



1984

## An Investigation of Factors Affecting Placement Decisions of Multidisciplinary Teams

Mark M. Zebrowski  
*Loyola University Chicago*

Follow this and additional works at: [https://ecommons.luc.edu/luc\\_diss](https://ecommons.luc.edu/luc_diss)



Part of the [Education Commons](#)

---

### Recommended Citation

Zebrowski, Mark M., "An Investigation of Factors Affecting Placement Decisions of Multidisciplinary Teams" (1984). *Dissertations*. 2479.

[https://ecommons.luc.edu/luc\\_diss/2479](https://ecommons.luc.edu/luc_diss/2479)

This Dissertation is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Dissertations by an authorized administrator of Loyola eCommons. For more information, please contact [ecommons@luc.edu](mailto:ecommons@luc.edu).



This work is licensed under a [Creative Commons Attribution-NonCommercial-No Derivative Works 3.0 License](#).  
Copyright © 1984 Mark M. Zebrowski

AN INVESTIGATION OF FACTORS AFFECTING  
PLACEMENT DECISIONS OF  
MULTIDISCIPLINARY TEAMS

by  
Mark M. Zebrowski

A Dissertation Submitted to the Faculty of the Graduate School  
of Loyola University of Chicago in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

May  
1984

## ACKNOWLEDGEMENTS

The author wishes to acknowledge the guidance and assistance rendered by Dr. Ronald Morgan, Dissertation Director and the other members of the committee Dr. Joy Rogers, Dr. Jack Kavanagh and Dr. Joseph Durlak. Without their encouragement, support and critiques this investigation would not have been possible. The author's thanks must be extended to all those who willingly participated in this study. Finally, a special thank you is extended to the author's wife for her patience and encouragement during his studies.

## VITA

The investigator, Mark Michael Zebrowski, is the son of Chester Zebrowski and Lorraine (Rasimowicz) Zebrowski. He was born August 22, 1950, in Chicago, Illinois.

His elementary education was obtained in parochial schools of the Archdiocese of Chicago, and he graduated from Weber High School located in Chicago, Illinois in 1968.

In September, 1968, he entered Illinois Institute of Technology and in May, 1972, received the degree of Bachelor of Science in Psychology. He began graduate studies at the Illinois Institute of Technology and received the degree of Master of Science in Psychology in May, 1974.

Mr. Zebrowski began his professional career in May, 1972 as a Technical Assistant in the Life Science Division of IIT Research Institute. He subsequently worked as a Rehabilitation Counselor in a residential care facility, and as a Psychologist at the Chicago Alcoholic Treatment Center. He is currently employed as a School Psychologist by the Chicago Public Schools.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS .....	ii
VITA .....	iii
LIST OF TABLES .....	vi
LIST OF ILLUSTRATIONS .....	ix
CONTENTS OF APPENDICES .....	x
INTRODUCTION .....	1
REVIEW OF RELATED LITERATURE .....	7
The Development of the MDC Team Model .....	7
Group Decision-Making .....	11
Interaction .....	14
Interaction and the Decision Process .....	18
Group versus Individual Decision Making .....	20
Group Size .....	26
Group Perception .....	27
Leadership .....	29
Identifying the Leader in a Small Group .....	29
Leader Behavior and Its Measurement .....	33
Factors Influencing Team Decisions .....	37
Decision Making Within the MDC .....	46
Recapitulation .....	55
METHOD .....	59
Hypotheses .....	59
Subjects .....	62
Procedure .....	66
Instrumentation .....	67
Design .....	74
RESULTS .....	80
Results Related to Testing Null Hypothesis I .....	80
Results Related to Null Hypothesis II .....	85
Results Related to Null Hypothesis III .....	87
Results Related to Null Hypothesis IV .....	87

Results Related to Null Hypothesis V .....	88
Results Related to Null Hypothesis VI .....	89
Results Related to the Presence of Parents in the Model .....	90
Results Related to Null Hypothesis VII .....	92
Results Related to Null Hypothesis VIII .....	93
Results Related to Null Hypothesis IX .....	93
Results Related to Null Hypothesis X .....	94
Results Related to Null Hypothesis XI .....	94
Results Related to Null Hypothesis XII .....	95
Results Related to Null Hypothesis XIV .....	95
 DISCUSSION .....	 96
Discussion of Results Related to Null Hypothesis I .....	97
Discussion of Results Related to Null Hypothesis II .....	98
Discussion of Results Related to Null Hypothesis III, IV, V, VI, VII .....	100
Discussion of Results Related to Null Hypothesis VIII, IX .....	103
Suggestions for Future Research .....	104
 SUMMARY .....	 108
 REFERENCES .....	 110
 TABLES .....	 131
 APPENDIX A .....	 184
 APPENDIX B .....	 186
 APPENDIX C .....	 188
 APPENDIX D .....	 190
 APPENDIX E .....	 192

## LIST OF TABLES

Table	Page
1. Frequency Distribution of Demographic Data.....	132
2. Frequency Distribution of Professional Experience .....	134
3. Descriptive Statistics for Rating Grid Constructs by Position .....	135
4. Canonical Discriminant Functions .....	136
5. Wilks Lambda (U-Statistic) and Univariate F-ratio .....	137
6. Linear Discriminant Funtion .....	138
7. Unstandardized Canonical Function Coefficients .....	139
8. Standardized Canonical Function Coefficients .....	140
9. Within Group Structure Coefficients .....	141
10. Canonical Discriminant Functions Evaluated at Group Means (Group Centroids) .....	142
11. Test of Equality of Group Covariance Matrices Using Box's M .....	143
12. Pairwise Squared Generalized Distances Between Groups .....	144
13. Discriminant Analysis Classification Summary .....	145
14. Summary of Multivariate and Univariate Tests for Effect Team .....	146
15. Summary of Multivariate and Univariate Tests for Effect Role .....	147
16. Summary of Multivariate and Univariate Tests for Effect Role*Team Interaction .....	148
17. Summary of the Univariate Tests for Effect Position(Team) .....	149

18.	Summary Table of Significant Univariate F-tests .....	150
19.	Summary of Tukey's Studentized Range Tests for the Rating Grid Constructs .....	151
20.	Number of Matching Decisions by Position for each Staffing Type .....	152
21.	Descriptive Statistics for Bales Categories by Position - No Parent Model .....	153
22.	Descriptive Statistics for Bales Categories by Staffing Type - No Parent Model .....	154
23.	Descriptive Statistics for Bales Categories by Position and Staffing - No Parent Model .....	155
24.	Descriptive Statistics for Bales Categories by Teams - No Parent Model .....	158
25.	Summary of Multivariate and Univariate Tests for Effect Team .....	160
26.	Summary of Multivariate and Univariate Tests for Effect Staffing Type .....	161
27.	Summary of Multivariate and Univariate Tests for Effect Team*Staffing Interaction .....	162
28.	Summary of Univariate Tests for Effect Position(Team) .....	163
29.	Descriptive Statistics for Bales Categories by Staffing Type - Parent Model .....	164
30.	Descriptive Statistics for Bales Categories by Teams - Parent Model .....	165
31.	Descriptive Statistics for Bales Categories by Position - Parent Model .....	166
32.	Descriptive Statistics for Bales Categories by Parental Participation - Parent Model .....	167
33.	Descriptive Statistics for Bales Categories by Position and Parental Participation .....	168



34.	Descriptive Statistics for Bales Categories by Parental Participation and Staffing Type .....	170
35.	Descriptive Statistics for Bales Categories by Team and Parental Participation .....	172
36.	Summary of Multivariate and Univariate Tests for Effect Team .....	174
37.	Summary of Multivariate and Univariate Tests for Effect Parent .....	175
38.	Summary of Multivariate and Univariate Tests for Effect Team*Parent .....	176
39.	Summary of Multivariate and Univariate Tests for Effect Staffing .....	177
40.	Summary of Multivariate and Univariate Tests for Effect Team*Staffing .....	178
41.	Summary of Multivariate and Univariate Tests for Effect Parent*Staffing .....	179
42.	Summary of Multivariate and Univariate Tests for Effect Team*Parent*Staffing .....	180
43.	Summary of Univariate Tests for Effect Position(Team) .....	181
44.	Summary of Univariate Tests for Effect Parent*Position(Team) .....	182
45.	Summary of Univariate Tests for Effect Position*Staffing(Team) .....	183

## LIST OF FIGURES

Figure	Page
1. Graphic Representation of the Analytic Design .....	78

## CONTENTS FOR APPENDICES

	Page
APPENDIX A .....	184
Demographic Data Questionnaire .....	185
APPENDIX B .....	186
Repertory Grid .....	187
APPENDIX C .....	188
Pre-MDC Questionnaire .....	189
APPENDIX D .....	190
Post-MDC Questionnaire .....	191
APPENDIX E .....	192
Bales' Set of Observation Categories .....	193

## INTRODUCTION

The overall purpose of the present study was to investigate systematically the decision making process of individuals (school psychologists, social worker, nurses, teachers, etc.) and small groups (multidisciplinary conference teams) in the determination of appropriate special education placement for exceptional children and to investigate some of the variables influencing such decisions. Over the years there has been an increased reliance on the use of multidisciplinary staffing teams in the planning and development of educational programs for exceptional children. Prior to the implementation of Public Law (P.L.) 94-142 (The Education for all Handicapped Children Act) the composition, development, and reliance on the multidisciplinary team was pragmatically determined. However, since the passage of P.L. 94-142 in 1975, the adaptation of a medical model to special education; the introduction of legislation specifying due process procedures; and, finally, litigation have forced the development of new procedures to correct injustices and protect the rights of individuals.

The composition of MDC teams can vary from state to state according to local regulations. However, all must meet certain federally prescribed minimum standards as stated in Public Law 94-142. Section 121a.344 of that law stipulates that a general participation in each meeting shall include the following participants:

- (1) A representative of the public agency, other than the

child's teacher, who is qualified to provide, or supervise the provisions of special education.

(2) The child's teacher.

(3) One or both of the child's parents.

(4) The child, where appropriate.

(5) Other individuals at the discretion of the parent or agency.

For a handicapped child who has been evaluated for the first time, the public agency shall insure:

(1) That a member of the evaluation team participates in the meeting; or

(2) That the representative of the public agency, the child's teacher, or some other person is present at the meeting, who is knowledgeable about the evaluation procedures used with the child and is familiar with the results of the evaluation.

The Illinois Rules and Regulations to Govern the Administration and Operation of Special Education (Rules, 1979, Article 1.05a) define the multidisciplinary conference (MDC) as:

a deliberation among appropriate persons for the purpose of determining eligibility for special education, developing recommendations for special education placement, reviewing educational progress, or considering the continuation or termination of special education for an individual child.

Such a conference or conferences takes place upon the completion of a comprehensive case study evaluation (Rules, 1979, Article 9.09.03). This conference may or may not be the conference at which the IEP (individualized education program) is developed (Rules, 1979,

Article 9.15). The participants in the conferences shall include (Rules, 1979, Article 9.15.1):

appropriate representatives of the child's local district of residence;

the special education director or designee who is qualified to provide or supervise the provision of special education;

all those school personnel involved in the evaluation of the child (see Rules, 1979, Article 9.09.3);

the parent(s);

those persons who may become responsible for providing the special education program or service to the child;

the child, where appropriate; and,

other individuals at the discretion of the parent or local district.

Recommendations made at the multidisciplinary conference shall be determined by consensus of the participating public school personnel (Rules, 1979, Article 9.17).

From the list of the rules regulating the provision of special education services presented above (Rules, 1979, Articles 9.09.3; 9.15.1; and 9.17), it is apparent that the people making the recommendations at the MDC may be the school psychologist, school social worker, school nurse, special education specialist, and other appropriate district representatives. The central purposes of MDC teams are the determination of eligibility for special education, development of recommendations for special education placement, review of educational progress, and possible revision of a handicapped child's individualized

education program (IEP). This entails the assessment of educational needs of the exceptional child and subsequent selection of appropriate learning milieus. The collection of all available medical, psychological, developmental, and educational data is emphasized to assist in designing the most adequate program to meet the unique learning needs of the exceptional child. These state and federal requirements related to the MDC team composition and function make the determination of special education placement for exceptional children primarily a group function.

The essence of a group implies differentiated rules interfacing in various ways to achieve a common goal (Proshansky and Seidenberg, 1965). The role of group leader has been the subject of considerable investigation (for current reviews of leadership theory and research see Heald, Romano and Georgiady, 1970; Hollander and Julian, 1969; Stogdill, 1974). Leadership in MDC teams may be perceived in several ways. Generally, MDC teams have appointed leaders as designated by school policy. One might consider the effect this person has on group decisions. Individual team members may view someone other than the appointed leader (peer-nominated leader) as the actual effector of the group's decisions. Jones and Gerard (1967) report that the appointed leader is often not effective in influencing team members. A third possibility competes for attention. The person or persons actually affecting team decisions might not be the appointed leader nor the peer nominated leader. If this should be the case, what are the identifying characteristics of the influential team member(s)?

