefficient among all sorters except sorters 13 and 14 is 1.43. A B-coefficient between sorters 13 and 14 was then computed and revealed to be 1.09. If there are two clusters in this group, the B-coefficient obtained by pairing sorters 13 and 14 should also be above 1.30 but it is not, so the divergence of sorters 13 and 14 from the group does not result from their going along together into a second cluster; rather this happens probably because the results got from these two sorters are not reliable enough because of some interferences during the performance period as has been described before. Thus, it is also concluded that this group possesses no cluster at all.

TABLE 4
 APPROXIMATE RANKED ORDER OF STATEMENTS
 ACCORDING TO MEAN SCORE

Ranked Order of Statements	Numbers of Statements		
	MS.3 Students	Education Students	Teachers
1	74	74	29
2	26	26	74
3	29	73	71
4	25	29	56
5	56	58	11
6	11	56	26
7	55	55	13
8	71	69	14
9	69	25	69
10	14	11	25
11	28	71	73
12	73	10	58
13	40	13	55
14	58	14	28
15	13	70	10
.	.	.	.
.	.	.	.
.	.	.	.
61	62	1	75
62	18	46	4
63	15	60	15

Ranked Order of Statements	Numbers of Statements		
	MS.3 Students	Education Students	Teachers
64	46)	15	35
65	50	62	60
66	35)	27)	27
67	53)	50)	46
68	60)	35	45
69	27)	53	47
70	47)	45	53
71	45	47	2
72	17	2)	50
73	2	17)	42
74	42	42)	17
75	32	32	32

Note: Any numbers which are bracketed have the equal value of mean score.

Table 4 provides a rough approximation of the ranked order of statements of the three groups according to the mean score (see Appendix E) which will be employed in the comparison of the results.

Comparison between the three groups of subjects.

Now consideration will be given to ten statements judged to represent the most ideal student-teacher relationship for each group of subjects. The MS.3 students selected the statements representing the following characteristics: two

statements referring to either good or excellent communication, seven statements about emotional distance indicating that the teacher tends to draw emotionally close-even extremely close-and one statement about status, specifying a peer relationship. The Education students selected four statements about communication, five about emotional distance, and one about status, all representing the same types of relationship as did the MS.3 students. The teachers selected two statements referring to communication, seven concerning emotional distance and one concerning status, all also representing the same types of relationship. These results show that there is high agreement among the three groups of subjects that the most ideal student-teacher relationship should include good or excellent communication between teacher and student, in a peer relationship, and the teacher should draw emotionally close - indeed very, very close - to student.

For the ten statements representing the least ideal relationships, the MS.3 students chose six statements about emotional distance which depict the teacher as rejecting, cool and neutral toward the student and four statements regarding status indicating that the teacher either looks down upon the student or feels superior to the student. The Education Group chose seven statements about emotional distance indicating the same kind of relationship as the MS.3 students and three statements regarding status also representing the same relationships as the MS.3 students. The teachers chose one statement about communication

indicating that no communication is possible, in addition to six statements about emotional distance and three statements about status, revealing the same relationship as the MS.3 students. Again the agreement of these three groups as to the characteristics of the least ideal student-teacher relationship is high and indicates that the least ideal relationship is that in which teacher feels very superior to the students, rejects and looks down upon them and also seems cool and neutral toward them. The one interesting point is that only the teachers stress the importance of the communication between teachers and students, the other group do not mention it at all.

Comparison with Tyler's study.

Included in the ten statements representing the most ideal student-teacher relationship from Tyler's study are six statements about the existence of good, excellent or moderate communication, three statements regarding status, indicating a peer relationship, and one statement about the maintenance of close emotional distance. Comparison between Tyler's results and the judgement of the teachers group of this present study reveals not much difference of perception between the two groups. They agreed to some extent except that Tyler's subjects included moderate communication in the ideal relationship and did not specify an extremely close emotional distance, while in this study the teachers ignored moderate communication and included a very, very close emotional distance in the statements representing the relationship.

Comparison between the selection of the most ideal statements of the teachers in this study and Tyler's revealed three identical statements chosen, namely:

25. The teacher really tries to explain things clearly to the student.

71. The teacher is sympathetic about the student's problems.

69. The teacher responds to the student's ideas in an accepting manner.

The student-teacher relationship found by Tyler to be least ideal is represented by three statements indicating that no communication is possible, five statements about emotional distance specifying that the teacher draws away or rejects students, and two statements about status indicating that the teacher feels very superior. Thus, the characteristics of the teaching relationship which are least ideal as perceived by teachers in this study and those in Tyler's study are similar in that such a relationship is felt to involve no communication, the teacher feels very superior, and draws away or rejects the students. The statements which are common for these two groups are:

2. The teacher feels disgusted by the students.

45. The teacher frequently ridicules the student's ideas.

17. The teacher is hostile toward the student.

47. The teacher is punitive toward the student.

32. The teacher rejects the student.

Comparison with Fiedler's study.

The characteristics of an ideal therapeutic relationship obtained from Fiedler's study involve good or excellent communication in a peer relationship. The least ideal relationship involves no communication, with the therapist feeling very superior and drawing away from the client. There is a great similarity between the ideal therapeutic relationship and ideal student-teacher relationship.