Palmer (1962) and Shaw (1961) have suggested that the possession

of knowledge relevant to the fulfillment of a group's goal is highly valued by group members and allows the individual in possession of such relevant information to exercise leadership in the group. Identification of the individual(s) with knowledge germane to the MDC team goals allows for a number of possibilities. Expertise in special education should be particularly valued by group members since the focus of the MDC team is (Rules, 1979, Article 1.05a) determining eligibility for special education, developing recommendations for special education placement, reviewing educational programs, or considering the continuation or termination of special education for the individual child. One of the questions to be explored is the relationship between the training each MDC team member has in special education and his influence on MDC team placement decisions.

Palmer's (1962) research on task ability and effective leadership suggested that the possession of knowledge germane to MDC team goals can only become known over time to other members of the team. The question related to this issue in the present study is the effect of the length of MDC membership in influencing team decisions.

The present investigation utilized information collected from actual functioning MDC's. The information collected consisted of selected demographic data responses, specially constructed repertory grids, data based on Bale's (1950a) Interaction Process Analysis gathered at staffings with three different outcomes, (LD, BD, and MR placement recommendations), and responses to specific questions concerning the placement decision of the MDC's. The collection of these data took place at four points during the investigation: when individuals agreed



to participate in the study, prior to MDC but after the case study evaluation had been completed, during the actual MDC, and immediately following the MDC. The data were then analyzed in such a manner as to answer the following research questions: are the various disciplinary specializations perceived differently by team members; do those individuals associated with different disciplinary specializations make different placement decisions; are the behaviors of MDC team members differentially affected by their disciplinary specialization, their team, the type of staffing, or the presence of parents; do training and experience affect behavior?

## REVIEW OF THE LITERATURE

The first topic to be reviewed in this chapter is the determination of some selected factors which led to the development of MDC teams. The next section focuses on individual and group decision making abilities. In the third section, a review of literature related to the question of leadership in small groups is presented along with a discussion of training and experience variables related to decision-making. Finally, an attempt is made to recapitulate the literature reviewed here within the context of the research problem at hand.

### The Development of the MDC Team Model

Several factors have contributed to the development of the MDC team. Among the more prominent contributing features have been: the replacement of a single individual (usually the school psychologist) with a committee for making special education placement and programming decisions; legislation and court decisions reflecting (a) the recognition of the heterogeneous learning characteristics among students who compose a category of exceptionality, (b) the expansion of placement options beyond the two choice selection of regular versus self-contained special class, (c) the requirement of a formal instructional program for all students; the recognition of the multifaceted features manifest in exceptional children; the legislation stipulating a team approach to the study of exceptional children; and, the development of special education's reliance on the medical model. They have resulted

in an increase in the amount and variety of information needed to adequately evaluate the students and make decisions to meet their needs. MDC teams (whose members represent various view-points) are presumed to be better able to fill the information and decision-making needs. They are expected to develop interdisciplinary solutions to placement and programming decisions.

The adoption of the medical model by special educators has emerged over many years and through considerable interaction with the medical profession. Trippe (1966, P. 31) commented that "Special education developed to provide meaningful educational experiences for children on the basis of medical disability." Members of the medical profession have contributed discovery of the biomedical causes for mental retardation and have actively assisted special education in serving of exceptional children (Forness and Hewett, 1974). This close alliance with the medical profession has generated the medical model of disease as an explanation of the exceptional child's problem. "The medical model connotes an interdisciplinary administrative arrangement or interventions in which the medical profession plays a central or dominant role" (Hallahan and Kauffman, 1974, P. 97). The importance of the medical profession could be seen in the fact that by 1973 physicians were active in the diagnostic and identification processes for exceptional children in almost 75% of the states (Trudeau et al., 1973). Many of the strategies employed by the medical profession have been adopted by special educators--a natural progression of events as a result of the acceptance of the medical model.

The complexity of problems manifested by exceptional children

was an additional factor promoting reliance on the MDC teams. The federal government, through Public Law 94-142 121a.5, specifies 11 categories of exceptionality (i.e. handicapping conditions) as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or as having specific learning disabilities. The problems of exceptional children generally are complex in nature, requiring proficiency in such areas as medicine, psychology, and education. In most instances, such complexities preclude any one person's expertise with medical, psychological, and educational fields. As an example, mental retardation may result from a number of causes including genetic, metabolic, and environmental and in addition may be accompanied by other medical, or behavioral problems. (Weintraub, Abeson, and Braddock, 1971).

Even prior to P.L. 94-142, which mandated a group process, legislation had been encouraging the development of MDC teams. The MDC team approach, as a process, was becoming increasingly mandated by state statutes (Bolick, Nye, and Trudeau, 1973; Abeson, Braddock, and Weintraub, 1971).

Again prior to P.L. 94-142, court involvement in special education had been an additional factor promoting the development of MDC teams. Legal decisions (*Diana v. State Board of Education*, 1970; *Mills v. Board of Education of District of Columbia*, 1972; *Pennsylvania Association of Retarded Children v. Commonwealth*, 1971) were being made which modified the regulations of state boards of education. As a consequence of legal involvement, all placement decisions in the state

of California had to be rendered by an MDC team rather than an individual professional using a single measurement (Weintraub, et al, 1971). Society's support of group process, and the collective cogency upon which it is contingent, augments the acceptance of MDC teams (Steiner, 1972).

Finally, advocates of the MDC approach cite numerous advantages accredited to the proponents of group process. Findings of Clements (1966), Ferguson (1969), and Mendelson (1967), suggest that group process allows for increased efficiency; continued in-service; elimination of errors; and a check and balance against individual deficits.

Mendelson's (1967) findings indicate that the integration of interdisciplinary findings aids in eliminating arbitrary diagnoses and erroneous conclusions. Likewise, Clement's research (1966) contends that the MDC team approach does much in insuring the consistency of the decision making process, and regulating the biases of individuals that may affect the placement of the exceptional child.

Ferguson (1969) argues that the MDC approach allows for greater efficiency by deleting duplication of services. This research, further, suggests that the interrelationships experienced by individual team members avail each the opportunity to become more thoroughly acquainted with the related disciplines through constant sharing.

Other writers including Buktenica (1970); Falick, Grimm, Konno, and Preston (1971); and Hogenson (1973) cited similar reasons for advocating the use of teams in special education decision making.

Pfeiffer (1980) argued that teams have the resources to provide a number of enhancing psychoeducational services, including program

development and evaluation, continuity of services to exceptional children, the sharing of planning and programming responsibilities across disciplines, and the integration of the assessment and intervention processes.

### Group Decision-Making

Social psychology and sociology have led the field of research with regard to groups and group dynamics. Merton (1957, P. 285) submits that the sociological concept of a group refers to "a number of agents who interact with one another in accord with established patterns." Smith (1945, P. 227) defines a social group as "...a unit consisting of a plural number of separate organisms who have a collective perception of their unity and who have the ability or tendency to act in a unitary manner toward the environment." However, Proshansky and Seidenberg (1965, P. 377) use the term group to refer to "...two or more individuals who can be collectively characterized as follows: they share a common set of norms, beliefs, and they exist in explicitly or implicitly defined relationships to one another such that the behavior of each has consequences for the others." These properties emerge from and have consequences for the interactions of individuals who are similarly motivated with respect to some specific objective or goal.

There is no definite cutting point in the continuum between a collection of individuals and a fully organized group. Also there is no definite cutting point between the small, intimate, face to face group and the large formal group. There are five characteristics which differentiate the group from a collection of individuals. The members

of the group are in interaction with one another. They share a common goal and norms, which give direction and limits to their activity. They also develop a set of roles and a network of interpersonal attraction, which differentiate them from other groups (Znaniecki, 1939; Sherif, 1954). Bales (1950, P. 33) provided one of the most commonly used definitions of a small group:

A small group is defined as any number of persons engaged in interaction with each other in a single face-to-face meeting or a series of meetings, in which each member receives some impression or perception of each other member distinct enough so that he can, either at the time or in a later questioning, give some reaction to each of the others as an individual person, even though it be only to recall that the other person was present.

MDC participants fit Bales' definition of a group and fulfill these functions.

To survive, all groups must meet four basic needs:

- (A) they must have or be able to generate the resources to accomplish the goal of the group,
- (G) they must be able to exercise enough control over their membership to be effective in reaching their common goal,
- (I) they must have rules which allow them to coordinate their activity and enough feeling of solidarity to stay together to complete the task, and finally,
- (L) the members must share some common identity and have some commitment to the values of the group.

The four categories of the AGIL scheme defined above, adoption, goal attainment, integration, and latent pattern maintenance, were derived empirically from an analysis of small groups by Parsons (1961) and Effrat (1968).

### Group Interaction

Decision making activity during MDC meetings may be viewed from two dimensions: (1) a task dimension, and (2) an interpersonal dimension. The team may realize conflict in relation to one or both of these dimensions.

The task dimension refers to those factors related to the accomplishment of particular tasks for which the group is sanctioned (Barbandel, 1976). Collins and Guetzkow call these the "task stimuli" (Collins and Guetzkow, 1964). According to Benne and Sheats (1948), task's functions include initiating opinion seeking; opinion giving; information seeking and giving; clarifying, elaborating, summarizing and census taking. The task functions would refer to agenda items at MDC meetings, such as disposition of students, new referrals, follow-up cases, designation of handicap and placement.

The interpersonal dimension refer to group member behavior that is inclusive of expectations about what should be and what will be done by participants. Collins and Guetzkow (1964) refers to these as interpersonal stimuli. Benne and Sheats (1948) describe these behaviors as maintenance functions which induce harmonizing, compromising, gate-keeping (giving group members a chance to contribute and encouraging and diagnosing each others' actions). Emotional issues are associated with the interpersonal dimension and are perceived by Walton (1972) as



negative feelings between members such as anger, distrust, scorn, fear, resentment, and rejection.

Maintenance functions refer to the patterns of communication and the ability of individual team members to relate to one another, and the degree to which the group experiences tension and frustration. Accordingly, conflict may be intrapsychic, interpersonal, or organizational.

### Social Interaction

The examination of social interaction offers three points of view: process, structure, and change. Process interaction is longitudinal in approach and analyzes the act by act sequence as it unfolds over time. The same data may be used to analyze the group's structure when the focus is on the relation among the elements in the system at a given time. This procedure is generally called the cross-sectional approach. Social change may be determined by focusing on the structure of the group over time (Hare, 1976). With these three components (process, structure, and change) providing a general outline of the elements in an interactional system in conjunction with the aforementioned statements on the characteristics of small groups, the behavior of individuals in interaction can be the focus of attention. Observers of social behavior tend to compartmentalize behaviors into three distinct categories. In some instances the focus of attention is on interpersonal behaviors, such as cooperative problem-solving. In other instances the focus is on intra-personal behaviors as observed by tension and anxiety. Yet, in other instances the focus is on aspects of individual performance which may characterize the individual alone

as well as in a group. For convenience it is easier to think in terms of interpersonal and personal behaviors.

The form of interaction is less specific than the content area and subsequently is more easily recorded. As a group is approached from the "outside" the first apparent aspect of interaction is the communication network (who speaks to whom) followed by the amount of interaction manifested by each of the communication channels. For an assessment of what is happening in the group, content categories are needed. The most frequent divisions are between content directed towards the solution of task problems and content directed toward the solution of socio-emotional problems. Within the latter area the predominant types of behavior are control and affection, whereas the task area should probably parallel the steps of the scientific method (Hare, 1976).

From an interactional perspective, the behavior of an individual includes not only how one acts towards others (output) but also how others respond to him or her (input). Logically then the minimum number of actors who can be involved in an interaction is two, with the minimum number of acts being two (the action and reaction), and the minimum number of time periods is also two (Bales and Slater, 1955).

The systematic observation of form and content can be conducted under varying degrees of complexity. For a communication network such observations can range from simply recording the total number of channels to identifying the extent to which each subject has channels open to every other subject in the group. When considering content several categories may be observed simultaneously, and described by a

act of interaction profiles similar to those used by Bales (1950).

Interaction rate is the one characteristic of an individual's interactive behavior most frequently reported in the literature. An individual's interaction rate may fluctuate while the content of the interactions remains comparatively stable. In most instances the interaction rate of an individual group member is related to the rate of other group members as well as to his personality. Increases in the interaction rate are most commonly associated with attempts to control deviant members (Schacter, 1951), while other research correlates high interaction rates with task success (Strodbeck, 1954), in yet other studies high interaction rates correlate with affection (Homans, 1950).

Groups containing a large number of mutual choices on either a work or play criterion are said to be highly cohesive in that these groups generally "stick together" longer than groups in which there are few mutual choices. Groups are frequently referred to as being highly cohesive without specifying the basis on which the choices were made and this criterion is important. For example, subjects who have chosen each other because they like to work with each other should be more productive than those who have chosen each other because they like to play together. The importance of the criterion on which choice is based is not always evident in the literature because many subjects have their own preferred criterion for choice and will use the same one no matter what the investigator suggests (French, 1956). This is to say that a subject with a salient need for affection will always choose those others perceived as fulfilling of his affectional need whether the situation calls for it or not.

Behavioral expectations tend to vary as much as an individual's criterion for group membership. Hare (1976) suggests two types of behavioral structures, the formal role structure of the group and their informal role structure. Of these two types, the formal structure is generally more obvious since it is usually in the group's total organization. Within the informal structure positions such as "best liked" and "scapegoat" can be identified through the use of sociometric indices indicating group member choices and/or rejections of other group members. The basis of interpersonal choices also has been inferred from such behavioral indices as the frequency of interaction or the content area dominating the interaction.

Interaction and the Decision Process: Although research has attempted to represent the characteristic modes of interaction between small groups of persons the primary emphasis in the social-psychological literature has been on between-person interaction. Interaction refers to all gestures, symbols, and words with which individuals respond to one another.

Each word or gesture imparts two types of information, task and social-emotional. It has implications for the task dimension of the group in that it affects the decision making process. It has implications, also, for the relative evaluation of members as well as the affective attachments among members. These two types of implications are always present for any individual act (Hare, 1976).

It would appear necessary, at this point, to examine a method of content analysis which allows one to break the interaction process into small units and assign each of the units to one of the categories. The

number of different types of acts included in the category system is dependent on the theoretical perspectives of the observer. Some category systems divide all interaction into two types, action and silence (Chapple, 1953). Some systems report only one type of verbal content such as personal pronouns (Conrad and Conrad, 1956), other systems rate words, gestures or any form of bodily action indicative of the individual's mental state. However, a recurring difficulty with the use of the category system has been that of inter-observer reliability. An observer's decision to place an act in any one of several categories is not an independent event in that a high frequency of acts in one category automatically lowers the frequency of acts in other categories. Despite this problem, research in the area of interobserver reliability (Blake, Frucketer and Mouton, 1954) supports trained observer judgments as being sufficiently reliable to encourage the use of interaction categories.

The category system of Bion and Thelan (Bion, 1959; Rioch, 1970; Stock and Thelan 1958; Thelan, 1954) assumes that every statement contains some elements of both word and emotion. The observer must determine and record the amount of each in each act. In the Bion-Thelan system work has four levels and there are three basic emotional states (fight or flight, pairing among group members, and dependency on the leader). In this system the work category is equivalent to the task area, fight or flight would be similar to hostility and withdrawal from the communication network, while dependency and pairing would represent control and affection.

The categories for interaction process analysis developed by

Bales (1950) have been used by a number of investigators in research on the behavior in small groups. Bales's method of coding interaction measures a unit act as a bit of behavior (usually verbal) which provides sufficient stimulus to elicit a meaningful response from another person. This is usually a sentence. Each sentence or comparable act is given one score to indicate the element of the task or socio-emotional behavior which appears to dominate the act. Each act or unit behavior is scored in one of twelve available categories. (See appendix).

The typical patterns of action and reaction which comprise the group process are the focal concern in the observation of interaction. Bales (1956, 1953, 1970) demonstrates that these act to act sequences are modified over the period of one meeting and over a series of meetings. Any generalizing from these patterns would be most applicable to ad hoc committees representing persons of equal social rank since most of the observations on interactions were collected on leaderless groups of college students who were unknown to each other prior to the formation of the group. This tends to parallel the MDC team in which the concept is that each member is of equal importance and shares equally in the decision making process and which may, on paper, be leaderless.

Overall characteristics generally manifested in small group research were first, problem solving behaviors represented a little more than half of the total number of responses while the remaining responses were distributed among positive reactions, negative reactions and questions. Second, talkative people elicited more responses to

themselves than other group members. Third, the forms of non-verbal behavior tended to be constant for the same subject but vary across cultures. Fourth, these non-verbal behaviors tended to function along three dimensions; 1) evaluation, 2) potency or status, and 3) responsiveness. Fifth, individuals comprising small groups tend to function along four continua; dominance vs. submissive, positiveness vs. negativity, seriousness vs. expressivity, and conformity vs. non-conformity. Sixth, group behavior varies depending on the tasks and characteristics of group members. Seventh, any category of action may be increased or decreased through positive or negative reinforcement.

Group versus Individual Decision Making: The focus of attention is now directed to small groups for the purpose of detecting those variables of consequence and of determining the relationship of those identified variables to MDC teams. Hare (1976), Hill (1982), Kelley and Thibaut (1954, 1969), Lorge, Fox, Davitz, and Brenner (1958), Wasserman and Silander (1964) are noted for their research findings on small groups. Their research and the scientific efforts of other noteworthy investigators provide substantial insights to the decision making process in small groups.

A pressing concern for researchers of small groups has been the issue of superiority of groups over individuals with reference to decision making. Lorge, Fox, Davitz and Brenner (1958) reviewed groups and individual decision making processes over a thirty-seven year period only to conclude the issue is unresolved with regard to questions of group superiority over individuals in decision rendering. While it is not possible to state that a group or groups performance is

better than an individual effort, research has generated clarifications contributing to situations of group superiority. Lorge et al (1958) contended that, in general, the group is superior to the individual but exceptions exist in which the "best" individual effort exceeds the "best" group effort.

Kelley and Thibaut's (1954, 1969) reviews on group process suggest that the relative superiority of groups in problem solving compared to individuals is dependent on the nature of the task. They submit that research studies have obtained sufficient data on problem variations to identify the problems with which groups are highly proficient and those with which they are most inefficient.

The reviews of Hoffman (1965), Hare (1976), and Hackman and Morris (1976) indicated that group versus individual performance was affected by the nature of the task. When learning was involved, group performance has been consistently superior to the performance of the individual. Laughlin, Kolowski, Meltzer, Ostop, and Vendovas (1968) found groups required fewer trials to achieve solutions than individuals in a study of concept formation. In a motor learning task, groups were superior to individuals for mean percentage of time on target (Wegner and Zeaman, 1956). Groups benefited from error correction when they pooled their responses on verbal learning tasks (Ryack, 1965).

On concept attainment tasks, more than pooling responses and correcting errors was involved. Qualitatively different learning strategies were employed by individuals and groups, with groups more frequently utilizing focusing strategies (Laughlin, McGlynn, Anderson, and Jacobson, 1968). Laughlin and Jaccard (1975) demonstrated that the



group can be affected by incidental learning from a subset of the group.

The complementary task model of Steiner (1966) assumed that group members possess unshared abilities and that in combining these abilities, the group could surpass the performance of individuals. The Laughlin and Johnson (1966) study utilizing the testing of individuals and their retesting in homogeneous and heterogeneous groups supported this model. When confronted with difficult or complex tasks, the most proficient group member seemed to draw upon the resources of the other group members to solve the task (Shaw and Ashton, 1976). In some cases the best member was hindered by working with less capable partners (Laughlin and Bitz, 1975; Laughlin and Branch, 1972), but such hindrance is low when the solution was readily apparent.

On tasks of learning and concept attainment, group performance generally exceeded that of the individual due to the groups ability to pool resources, correct errors, and utilize qualitatively different strategies. On abstract tasks, groups appeared to benefit primarily from the aggregation of resources. Members were able to pool and integrate resources and correct each others errors. On multi-step tasks, groups were likely to have a greater probability of having at least one member who would be able to solve any stage than an individual. Although group performance usually was superior to individual performance, it did not achieve the level suggested by statistical pooling.

Three possibilities exist in regard to the level of proficiency of groups; groups may perform at the level of the most proficient

member; groups may perform below the level of the most proficient member; groups may perform above the level of the "best" member.

Numerous studies suggest circumstances which lead to a group's performance at the level of its "best", or most proficient, member. Gurnee (1937) studied classroom groups and individuals in their performance on a multiple choice achievement test. Findings demonstrated that groups performed no better than the best individual.

Thorndike (1938) observed groups of 4, 5, and 6 members involving 1200 college students. The task employed the simple selection of one of two alternatives. Analysis disclosed that group performance equaled or approximated but did not surpass the "best" or most proficient individual.

Hudgins (1960) observed the problem solving process of fifth graders with arithmetic problems. Problems first were solved individually and then worked cooperatively in groups. Findings disclosed problems correctly answered were greater for the groups than for individuals. It is necessary to comment that the problem was solved only if it had been solved previously by one of the group members. The correlation of problems solved correctly with the number of problems can be explained through a pooling effect.

In summary, the findings suggest that there are situations in which a group is capable of functioning at the level of its most proficient member. Kelley and Thibaut (1969) suggest that groups perform as well as their "best" members when dealing with problems that have two characteristics: (1) few steps required for solution, and (2) solutions are highly verifiable by all persons in possession of the

original facts of the problem.

It is possible for a group to perform below the level of its best member. Davis and Restle (1963) found the performance of four groups fell short of the typical individual's in tasks that were relatively long and required working through a sequence of ideas to arrive at correct answers. Groups tend to function at a level below that of the most proficient member when solutions require processing interrelated steps, applying rules at each point, and recalling previously reached conclusions. The implications of these findings are not clear with regard to decisions made by MDC teams. While the information used by MDC teams is interrelated and complex, there are not specific rules applied at various steps to arrive at a correct decision.

There are specific problem solving areas in which groups appear to perform better than any single member is able to perform. Faust (1959) compared the performance of individuals to groups on anagram problems. Both groups and individuals followed the same instructions. Results disclosed that groups were superior to the most proficient individual.

In the Perlmutter study (1953), three person groups were required to learn two lists of nonsense words. The findings noted that the group recall scores tended to be equal to or better than the best individual scores.

In a follow-up study reported by Perlmutter (1953), group superiority over individuals was observed. Content analysis of group and individual protocols on recall tasks indicated that recall scores for the best individuals were more frequently below the group than they

were above the group.

Kelley and Thibaut (1969) reported that analysis of situations in which groups tend to surpass their "best" individuals suggested that group decisions are likely to be superior when the problem is multifaceted, and when group members have uncorrelated strengths or deficiencies in their capabilities with respect to the parts of the problems.

MDC teams work with extremely complex problems and their individual members possess diverse abilities in relation to servicing exceptional children. Considering the research findings, it would appear that MDC teams would be superior to individual team members in selecting appropriate educational placement for exceptional children.

The issue of group versus individual superiority in decision making has grown from a simple either/or concept to a series of interrelated assumptions about the nature of the tasks under consideration. The research reviewed here suggests that groups may function above, below, and at the level of its most proficient members. Groups operate at the level of the most proficient member with problems which involve few steps for their solution and which are readily validated. Groups tend to function below the level of the "best" with problems requiring interrelated steps and involving recall of previously reached conclusions. Groups tend to surpass the level of best members when problems have multiple parts and the group members have uncorrelated abilities or deficiencies in their proficiencies with respect to the components of the problem.

MDC teams encounter multifaceted problems which do not easily

lend themselves to validation. Additionally, group members possess varied skills that relate to the problems of the exceptional child in different ways. The implication is that tasks faced by MDC teams should promote group superiority.

Group Size: The relationship between group size and the group process has been given considerable study. No exact upper limit has been set for the size of a small group. The usefulness of the concept of the small group rests on the fact that size can be a limiting factor on the amount and quality of communication that can take place among the members. Therefore, size can affect the relationships among the group members. While such a fact has implications for group efficiency it does not clarify the question of accuracy in decision making. A number of investigations have been conducted to determine the effect of group size on problem solving.

While size may be reviewed as a limiting condition in certain respects, increasing size is not a constricting factor. Some of the resources or abilities needed to perform a task are additive in character. They include such things as the amount of information that can be recalled and absorbed; and the number of critical judgments available to correct errors (Steiner, 1966; Neumann, 1969).

However, there is a point of "diminishing returns" that is eventually reached. The addition of another person does not necessarily mean an increase in efficiency (Smith and Murdock, 1970). While difficulty in coordinating the actions of the group increases with size, this is only one factor. A second factor was explored by J. R. Gibb (1951). Gibb showed that the proportion of group members who feel

inhibited increases as the size of the group increases.

The quality of interaction among members in a group trying to reach a decision changes with increasing group size. As groups become larger, they become more mechanical in their methods of introducing information and less sensitive to differing viewpoints (Bales and Borgotta, 1955). Also larger groups are more likely to attempt direct solutions whether or not all group members agree. Rates of showing tension tend to decrease, but joking and laughter increase with increase in group size. This suggests tendency for less direct involvement in task success and for tension to be displaced in humor.

A number of studies suggest five as the optimal group size (Bales, 1954; Hackman and Vidmar 1970; Slater, 1958). Hare (1952) showed members of five member groups to be more satisfied than members of 12 man groups. Below this size members complained that the group was too small, perhaps this was due to the strain of face-to-face relationships. Above five the members tended to complain that the group was too large.

Group Perception: Group members are generally aware of their behavior and of the effect that it is having on other group members (Crowell, Katcher, and Miyamoto, 1955). Behavior is apt to be least self conscious in a small group in which the individual is highly involved (Goffman, 1957) and most self-conscious in larger groups which provide some time for reflection between acts.

Though the perception of another person usually changes as new information is obtained about the person, the first impression of a person may color all additional information. In laboratory experiments

(Asch, 1946) and in classroom settings (Kelley, 1950) the effect of the first impression has been demonstrated by presenting a list of adjectives describing a person as warm for half the subjects and cold for the other half. In both cases the person who was initially identified as warm was perceived more favorably. In a similar experiment (Bond and Dutton, 1973) the subjects made less extreme ratings on the warm/cold dimension when they anticipated future interaction with the stimulus person than when they did not.

The individual's perception, at any given time, is a function of the attitudes of the society transmitted in culture, the more transient perceptions of the small group involved in the action of the moment, and an idiosyncratic component which results from the personality of the perceiver and perceived along with situational variables. A fundamental part of the individual's perceptual base is in his assessment of the perceptions of his group (Cartwright, 1952; Zander, 1958). The self-concept of men living in a dormitory in four-man living units have been found to be influenced by others' perceptions of them over a period of months of living together (Manis, 1955). In a study of college class room and fraternity groups (Miyamoto and Dornbusch, 1956) self-perceptions were found to be related to the actual attitudes of the other group members. However, the self-perceptions were more likely related to the subjects' perceptions of the others' attitudes, and most closely related to the subjects' estimates of generalized attitude. The group's perception of the individual will have more influence if the individual is highly attracted to the group and when the other group members place a high value on his participation

(Zander, Stotland, and Wolfe, 1960).

### Leadership

A primary component of group process is leadership. The exercise of power by individuals over one another characterizes all social life (Gibb, 1969a). Curiosity with regard to the phenomenon of leadership is strong.

Gibb (1969b) maintains that leadership is a special case of a larger process of role differentiation within groups. He further suggests that leadership is applied to circumstances prevalent in a group when role differentiation results in one or more interacting members influencing the actions or decisions of other group members in a shared venture terminating in a common goal.

The thrust of leadership studies, for many years, concentrated on the specification of leadership acts and the identification of characteristics attributable to individuals initiating such acts. The leadership model has generated three basic positions: (1) leadership as a function of occupying an office or position of leadership; (2) leadership as an effect of certain traits that characterize leaders wherever they may be found; (3) leadership as a function of personality and the social situation, and the interaction of the two.

Identifying the Leader in a Small Group: Shartle and Stogdill (1952) defined a leader as whoever occupies a leader's office. They assumed that persons who occupied positions which were commonly presumed to demand leadership ability were likely subjects for the study of leadership. The basic weakness in such a concept can be seen in an organizational situation in which there is no clearly defined position



of leader. Gibb (1969b) in a summary of the work on appointed leaders suggested that such a definition includes too wide a variety of relationships to have scientific value. The variety of traits a leader may have is the same as that of any other group member, except that the leader is usually found to have a higher rating on each of the "good" traits. While correlations between "good" personality traits and leadership are generally positive, they are rarely large (Hare, 1976).

Little variance in leader behavior can be accounted for in this way (Gibb, 1954). Certain traits such as intelligence, enthusiasm, dominance, self-confidence, social participation, and equalitarianism are frequently found to characterize leaders (Gibb, 1947; Sorrentino, 1973; Stogdill, 1948; Zigon and Cannon, 1974; and others). Usually, however, the relationship of a trait to the leadership role is more meaningful if consideration is given to the nature of the followers. While potential leaders tend to have more of all positive attributes than the other members of the group, they cannot be so extreme that they become deviates. At one college (Davie and Hare, 1956) found the campus leaders to usually be "B" students. The straight "A" student might be considered an outcast if he were suspected of doing so well that the other members of the class received poor grades by comparison.

Considering total personality as a cluster of traits, a common finding in research indicates that there are two basic personality types among leaders. Some are self-oriented (authoritarian), rather hostile persons with driving needs to be at the center of group activities; while others are group-oriented (egalitarian) persons who are able to reduce tension in a group, work toward a group goal, and take a

follower role when it is appropriate (Hare, 1957; Stogdill, 1974). However, it should be noted that leaders who emerge in leaderless groups tend to be more authoritarian in their behavior than those leaders who are appointed (Carter et al., 1951). This seemingly occurs because more domineering behavior is required to establish than to maintain a leadership role (Hare, 1957). Hence, if the traits of an effective leader are related to the functions he will perform in the group, probably the most general rule for leader selection would hinge upon selecting the individuals who have the necessary skills and the willingness to meet the group's need using them (Wolman, 1956). Similarly one would expect the leader to be most effective when the needs of the group are clearly defined.

Hemphill's (1949, cited in Hare, 1976) extensive questionnaire of leadership qualities identified five functions common to leaders of all groups: (1) advance purpose of group; (2) administrative; (3) inspire greater activity or set force for the group; (4) make individual members feel secure of their place in the group; (5) act without regard to one's own self-interest.

Considerable energy has been spent in attempts to identify specific traits which characterize leaders. A review of literature by Stogdill (1948) tested several traits which appeared related to leadership such as: weight, height, wealth, health, physique, energy, appearance, and intelligence. The findings demonstrated limited statistical significance and no usefulness across groups. It becomes increasingly obvious that leadership does not lend itself to a reductionistic analysis of physical traits of the leaders (Gibb, 1969b).

In addition to physical traits, numerous investigations have been conducted involving personality variables. Explored have been such areas as: personality integration (Mann, 1959); personality adjustment (Holtzman, 1952); will power and perseverance (Hanawalt, Hamilton, and Morris, 1943); introversion and extroversion (Cattell and Stice, 1954); application and industry (Henry, 1949; Stogdill, 1948).

In reviewing the relationship between leadership and personality traits, two positions emerge. First, several reviews of the personalities of leaders (Goodenough, 1930; Mann, 1959; Stogdill, 1948, 1974) have failed to identify any consistent patterns of traits which characterize leaders. Cartwright and Zanders (1968, P. 303) have stated that: "...on the whole, the attempts to discover traits that distinguish leaders from non-leaders have been disappointing." What has been suggested, however, is that leaders seemingly possess the same traits as non-leaders only in more abundance which in any particular situation, enable an individual to (a) contribute significantly to group movement in the direction of the goal and (b) be perceived as doing so by the other group members.

Present indications are that leadership is not truly a unitary process, and it is unlikely that any trait or set of traits is consistently present to account for leadership in all situations. The unitary trait theory has been modified to account for situational variables (Gibb, 1969; Hare, 1974).

Sherif (1948) suggested that with the emergence of a group structure each of its members is assigned a relative position within the group, depending on the nature of interactional relations with all

other members, and the relative position is a function of individuals in pursuit of a common goal.

The relative role an individual assumes within a group is dependent on personality, ability, skills, and other traits which distinguish him from the other group members. Roles are determined by the individual's standing in relation to his peers in the qualities required by the particular group goal or situation. However, one's standing is not dependent on actual possession of these special qualities but the extent to which peers perceive one as having these qualities. Hence, leadership is a function of the interaction of personality and the goal or situation.

Leader Behavior and Its Measurement: The task at hand in determining leadership in small groups is the study of leadership behavior. Two major methods offer themselves for analysis of leadership behavior. With the first method, attention focuses on the perceptions and impressions of the group members as an indicator of leadership within the group. The second method measures the relative influence of individual members on other group members.

Sociometry has been an effective instrument for the study of leadership. The easiest and most frequently employed sociometric technique is the peer rating (Hollander, 1964). A peer rating involves the individual group members' assessment of other group members on an observable quality such as task effectiveness, leadership, and popularity. A composite score is obtained from these ratings which can serve to predict a criterion or act as a criterion itself to validate other factors. Peer nominations consistently represented a more superior

prediction of performance criteria across situations than any other variable (Hare, 1974; Hollander, 1964; Williams and Leavitt, 1947).

The other major assessment of leadership is in the measurement of influence of group members upon one another. It becomes necessary to focus attention on leader behavior occurring in a group when considering the issue of influence. All the types of central persons of groups have in common the fact that they have influence over the other group members. The dynamics of power are such that those having the most power are the most imitated, approached nondirectively, and deferred to most frequently. They would be more likely to direct others, and resist the directions of others. The more powerful group member is better liked and more frequently identified as the individual the group members want to be like (Lippitt, Polansky, and Rosen, 1952).

The influence of a member in an informal structure will be enhanced if he is placed in a formal position of leadership. The effectiveness of a leader is greatest when he utilizes the opinions of minority members who are initially correct (Maier and Solem, 1952). Upon being placed as a leader, an individual will try to exert more influence. Regardless of the basis of the power (be it legitimacy, ability to coordinate activities, skill, or other factors) the more an individual attempts to influence another person, the more he will be successful in influencing the other members of the group (Gray, Richardson, and Mayhew, 1968; Hoffman, Burke, and Maier, 1965).

Hopkins (1964) states that influence is the effect of action on group consensus. The underlying implication is that group consensus will move toward the position held by the person exercising the great-

est influence. The issue of influence is inextricably tied to the issue of power. One person has power over another if he can perform an act that will result in a change in the other person. The effectiveness of this act depends upon O's (the one perceived as exerting influence) possession of power resources and upon P's (the one influenced) motive base of power. An influential act establishes a relationship between a resource of O and a motive base of P (Cartwright and Zander, 1968).

Lists of resources of interpersonal power usually contain such items as wealth, prestige, skill, information, physical strength, and the ability to gratify the ego needs that individuals have for such intangibles as recognition, affection, respect, and accomplishment. Clearly, such properties frequently serve as resources and persons possessing them often derive power from them.

Power may be viewed as an intervening process in organizational development rather than a structural given or terminal effect of planned change. Power relationships are viewed as deriving from multiple inputs, design variables, and as leading to multiple outputs in terms of organizational consequences such as member attitudes and behavior (Wood, 1972b).

A person with resources has a capacity to perform acts that will influence those who value the resources. If the individual desires to accomplish some objective requiring changes in behavior, beliefs or attitudes of others, he may be expected to perform acts that he believes will bring about these changes. Power motivation affects an individual's attempts at influence, as well as attitudes resulting from

the successful exercise of influence (Cartwright & Zander, 1968; Wood, 1972a). When viewed as an interactional phenomenon, the exercise or influence of power is dependent upon the perceptions and reactions of the group members. A team member can only be considered to be influential if viewed as such by the group members.

Several studies on group process have indicated that possession of knowledge (power resource) relevant to group goals is highly valued by the group. Palmer (1962) administered test items first to individuals, then to four man groups, and required consensus on each item. The higher the score on the first exam, the more influence a student exerted in causing others to change their answers to conform to his.

Shaw (1961) experimented with groups in which one member was given information either of high or low validity for solving a difficult concept formation task. Findings disclosed that the more valid the information, the more influential the informed individual was in causing others to change or adopt the new solution.

Ziller and Behringer (1960) attempted to determine the effect of adding a knowledgeable newcomer to a team. First, a three person group worked on two problems. Following this phase, a fourth person was introduced. The group then performed a more difficult third task. Accomplices had been provided with correct answers and convincing rationale. Findings indicated that the knowledgeable newcomer had significant influence.

The evidence suggests that the presence of a knowledgeable member in a group is likely to lead to his rapid acceptance by the group, if he has a history of success. Previous success on related

group tasks plays a major role in member willingness to accept influence. Analysis of influence within a small group should, therefore, involve an analysis, of the individual's knowledge of group goals. Experience can be established by observing the length of time a person has been a member of a group. Training and experience seemingly contribute to possession of knowledge and history of successful decision-making.

Information on leadership can be readily applied to MDC teams. MDC teams have appointed leaders because school policy usually dictates that a specific individual chair the group. It is obvious that the appointed leader may or may not be influencing team members significantly in the selection of appropriate educational placement. Thus, the important factor with regard to influence is the possession of information relevant to the group's goals. In the case of MDC teams, the relevant information is the knowledge of appropriate educational placement for the exceptional child.

#### Factors Influencing Team Decisions

Abelson and Woodman (1983) suggested that the advantages of the MDC have been established and that research should now be focused on improving the effectiveness of the MDC. In order to achieve the multidisciplinary decision, all MDC members must participate in many aspects of group decision-making. The extent to which all team members participate has not been closely examined. Previous studies have simply described which individuals attended staffings but they have not provided indications of the nature and frequency of participation (Keogh, Kucic, Taulman, Agard, 1975). Goldstein, Arkell, Ashcroft, Hanley, and



Lilly (1975) concluded that placement decisions were usually dictated by the dominant team member rather than by group deliberation. Yoshida, Fenton, Maxwell, and Kaufman (1975) showed that MDC team members of different professions participated differently. Appraisal personnel (i.e. psychologists, social workers, school counselors) and administrators generally had higher participation scores than medical personnel, special or regular education teachers or the parents. (Ysseldyke, Algozzine, and Allen, 1981; Ysseldyke, Algozzine, and Mitchell, 1982). Participation was shown to be related to satisfaction with the working of the MDC team, though role was not significantly related to either variable. As a functioning group, the impact of group process on the MDC team's functioning must be acknowledged (Gillespie, 1978; Kane, 1975). Gilliam (1979), Gilliam and Coleman (1981), along with Yoshida, Fenton, Maxwell and Kaufman (1978b) noted disparity in the influence, participation and satisfaction of MDC team members. Knoff (1983) found team members do exert disproportionate influence on placement decisions but that the pattern of influence was different than that of previous studies. Knoff suggested that each team should be considered unique with its own team specific interactions and patterns of influence. Pfeiffer (1982a) found that group decision making facilitated a significant reduction in erroneous placement decisions.

The literature related to organizational theory and small groups describes group decision-making situations that are very similar to MDC meetings (Likert, 1967; Vroom, 1969).

Psychoeducational assessment has been the function for psychol-

ogists working in the schools. They are responsible for individual appraisals of children being considered for special education placement. Working with personnel from regular and special education, psychologists direct their attention towards identifying children eligible for special education. They are perceived as being expert in the administration and interpretation of tests (Matuszek and Oakland, 1979).

Psychologists frequently feel dissatisfaction with this rather narrow role definition. Psychologists are aware that a restricted set of characteristics of children are observed, that opportunities to confer with teachers and other significant adults who know the children are limited, and that the number of cases needing processing are never ending. Teachers frequently express dissatisfaction with the quality and relevance of the psychologists' reports (Bennett 1970), with the insufficiency of the psychologists' data gathering techniques, and with the isolated nature of the psychologists' work (Sabatino, 1972).

These problems have been exacerbated by the three trends: the expansion of special education services, the need to provide more comprehensive assessment procedures as prescribed by the Office of Civil Rights (OCR), federal legislation (Public Laws 93-390 and 94-142), and litigation challenging the validity of tests when used on minority children (Oakland and Loasa, 1977). Federal and state regulations for special education call for more extensive and frequent screening of eligible students. Psychologists are developing defensive practices (e.g. over evaluation) to avoid the possibility of law suits. In addition, over evaluation may occur through the implementation of

the Office of Civil Rights guidelines for assessing minority children (Gerry, 1973).

There has been a tendency to identify characteristics which should be included in an assessment program without first determining which characteristics actually influence the decision-making practice. The need to determine which characteristics influence decisions regarding special placement is basic to the design and implementation of an assessment program. The characteristics which can potentially influence judgments about special education placement can be identified through three main sources: those specified by the State Education Authority (SEA) policies governing special education, those identified in the professional literature (Morrow, Powell, and Ely, 1976), and those specified by OCR as being important for assessing minority group children. Among the characteristics are ethnicity, socio-economic status (SES), intelligence, adaptive behavior, achievement test scores, classroom achievement, language characteristics, manageability, self concept, and interpersonal relationships.

Matuszek and Oakland (1979) indicated that psychologists drew from a small pool of objectively based information when making decisions involving special education placement. Psychologists seemingly relied most heavily on IQ and achievement test data, though, they also utilized SES, class achievement, and home related anxiety data when making their decisions. Ysseldyke, Algozzine, Regan and McGue (1981) suggested that sex, SES, and physical appearance had no effect when making decisions, however, the teacher's reason for referral significantly affects the decisions. Bernard and Clarizio (1981) sug-

gested that there was no bias due to SES, but that sex, age, and intelligence may contribute to placement decisions. Teachers were found to rely heavily on six variables when making placement recommendations: class achievement, test achievement, IQ, home-related anxiety, self concept, and adaptive behavior. That Johnson (1980) indicated a number of factors which seemed to explain the importance of class achievement to teachers might be expected. The importance of the IQ was unexpected, particularly since tests are often denigrated by teachers (McKenna, 1977).

The role of the special educator in placement and programming decisions has been solidly established as a result of recent developments. The assessment procedures mandated by P.L. 94-142 and the emphasis now being placed on social competence has encouraged collaboration between the school psychologists and instructional personnel. Traditionally the school psychologist had identified most of the mentally handicapped school children (Meyers, 1973) and had been the most influential person when it came to making placement decisions. Special education placements were frequently based on test results alone. In the last decade professionals in special education have noted a need to involve parents in the educational planning of exceptional children (Simches, 1975). Dunn (1968) claimed educator's were guilty of fostering the quantity of special education programs with little regard for the quality of instruction. In the absence of legislative action, groups utilized litigation to make public policy (Holtzman, 1966). The Pennsylvania Association for Retarded Children (PARC) brought suit on behalf of thirteen retarded children. The

results of that suit gave the right to an individually appropriate public education for mentally retarded children (PARC v. Commonwealth, 1971). The Mills v. Board of Education of the District of Columbia case (Mills v. Board of Education, 1972) expanded the PARC decision to all children who suffered mental, behavioral, emotional, or physical handicaps. By 1975 at least 36 cases appeared in state or federal court focusing on guaranteeing the exceptional child the right to an education (Kaufman, Gottlieb, Agard, and Kukic, 1975). In each case the parents or parent advocate group brought suit on behalf of children, who were excluded from public education. The courts ruled in favor of the excluded children and further stated that they were entitled to alternative free public educational programs (Schipper, Wilson, and Wolf, 1977). Parental participation in education has been demonstrated to have a positive effect on a child's achievement (Bigler, 1975; Bittle, 1975; Edgerly, 1975; Locke, 1976). In addition parental involvement has also brought about positive change in parental attitude (Corrado, 1975; Lynch, 1976). The passage of P.L. 94-142 (the Education for All Handicapped Children Act of 1975) has mandated parental participation as a component of special education within the public schools. Parents are now required to be involved in all aspects of the placement process including the development of the individualized program (IEP).

The role of parents in placement decisions and IEP development has just begun to evolve. In a survey of the professional members of MDC teams (Yoshida, Fenton, Kaufman, and Maxwell, 1978) it was found that the majority felt that parent participation in the IEP development

should consist of presenting and gathering relevant information rather than contributing to the educational planning. Two participants present at all of the IEP conferences were the parent and resource teacher. Conferences were cancelled when the parent failed to attend. The classroom teacher was present less than 50% of the time.

The IEP had been written primarily by the resource teacher prior to the conference. Thus the purpose of the conference should be viewed as one of informing the parents of the nature of an already developed IEP, obtaining possible suggestions for modifications from the parents, and receiving their approval. The National Education Association's (NEA) Study of Education of the Handicapped (1978) reported that placement decisions were made as a result of informal meetings between the resource teacher and the classroom teacher. Under such circumstances the IEP meeting becomes a "performance procedure" with little actual effect. A majority of the Directors of Special Education (79%) indicated that they regularly hold meetings without parents present to decide what to tell parents (Poland, Thurlow, Ysseldyke, and Mirkin, 1982).

In a study of IEP conferences Goldstein et al (1980) found that curriculum, behavior, and performance ranked as the three most frequently discussed areas, while evaluation, placement, special services, rights and responsibilities, future contacts and future plans received little attention. Approximately 30% of the time in the meeting was spent presenting data (Ysseldyke, Algozzine, Rostollan, and Shimm, 1981) about 17% of the time was spent describing classroom performance. Information related to the evaluation primarily consisted of standard-

ized achievement test scores reported as grade equivalencies presented in a confusing manner, yet parents asked few questions. In only 27% of the meetings was the language used consistently at a level judged understandable to parents (Poland, Thurlow, Ysseldyke, and Mirkin, 1982). Despite these shortcomings an overwhelmingly positive reaction to the conference was a result. It was suggested that this positive response was due to the parents' lack of knowledge of the purpose of the IEP meeting and that it was an increase in communication over what has been experienced in the past. Hoff, Fenton, Yoshida, and Kaufman (1978) suggested the lack of parental understanding of MDC decisions indicates that parents are not involved in the decision-making process.

The increase of parental involvement through informed consent is a primary feature of PL. 94-142. The intent of the law was a radical change from the past in which the school was the final authority in determining the appropriate education for handicapped children. It creates a situation in which the school shares the decision-making authority with the parents. Parental involvement is brought about by the requirements that: (a) parents be notified of proposed changes in educational status or program and they must give their consent, (b) parents must be invited to MDC meetings where decisions about eligibility, program, and placement for their handicapped child are taking place.

The sharing of information is crucial to parental involvement. Both written notice and the parents participation in MDC are the primary means of sharing information with parents. The parents utilize this information while acting as the child's advocate by giving permis-

sion or appealing the proposed placement.

The responsibility for fostering parental participation rests with the Local Education Agency (LEA). The Local Education Agency must insure that the parents are informed of their rights, that they are invited to participate in decision-making, and that they understand and consent in writing to special education decisions. P.L. 94-142 has the minimum requirements that the Local Education Agency give prior written notice whenever: it proposes to "initiate or change the identification, evaluation, or educational placement....or the free appropriate education provided to the child." The LEA is responsible for insuring that the parents "have been fully informed of all information relevant to the activity for which consent is sought." More importantly, the LEA must be sure that the parent understands and agrees in writing to the carrying out of the activity "for which the consent has been requested" (Federal Register, 1977, p. 42495-5). Federal requirements for written notification at crucial points in the planning and placement process implies that three notices be given to the parent prior to the initial special education placement, prior to evaluation, prior to the MDC meeting, and prior to implementing special education services. The timing of these notices is explicitly stated in federal guidelines, while the content is open to interpretation.

Most states have required only a minimal description of the recommendations while others have required more elaborate reporting of evaluation procedures, alternate placements considered, along with statements of certain parental rights. Judicial interpretations such as Mills (1972) and PARC (1971) have encouraged the more elaborate



forms of notice in addition to more intelligible forms.

Numerous authors have supported an interdisciplinary team approach to the delivery of pupil personnel services (Ferguson, 1970; Falick, Grimm, Preston, and Konno, 1971; Hogenson, 1973). Thomas (1972) enumerated several benefits of pupil personnel services collaboration with instructional personnel. Included among the benefits were increased opportunities to prevent maladaptations and to devise and implement less traditional ways of dealing with problems. Buktenica (1970) noted that teams emphasized assessment of needs and the prevention of maladaptation rather than a crisis response approach. The research has shown that not only are MDC teams effective (Maher, 1981; Maher and Barbrack, 1980; Pfeiffer, 1982b; Rettke, 1968) but has challenged studies which concluded that MDC team decisions were no better than those made by individuals (Pfeiffer, 1982).

Armer and Thomas (1978) indicated that school personnel were aware of differences in collaboration among teams and that high collaboration teams were viewed more positively. High collaboration teams met regularly with faculty and administrators and were perceived as working as a team and also as more cooperative.

Decision-Making Within the MDC: Ysseldyke and Regan (1980) pointed out the need for nondiscriminatory assessment. Efforts to implement P.L. 94-142 have resulted in increased attention on the assessment-intervention and decision making process with exceptional children. Cromwell (1975) stated that many decisions reflect the decision-makers desire to avoid confrontation about the decision. Guba (1978) outlined other factors that might influence the decision maker:

- a) Undesirable consequences of an interaction,
- b) Confusion regarding a course of action,
- c) Undesirable deviation from older practice,
- d) Conflicts with traditional values,
- e) Conflicts with personal values,
- f) Potential loss of power,
- g) Potential economical threats,
- h) Perceived inconsistency with a suggested course of action,
- i) Lack of understanding of rationales or goals,
- j) Bias based of negative personal experience,
- k) Potentially harmful side effects,

Psychoeducational assessment and decision making include at least five categories of decision: referral, screening, classification/ placement, instruction, and program evaluation. Across these categories there are a number of things that influence the decision making processes.

Slovic and Lichtenstein (1973) in summarizing the state of knowledge and human judgment made the following points:

- 1) Judges respond in predictable ways to available information,
- 2) Judges tend to resort to simplified decision strategies, many of which lead them to ignore or misuse relevant information,
- 3) The structure of the judgment situation is an important determinant of information use,
- 4) There are variables that influence decision making, yet we know nothing of how they effect decision making.

Research generally indicates that the clinical judgment process,

in which individuals infer diagnostic labels and predict treatment outcomes, is unreliable at best. Even when using the same data set, different judges do not consistently reach the same conclusions (Wiggins, 1973). Further the validity of judgments tends to be low, and increasing the amount of information available does not increase validity. In addition the validity is not related to the experiences of the judges, nor is it related to the confidence with which judgments are made (Thurlow and Ysseldyke, 1979).

In analyzing the decision making process as it relates to the IEP team, Yoshida, Fenton, Maxwell, and Kaufman (1977) found that school psychologists participated in the placement team decision making process the most often and that they were the most satisfied. Regular teachers participated the least and were the least satisfied. The group decision making process is an exercise in human information processing. It is a multifaceted, multiphased process in which multiple power basis and interaction dynamics affect power relationships. Psychoeducational decisions regarding special education students occur in a context; the decisions are directly affected by that context.

Holland (1980, P. 552) found that while recommendations and decisions are made on the basis of multidisciplinary evaluations and the inputs from many school professionals, many subtle yet forceful factors influence the decision making process among them are:

- a) Parental pressures,
- b) Available programs/resources,
- c) The student's male/female identity,
- d) Racial considerations,

- e) Vested interests of social agencies/advocacy groups,
- f) The teacher's and/or the principal's influence,
- g) Physical/social/emotional maturity of the student,
- h) Geographical proximity of the special education services,
- i) Academic as well as school behavior of the student,

To complicate the decision making process further each participant interprets the vast amount of information through their previous experiences, biases, beliefs, and perspectives. Effective communication, good interpersonal skills, and/or degree of authority of the participants will influence the final decision.

While effective communication among school personnel appeared crucial to the success of the assessment and placement processes (Holland, 1980), increased staff and program alternatives would also lead to more appropriate placement. Holland (1980) found that although the rules and regulations for P.L. 94-142 state available programs, resources and/or financial support should not determine placement decisions these factors do influence decisions.

Team procedures are governed by due process obligations to insure that the resulting decisions are rational not arbitrary. Most theories of decision making assumed that the team members agree with the organizational goals, as a result, the consequences of a lack of knowledge of the goals, or a difference in the interpretation of the goals have largely been ignored (March and Simon, 1958). Goal clarity has operational implications for the MDC team. The formal organizational goals provide the basis for rational decision making, failure to attend to these goals are likely to be accompanied by a failure to

attend to the activities necessary for making appropriate decisions. The orderliness and efficiency of the process is dependent upon the extent to which the team members understand their goals and the expectations placed on them. Incongruent perceptions among group members frequently results in the ineffective behaviors (Schmuck, Runkel, Saturen, Mortell, and Derr, 1972). March and Simon (1958) theorized that the greater the clarity of goals associated with an activity the greater the tendency of the group members to engage in it. When goals are explicit, it is easier to attach rewards and penalties to the behavior necessary for achieving them, thereby making it easier to exert administrative and social pressure on individual members to conform to group goals. It would seem that, if the responsibilities are clearly known and understood by MDC team members, the assigned and expected goals are more likely to be carried out.

Fenton, Yoshida, Maxwell, and Kaufman (1979) found that not all placement teams have an accurate idea about the scope of their responsibilities, and that they recognize duties differently according to roles (i.e. administrator, teacher, psychologist, social worker). Team members' awareness of the organizational goals is the first step in assuring appropriate decisions regarding educational programming. The internalization of the goals is dependent on the extent to which they are operational (Katz and Kohn, 1966). The placement teams perception of their goals differed from the goal statements found in the written documents of the state educational agencies and P.L. 94-142 (Fenton, Yoshida, et al, 1979). In addition disagreements among team members about the teams duties were noted. The more strongly group-members

identified with their professional subgroups the greater was the likelihood that their perception of the goals differed. This suggests that placement teams may have difficulty getting their members to function as a unit.

School personnel regularly must decide who, among those students experiencing academic and behavioral difficulties, should be declared eligible for and receive special education services. Considerable time and effort go into the collection of data for decision making and in the actual deliberations that lead to decisions. Yet little is known about the extent to which specific kinds of data influence the decision making process.

Those involved in making psychoeducational decisions about students routinely administer or utilize the results of standardized tests during the decision making process. The test data are collected to facilitate the making of screening, eligibility, intervention and evaluation decisions (Salvia and Ysseldyke, 1978). Investigators (Levine, 1974; Silverstein, 1963; Thurlow and Ysseldyke, 1979) have reported the frequency with which various tests are used. However, there are no studies reporting the kinds of tests used by different practitioners, and few on the extent to which decision makers perceive different kinds of tests influencing the decisions they make. Matuszek and Oakland (1979) demonstrated that both classroom teachers and school psychologists consider IQ, tested achievement, and home-related anxiety important in making decisions about people, but that psychologist weigh IQ and tested achievement more heavily than do teachers.

Data exist demonstrating that professional-student interactions

and assessment processes are affected by naturally occurring pupil characteristics (e.g., race, sex, SES, physical attractiveness, etc.). Teachers interact differently with black and white students (Coates, 1972; Rubovitz & Moehr, 1973) and differently with boys and girls (Meyer and Thompson, 1956). The pupils' sexes affect the types of academic and social difficulties expected from students (Algozzine and Ysseldkye, 1980; Schlosser and Algozzine, 1979). SES has been shown to affect teacher-pupil interactions (Jackson and Lahaderne, 1967). Berscherd and Walster (1974), and Ross and Salvia (1975) demonstrated that physical attractiveness affects both interactions and diagnostic outcomes.

Ysseldyke, Algozzine, Regan and McGue (1981) demonstrated that a student's sex, SES, and physical appearance had an effect on decisions affecting placement. Reasons for referral significantly affected decisions. When all assessment data indicated average or normal performance, students referred for behavior problems were diagnosed and labeled emotionally disturbed more frequently than those referred for academic problems (Ysseldyke and Algozzine, 1982). Previously assigned diagnostic labels resulted in differential treatment of the same behavior when demonstrated by children labeled normal (Sutherland and Algozzine, 1979).

Different kinds of assessment data differentially affected decisions (Ysseldyke, Algozzine, et al., 1981). Achievement test scores and IQ along with the disparity between the two were perceived to be the most useful and influential. However, when the referral was for behavior problems, personality tests and behavioral data were perceived

as being more influential.

SES influenced decisions more frequently when the student was from a high SES than a low SES background. Sex, SES, and, reason for referral had a greater influence than physical appearance, but only when the reason for referral was academic. Reason for referral had a greater effect on decisions than did sex, appearance, or SES.

The labeling of special education populations is based upon the premise that certain characteristics will be useful for identifying reasonably homogenous groups of exceptional children for instructional purposes. A significant amount of research exists which analyzes the characteristics associated with specific handicapping conditions. Gajar (1980) demonstrated the significance of certain measures in identifying exceptional children. Measures of IQ, underachievement in reading, test-score scatter, conduct disorder, and personality problems correctly classified 81.8% of a selected population, and lend support to the use of the measures in the labeling of EMR, ED, and LD groupings.

The significance of IQ measures was expected; EMR students are usually classified and discriminated from the other groups on the basis of poor performance on IQ tests. Underachievement in reading and test scatter are the measures primarily used for the identification of LD subjects. Personality and social-adjustment disorders have been associated with ED children. The lack of acceptable methods of identifying ED behavior has been a problem. Educationally irrelevant schemes based on psychiatric descriptions of adult behavior have been used. Classification systems taking into account childhood disorders have been



recently developed. The dimensional approach, which identifies statistically interrelated patterns of behavior (conduct disorders, personality problems, immaturity-inadequacy) has the potential of being educationally relevant (Kaufman, 1977; Quay and Werry, 1972).

The practice of making placement decisions on the basis of IQ test results alone brought severe criticism (Bernal, 1975; Jackson, 1975; Jastak, McPhee, and Whitman, 1963). The development of new measures to facilitate the use of multiple criteria for decision-making was advocated (Grossman, 1973), as was the use of a team approach (Caterall, 1972; Sabatino, 1972). This resulted in the development of a number of measures of adaptive behavior; the Adaptive Behavior Scale (Lambert, Windmiller, Cole, & Figueroa, 1974) and the Adaptive Behavior Inventory for Children (Mercer & Lewis, 1977) to be used to complement IQ and achievement data when making placement decisions.

Coulter, Morrow, and Zucker (1978) noted that 66.9% of the educable mentally handicapped children were declassified following an adaptive behavior assessment. The importance of least restrictive placement to social adaptability was demonstrated by Gottlieb, Gumpel, and Budoff (1975). They reported integrated EMR labeled students engaged in more prosocial behavior and fewer physically aggressive behaviors than did their regular classmates or segregated EMR students.

Hannaford, Simon, and Ellis (1957) found that special education administrators, school diagnosticians, and instructional personnel made placement decisions on the basis of the following criteria: IQ, chronological age, WRAT scores, and teacher referrals. Behavioral observations were not important determiners. Backman (1975) found that pro-

professionals allowed IQ scores to have the most significant impact on placement decisions, and underestimated the extent to which IQ influenced their decisions.

Smith and Knoff (1981) noted that students in school psychology and special education did not differ in placement decisions when given IQ and AAMD data in varied order of presentation followed by academic information. The emphasis on mainstreaming in the schools has had an effect on training programs, both school psychology and special education students made decisions which would place the child in a developmentally higher, less segregated environment than the child's data might predict. However, IQ still carried more weight than adaptive-behavior skills; academic information did not further influence placement decisions.

### Recapitulation

From the preceding sections it is apparent that changes have occurred in the making of special education placement and programing decisions. Many factors contributed to these changes: legislation and court decisions, the expansion of educational programs, the adoption of the medical model to special education, along with the recognition of the multifaceted nature of the problems exhibited by the exceptional child. The result has been a shift away from a single individual (usually the psychologist) making such decisions to a situation in which a number of individuals of different disciplines must work together to arrive at a joint decision regarding special education programing and placement.

Because the individuals who must make these joint decisions

regarding special education placement and programing are required to meet together as an MDC with specified goals or purposes which both give direction to and limit their activity, they (i.e. those who meet together) meet the criterion most commonly used to define a small group (Bales, 1950).

If the participants at an MDC constitute a small group, it is then reasonable to look at the activity of the MDC participants from the perspective afforded by the existing literature on small groups. The activity of the MDC can then be viewed from two dimensions: a task dimension defined by Barbandel (1976) as those factors related to the accomplishment of tasks for which the group is sanctioned; and an interpersonal dimension considered by Collins and Guetzkow (1964) to be behavior that is inclusive of expectations about what should and will be done by participants.

The examination of the social interaction literature (i.e. the interaction between individuals) offers three points of view: process, structure, and change. Frequently the same data can be utilized when looking at interaction from these three perspectives. The most frequently recorded aspect of social interaction is its form because it is more generalized than content areas. The systematic observation of form and content can be conducted under varying degrees of complexity. Bales' (1950) interaction process analysis is one method widely used by investigators in small group research.

Because there has been the shift away from special education placement and program decision-making by an individual to decision-making by a group, the MDC, an area of concern has been the superiority

of groups over individuals with reference to decision-making. In general, the group decision is superior to the individual (Hill, 1982; Lorge et al, 1958). However, there appear to be exceptions in which the "best" individual effort exceeds the "best" group effort, though this appears to be highly dependent on the nature of the task. Groups appear to perform as well as their "best" members when dealing with problems which have few steps and are highly verifiable. Groups tend to function below the level of the most proficient member when solutions require processing interrelated steps, applying rules at each point and recalling previous conclusions. Group decisions tend to surpass the most proficient individual when the problem is multifaceted, and when the group members have uncorrelated strengths and weaknesses. MDC teams whose members have varied skills deal with multifaceted problems which do not have easily validated solutions. Therefore, by implication, MDC team decisions should be superior to those of the individual members.

The quality of interaction among group members trying to reach a decision changes with the size of the group. A number of studies suggest five as the optimal group size. Below this size, members seem to feel a group is too small while above this size they feel it is too large. The MDC teams observed in the present investigation contain five members.

A review of the literature reported that group members' perceptions of their fellow members and themselves can affect the way in which they interact and respond to each other. The more alike group members are in their perceptions of themselves and each other, the

greater will be their attraction to each other and the more they will value each others opinions and judgments. This would suggest that for members of the MDC to function most effectively they should have similar perceptions of each other. Group members perception of each other also effect the leadership role and its effectiveness or influence.

Finally, a number of factors have been shown to affect the decisions of MDC teams. These factors provide some background for the current investigation and show that the present study is not all inclusive.

## METHOD

### Hypotheses

The following null hypotheses were tested:

H<sub>0</sub> I. There is no significant difference in the perception of the role and functions of individual MDC team members across MDC disciplinary specializations as measured by the use of the rating grid. This hypothesis was tested by examining the cell means across positions. Null Hypothesis I (H<sub>0</sub>:  $\bar{x} = \bar{x} = \bar{x}...$ ) was tested by using analysis of variance procedures.

H<sub>0</sub> II. There is no significant difference among the placement decision recommendations across the individual MDC team members. If the decisions of the MDC team members were the same, then the proportion of cases that they place in each diagnostic category should be the same. That is to say that H<sub>0</sub>  $P_{m1}=P_{mre}$   $P_{bd}=P_{bde}$   $P_{ld}=P_{lde}$  where  $P_{.e}$  is the expected value based on the full MDC team, Null Hypothesis II was tested by utilizing  $\chi^2$ .

H<sub>0</sub> III. There is no significant difference in the interactional behaviors of MDC members across staffing conditions (i.e. LD, BD, MR). This hypothesis was tested by comparing MDC members interactional behaviors (Bales data) under the conditions of differing staffing types

(conditions). Analysis of variance techniques were employed in testing Null Hypothesis III.

- H<sub>0</sub> IV. There is no significant difference in overall interactional behaviors across MDC teams. This hypothesis was tested by examining the overall interactional behaviors across MDC teams. Once again, analysis of variance techniques were utilized as a statistical test of Null Hypothesis IV.
- H<sub>0</sub> V. There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects team and staffing type. This hypothesis was tested utilizing analysis of variance techniques.
- H<sub>0</sub> VI. There is no significant difference among MDC team member's interactional behaviors across disciplinary specializations. This hypothesis was tested by comparing individual team members behavior using the Bales data. Null Hypothesis VI was tested by utilizing analysis of variance techniques and examining plots of means depicting interaction between disciplinary specializations and team classifications.
- H<sub>0</sub> VII. There is no significant difference in the interactional behaviors of MDC members associated with the participation of the parent. This hypothesis was tested by comparing the overall interactional behaviors of MDC members across the conditions of parental participation

and no parental participation.

- H<sub>0</sub> VIII. There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the team and parent participation conditions (parent and no parent present). This hypothesis was tested through the comparison of the behavior of MDC members under conditions of varying team and parental participation, utilizing analysis of variance techniques.
- H<sub>0</sub> IX. There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects of parental participation and staffing type. This hypothesis was tested utilizing analysis of variance techniques.
- H<sub>0</sub> X. There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects of the team, parental participation, and staffing type. This hypothesis was tested utilizing analysis of variance techniques.
- H<sub>0</sub> XI. There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects of disciplinary specialization and parent participation. This hypothesis was tested through the comparison of MDC members behavior utilizing analysis of variance technique.
- H<sub>0</sub> XII. There is no significant difference in the interactional



behaviors of MDC members associated with the interaction of the main effects of disciplinary specialization and staffing condition. This hypothesis was examined through the comparison of MDC members interactional behaviors (Bales data) under the conditions of differing staffing types utilizing analysis of variance techniques.

H<sub>0</sub> XIII. There is no significant difference in the interactional behaviors of team members across high and low levels of training. Null Hypothesis (H<sub>0</sub>:  $\bar{x}_h = \bar{x}_l$ ) XIII was tested utilizing F tests and analysis of variance on the interaction data.

H<sub>0</sub> XIV. There is no significant difference in the interactional behaviors of team members across high and low levels of experience. Null Hypothesis XIV was tested utilizing F tests and analysis of variance techniques on the interaction data.

### Subjects

The subjects (N=120) for the study were the participants at 52 multidisciplinary conferences, as defined by the Illinois Rules and Regulations to Govern the Administration and Operation of Special Education (Rules). As defined by the (Rules 1979, Article 1.05a), the multi-disciplinary conference (MDC) is "a deliberation among appropriate persons for the purpose of determining eligibility for special education, developing recommendations for special education placement, reviewing educational progress, or considering the continuation or

termination of special education for an individual child." Such a conference takes place upon the completion of a comprehensive case study evaluation (Rules, 1979 Article 9.09.03). This conference may or may not be the conference at which the IEP (individualized education program) is developed (Rules, 1979 Article 9.15). The participants in the conference shall include (Rules, 1979 Article 9.15.1):

Appropriate representatives of the child's local district of residence;

The special education director or designee who is qualified to provide or supervise the provision of special education;

All those school personnel involved in the evaluation of the child (see Rules, 1979 Article 9.09.3);

The parents;

Those persons who may become responsible for providing the special education program or service to the child;

Other individuals at the discretion of the parent or local district.

Participants for this study were divided into two subgroups. Those who were members of multidisciplinary conference teams (i.e. the school district personnel responsible for the evaluation of the student, Rules, 1979 Article 9.09.03) and other participants (including the parents and teachers).

The actual selection of subjects for this study was a multi-step process:

- 1) Fifty school psychologists were selected randomly from the population of psychologists serving in the elementary and

secondary schools of the City of Chicago. All of the psychologists in this population were actual members of independent MDC teams (i.e. none of the team members served on more than one team).

- 2) The 50 selected psychologists were asked to aid the investigator in contacting the other members of their respective teams so that the team members' willingness to voluntarily participate in the study could be determined.
- 3) From among those teams (18) which unanimously agreed to participate 12 were chosen randomly. These individuals (i.e. the members of the 12 MDCs) were observed and served as the subjects in the present investigation.
- 4) Subjects selected for inclusion in the present study met all of the following criteria:
  - a) All the participants at the MDC agreed to be subjects.
  - b) The MDC's decision resulted in an MR (mentally retarded), BD (behavior disordered), or LD (learning disabilities) placement. MDC's decisions resulting in other placements were not considered for inclusion in the present investigation.
  - c) Each team was observed at three MDCs at which the parent was not present; one resulting in a MR placement, one resulting in a BD placement, and one resulting in an LD placement. It is important to note that only the data from the first MDC recommending one of the placements (MR, BD, LD) were utilized in the final

analysis. That is to say that if, for one team, the first six staffings observed resulted in MR, BD, MR, MR, BD, LD placements, only the data from the first, second, and sixth MDC were utilized in the final analysis and testing of the null hypotheses.

- d) Six MDC teams were observed at three additional MDCs at which the parent was present; one resulting in an MR placement, one resulting in a BD placement, and one resulting in a LD staffing. MDCs were selected in the same manner as outlined in (c) above.

If any individual refused to participate in the study, that MDC was not utilized in the study and another team was selected. This procedure was utilized because it would be impossible to collect the data about the interactions within the MDC, while excluding a single participant because all members of the MDC team would be present and interacting. In addition, the unwillingness of an individual to participate would preclude the effective use of the repertory grid analysis of the perception data since that individual would be excluded as a rater.

The final sample included 12 MDC teams made up of five individuals; a school psychologist, a school social worker, a school nurse, a teacher, and a school administrator. Due to the changing of teachers across staffings, there were 54 teachers, but only 12 psychologists, 12 social workers, 12 nurses, 12 administrators and 18 parents involved in the study. The parents were not asked to actively do anything by the experimenter, nor did the experimenter interact with the parents in any

way other than to obtain permission to observe the MDCs.

### Procedure

Systematic data collection took place at four points during the study; when individuals agreed to participate in the study, prior to the staffing after all data on the child to be staffed had been collected, during the actual staffing, and immediately following the MDC.

On agreeing to participate in the study and before any staffing, selected school district personnel were administered a questionnaire to obtain relevant demographic data. In addition, each team member was asked to rate his/her ideal perceptions of a team members' roles and functions on a number of variables using a rating grid (see Appendix B for details). It should be noted that only the first teacher to participate with a particular team was asked to complete the rating grids.

Immediately prior to each staffing, after having reviewed all the available material, each MDC participant was systematically questioned regarding what they as individuals felt to be the appropriate placement and what single piece of information contributed most to their individual decision.

During the actual MDC, empirical measurements of overt behavior were gathered utilizing Bales' categories for interactional process analysis. Two observers were utilized for the collection of data in this instance. The observers were the author and one of three other persons who had been carefully trained by the author. Which of the three actually participated as an observer for a particular staffing was dependent upon their availability at the time of the MDC. No attempt was made to gather reliability data for this use of the Bales'

## IPA.

Finally, following each MDC the participants were questioned as to what single piece of information they felt contributed most to the group decision.

## Instrumentation.

Three instruments were utilized in this investigation: The demographic data questionnaire (DDQ), a specially constructed repertory grid, and the Bales' interaction process analysis (IPA).

Demographic data questionnaire: The demographic data questionnaire (DDQ) was designed specifically for the present investigation. The questionnaire (see Appendix A for details) provides information about the participant's sex, level of education, and professional experience. Besides asking about the highest degree held, the questionnaire asked for additional undergraduate and/or graduate level courses taken in excess of the degree requirements. The questions related to professional experience were designed to differentiate experience in the participant's current position, from professional experience in the school, from total professional experience. On questions related to the team, the time the team members had worked together on a regular basis made it possible to easily distinguish between participants on that basis.

Repertory Grids: The overall theoretical basis for the specially constructed repertory grid is G.A. Kelly's (1955) Personal Construct Theory. According to Kelly, behind each single act of judgment that a person makes (consciously or unconsciously) lies his implicit theory about the realm of events within which he is making

judgments. Repertory grid techniques are a way of exploring the structure and content of such implicit theories. In using the term "theory" it is not being argued that such theories are formal and articulated. But such theories are theories in the sense of being networks of meaning through which persons see and handle the universe of situations in which they move.

The difficulties of exploring construct systems, by grids or other means, reportedly forces the focus more heavily on verbalized and easily accessible constructs. Of course, it should not be assumed that a construct is the same as its verbal label. A construct is a discrimination, not a verbal label. The value and meaning of a construct can only be assessed in terms of its location within the network of constructs. The results of a grid can be considered a map of the construct system of an individual, a sort of ideographic cartography as contrasted with the nomothetic cartography of the semantic differential.

Kelly (1955) stated that we strive to make sense out of our universe, out of ourselves, and out of particular situations we encounter. To this end each of us invents and re-invents an implicit theoretical framework which is our own personal construct system. Kelly devised the repertory grid technique as a method for exploring personal construct systems.

In all his definitions, Kelly retained the notion that constructs were bipolar. He argued that we never affirm anything without simultaneously denying something. It is in this context (i.e. contrast) that the usefulness of the construct subsists. That is to

say that the bipolarity exists in the construct itself not in the elements sorted by the construct.

All grids involve the consideration of the issue of range of convenience. Kelly argued that there are infinite numbers of elements to which it can be applied by a given person at a given time. Individuals differ because their construction of events differ. People don't respond to their perception of the stimulus. To the extent that one person employs a construction of experience which is similar to that employed by another, their processes may be viewed as psychologically similar. To the extent that a person construes the construction processes of another, that person may play a role in the social processes of the other person.

A number of issues have to be considered when designing a grid. The elements are chosen to represent the area in which construing is to be investigated. If interpersonal relationship is to be investigated, the elements may be people. They (i.e. the people) may be specific people, or people who fit specific roles. The elements must be within the range of convenience of the constructs to be used. The elements must be representative of the pool from which they are drawn.

The constructs for the rating grid utilized in the present investigation were selected by a majority of a panel of five school psychologists from a list of possible constructs provided by 10 school psychologists and the investigator. All 15 psychologists were informed of the purpose of the list and the nature of the study. The list of possible constructs was carefully and systematically drawn from the literature relating to the effective functioning of small groups. A



copy of the repertory grid is found in Appendix C. Respondents were instructed to place a check on the blank that most closely reflected the element's (job title) relative position on the bipolar construct.

For example, the construct friendly-hostile was used as an axis of reference. If a respondent placed a check closer to friendly than to hostile, then the element being rated was considered to be more friendly. The closer to friendly the check was, the more friendly the element was considered to be. The scale was relative, not absolute, in that no defined unit of friendliness or hostility was being measured. Numerical values (one through seven) were assigned to the seven blanks (from left to right) for computational purposes. The poles of the constructs were arranged in such a manner that the positive terms were not all located on the same side. This was done to force the respondent to read and think about the construct and not simply place a check down a column of blanks.

The subjects (parents excluded) were given five rating grids, one titled for each disciplinary specialization (psychologists, social worker, nurse, teacher and administrator), along with verbal instructions based upon the following outline:

- 1) Note the pairs of adjectives on each sheet (They can be used to characterize or describe a disciplinary specialization).
- 2) Place a check on the blank between each set of adjectives which reflect how you view the disciplinary specialization relative to the adjectives.
- 3) Example: For the pair friendly/hostile, a check placed on a blank closer to hostile would indicate that you view or feel

the disciplinary specialization to be more hostile than friendly. A check closer to friendly would indicate that you view or feel the disciplinary specialization to be more friendly.

- 4) Note: You are rating the disciplinary specialization as a whole, not the individual members of your MDC team.

As a result of these rating procedures, each of five disciplinary specializations (i.e. psychologist, social worker, nurse, teacher and administrator) was rated on seventeen constructs (self oriented/group oriented; friendly/hostile; insecure/secure; submissive/dominant; goal oriented/affect oriented; self-isolating/outgoing; sensitive/insensitive; leader/follower; aggressive/passive; autocratic/democratic; non-adaptable/adaptable; competent/incompetent; worthless/valuable; anxious/ relaxed; nonconforming/conforming; knowledgeable/ignorant; influential/inconsequential).

Interaction Process Analysis: The Bales' method of interaction process analysis (IPA) has been used by a number of investigators in research on behavior in small groups. Each overt act that occurs in a group is classified in one of 12 categories: three are positive reactions; three are attempted answers; three are questions; and three are negative reactions. Appendix D contains a representation of Bales' 12 categories of interactional behavior.

Using the Bales system an observer is able to condense all possible ways of looking at group events into a set of 12 categories as a result of a highly ordered conception of the group process. The main features of this classification process may be summarized as follows:

- I The small face to face group is one instance of a more general system (social system) which includes organizations, communities, societies and nations. As such, the small group possesses many features comparable to the features found in larger social systems.
- II The origin and dynamic relations of these features may be studied relatively simply in the small group not only because of the ease of observation but because the structured features are solutions to issues arising out of a specific context of interaction.
- III A wide range of interpersonal encounters can usually be conceived of as problem solving.
- IV If a group is to solve its problems and arrive at its decisions certain basic functions must be performed at a minimum level of proficiency:
  - a) communication; b) evaluation; and c) control.
- V Freedom to work on the problem is dependent on certain interpersonal processes involving periodic feedback from members relating to the acceptability of the group's movement; the tension level with and between members; and the group must be held together.
- VI Bales (1950) suggests that the instrumental functions and socio-emotional functions are dynamically related: attempts to solve the task tend to break up the group necessitating reintegrative activities, while attempts to pull the group together tend to weaken task ef-

iciency requiring renewed emphasis on task.

Therefore, classification of behavior is clearly and unequivocally a matter of interpretation. It involves the "reading in" of content, the inference that the behavior has functions either by intent or by function. All kinds of behavior--overt skeletal, verbal, gestured, expressive--are included provided the observer can assign meaning to the behavior in terms of the categories. The scoring procedure is simple: observers screen each act or gesture to determine which of the categories it falls into and records who did the act, the category of the act and who received the act. The data collected in this manner are the frequencies for each category.

In the present investigation, two trained observers recorded, for each interaction, which of the 12 categories the interaction fell into along with the originator of the act. The observers were trained by studying the rationale of the IPA method and some of its applications. The more extended definition for each category was read and the unit to be scored was considered. A sample protocol was carefully and systematically reviewed. An example of a sample protocol to illustrate the scoring procedure is presented below:

"I imagine you have a lot of questions in mind (1/5). Well what do you think it is (1/8)? Anybody have any ideas as to what in each this might accomplish (1/8)? Not much (3/5). Ed, do you agree (2/8) (Bales, 1950)."

The first number indicating who did the action and the second number indicates the category of the action.

Three things should be noted about the use of Bales' (1950) IPA

in the presented study. First, the technique was modified. The primary use of IPA was to provide a standard classification for behaviors taking place in the MDC. The observers did not record the target of each act. They (the observers) simply recorded the originator of each act along with its category. This modification provided the experimenter with the frequency that each category of behavior occurred for each disciplinary specialization. Second, the observers at each MDC consisted of the experimenter and one of three colleagues. The availability of the colleagues determined who the second observer would be. Third, no attempt was made to determine the reliability of the data collected by this method.

The modifications made to IPA for this study precluded the use of more complicated analytic procedures proposed by Bales (1950). However, it should be noted that those techniques are not frequently used. IPA data have most frequently been reported as frequency counts, with analysis limited to the study of differences between frequencies.

IPA does not provide insight into the motivation or rationale for a type of behavior. It simply reports that the behavior exists.

### Design

The systematic observation of each MDC team in conferences resulting in MR (mental retardation), and BD (behavior disorder), and LD (learning disability resource) placement provided a means of controlling for differences in the psychologist level of participation and mandated influence. Rules, 1979, Article 9.09.3.i.(1) specifies that a psychological evaluation shall be required:

- (a) In order to place any child in a special education place-

ment for children with mental impairment (see Illinois Revised Statutes, Chapter 122, Section 14-8.01) which states "No child shall be eligible for admission to a special class for the educable mentally handicapped or for the trainable mentally handicapped except with psychological evaluation and recommendation by a school psychologist."

- (b) In order to place any child in a special education instructional program.
- (c) In order to place any child in a special education placement for children with behavior disorders.
- (d) In order to place any child where there are questions about his or her intellectual functioning and/or learning capacity.

A psychological evaluation for all other children shall be considered optional.

From Rules, 1979, Article 9.09.3,1,(1),(a), it is apparent that in the case of an MR placement a psychological evaluation is needed and that the psychologist must state eligibility for MR placement. This implies that while an MDC does not have to follow the psychologist's recommendation and place an exceptional child in an MR program, the MDC cannot place an exceptional child in an MR program without the psychologist's agreement. In the case of a BD placement, a psychological evaluation is required and therefore the participation of a psychologist at the MDC is required. However, the psychologist is not required to be in agreement with the BD placement. In the case of an LD re-

source placement a psychological evaluation is not necessary, therefore, a psychologist is not required to be at the MDC. Thus, one may note two levels of mandated authority (the ability to veto one type of placement but not the others) and three levels of mandated participation. The social worker and the teacher-nurse are not required to be present at the MDC by either the Illinois Rules and Regulations to Govern the Administration and Operation of Special Education or P.L. 94-142. However, their participation in the MDC is mandated by the Local Education Agency (LEA). Statements of eligibility are not required from either the nurse or the social worker to make any special education placement.

These three levels of mandatory authority taken in combination with the sampling procedure described on page 62 provided for a 12 x 6 matrix. That is to say that this was a repeated measures design with 72 cells of which 18 were missing data. Figure 1 presents the overall analytic paradigm utilized in this investigation. The individual cells are filled with conference participant measures (i.e. Bales' scores). Only the scores of core team participants were considered, thus giving this design an even number of cells.

The independent variables were:

Type of staffing (i.e. MR, BD, LD)

Disciplinary specialization (position) (e.g. psychologist,  
social worker, parent, etc.)

Team

Presence of the parent

Levels of experience

### Levels of training

The dependent variables were:

The Bales' scores

The ratings from the repertory grid

The decisions of individual team members

There exists in the design the possibility of a confounding variable (severity, i.e. the extent to which an exceptional characteristic handicaps a child). The concept of least restrictive programming as outlined by Public Law 94-142 would suggest that severity should be a factor in determining whether a special education placement is to be a resource or an instructional program. In the school district from which this sample was drawn, the majority of BD and MR program placements are self-contained by district policy. That is to say that if a child is found to be BD or MR he or she is, for the most part, automatically placed in a self-contained classroom and that the option of a resource placement is virtually non-existent. This means that a much broader range in terms of severity exists in the MR and BD designation than in the LD resource designation. Thus, it was not possible to control for severity of handicapping conditions within this overall design since the MDC, in effect, does not specify a degree of severity. Any attempt by the experimenter to specify a level of severity for these handicaps could result in a systematic error of results as great or greater than that induced by uncontrolled severity. There was no way to control for severity statistically unless some level of severity could be determined for each case.

The analysis of the data utilized a number of techniques includ-



Figure 1

## GRAPHIC REPRESENTATION OF THE ANALYTIC DESIGN

	NO PARENT			PARENTS		
	<u>LD</u>	<u>BD</u>	<u>MR</u>	<u>LD</u>	<u>BD</u>	<u>MR</u>
<u>Team 1</u>						
Psychologist	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>
Social Worker						
Nurse						
Teacher						
Administrator						
*****						
*****						
*****						
*****						
<u>Team 6</u>						
Psychologist	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>
Social Worker						
Nurse						
Teacher						
Administrator						
<u>Team 7</u>						
Psychologist	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>			
Social Worker						
Nurse						
Teacher						
Administrator						
*****						
*****						
*****						
*****						
<u>Team 12</u>						
Psychologist	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>	V <sub>1</sub> -V <sub>12</sub>			
Social Worker						
Nurse						
Teacher						
Administrator						

MISSING DATA

Where: V<sub>1</sub>-V<sub>12</sub> = Bales' Scores

ing analysis of variance and chi-square methods. Repertory grid ratings were analyzed to determine the nature of the relationships among constructs (i.e. the variables the participants were rated on and the participants), and to determine if there were any systematic and consistent differences among the participants.

## RESULTS

This chapter is concerned with the presentation of the data gathered during the course of this study. The information is presented in the following sequence for each Null Hypothesis, the relevant data are presented and tested following the presentation of the descriptive data.

### Results Related to Testing Null Hypothesis I

Null Hypothesis I (there is no significant difference in the perception of the role and function of individual MDC team members across MDC disciplinary specializations as measured by the use of the rating grid) was tested through the use of discriminate analysis procedures with a computer program which statistically controlled for the variance due to the rater. Tables 3 through 12 present the findings from the discriminant analysis. Table 3 is a presentation of the relevant simple descriptive statistics.

One way to judge the substantive utility of a discriminant function is by examining the canonical correlation coefficient. It is a measure of association which summarizes the degree of relatedness between the groups and the discriminant function (i.e. two sets acting through pairs of linear combinations). An alternative view comes from analysis of variance, where the groups are considered as independent variables which influence the values on the discriminant function, the dependent variable. The degree of difference between the group means

on the function is measured by eta. Eta-squared (i.e. the canonical correlation squared) is the proportion of variation in the discriminant function explained by the groups. Regardless of the approach taken, the canonical correlation is a valuable tool in judging the substantive utility of the discriminant function. A high coefficient indicates that a strong relationship exists between the groups and the discriminant function. It reports how well the function is doing, if the groups are not very different on the variables being analyzed, then the correlations will be low.

From Table 4, it can be seen that the canonical correlations range from .6887 for function 1 to .3701 for function 4. This indicates that the proportion of variance in the discriminant functions explained by the groups ranged from 47.4% for function 1 to 13.7% for the fourth function. These are moderate to low values and as such indicate that the groups are not very different on seventeen constructs utilized in the rating grid.

Because the data were based upon a sample and not a population it was necessary to determine if the differences were statistically significant. That is, what is the probability that the sampling processes produced cases which show the degree of discrimination found when in fact no difference exists within the population from which the sample is drawn? The most common test of statistical significance for discriminant functions does not look at the function but rather the residual discrimination in the system prior to deriving that function. The residual discrimination is the ability of the variables to discriminate among the groups beyond any information already extracted.

If the residual discrimination is small, then any additional functions would prove to be meaningless. Wilke's lambda, a multivariate measure of group differences over several variables, is the statistic used. Since lambda is an inverse measure, values of lambda which are near zero indicate high discrimination. As lambda approaches 1.0 it indicates progressively less discriminating ability remains.

The Wilke's lambda (Table 4) derived after three functions equaled .894 was rather large and indicated that the remaining information about group differences might not be of value. The significance of lambda was tested by converting it into an approximation of the chi-square distribution. From the chi-square results presented in Table 4, it is apparent that, after the derivation of the third function, the residual discrimination was significant (.0022 level). Therefore, the fourth and final discriminant function was derived. This provides assurance that the derived functions were statistically significant as a set. This does not indicate the significance of any single function, but rather the significance of all the derived functions working together.

Table 5 provides Wilke's lambda and univariate F-ratio for the 17 constructs which make up the rating grid. The table indicates that 14 of 17 constructs were significant discriminators beyond the .01 level.

From the classification summary (Table 13) we find that 186 or 62% of the cases were correctly classified into their respective positions by the derived discriminant functions (Table 8). The use of the proportional reduction in error statistic, tau, resulted in a value of

0.566. This means that classification based on the discriminating variables made 56.6% fewer errors than would be expected by random assignment. This suggests that there is considerable overlap among the groups. They are not clearly separated even though the discrimination is statistically significant.

Because the discriminant functions are significant (.0022) Null Hypothesis I must be rejected. We therefore conclude that differences exist between the perceptions of MDC members on the 17 constructs identified on the rating grid.

Because unstandardized coefficients (Table 7) do tell us the absolute contribution of a variable in determining the discriminant, this information may be misleading when the units of measure for the variables are not equal. The standardized coefficients indicate the relative importance of the variable to the discriminate function (i.e. which variables contribute the most to determining the scores on the function).

Table 8 reports the standardized coefficients. For function 1, knowledgeable/ignorant makes the greatest contribution. The other variables are of minor importance with the exception of sensitive/insensitive, and influential/inconsequential.

In function 2, two variables have high coefficients, insecure/secure, and influential/inconsequential with the other variables having relatively low or moderate coefficients.

On function 3, high coefficients were found for self-isolating/outgoing, knowledgeable/ignorant, sensitive/insensitive, anxious/relaxed, and submissive/dominant.

On function 4, relatively high coefficients were found for friendly/hostile, competent/incompetent, aggressive/passive, and knowledgeable/ignorant.

This pattern of standardized coefficients was suggestive of considerable overlap among the functions. From the within group structure coefficients (Table 9) it was possible to determine how closely the variables and functions were related, since they were simple bivariate correlations and not affected by the other variables.

For function 1 the variables with the largest absolute within structure coefficients are knowledgeable/ignorant, sensitive/insensitive, competent/incompetent, nonadaptable/adaptable and autocratic/democratic. Taking the signs into account, function 1 seems to select those individuals who are knowledgeable, sensitive, competent, adaptable and democratic.

The variables with the largest absolute structure coefficient on function 2 is influential/inconsequential. Taking the signs into account, function 2 appears to select those who are inconsequential and autocratic.

For function 3, the variables with the largest absolute within-structure coefficients are self-isolating/outgoing, anxious/relaxed, and self-oriented/group oriented. Function 3, therefore, appears to be selecting for outgoing relaxed individuals, who are group oriented.

Five variables have within-group structure coefficients which fall within a narrow range for function 4. The variables are: aggressive/passive, friendly/hostile, nonconforming/conforming, submissive/dominant, and leader/follower. Function 4 appears to be selecting for

the passive, hostile, conforming, submissive, follower.

The group centroids (Table 10) for the canonical discriminant functions provide more information about the group differences. They are the mean discriminant scores for each group on the respective functions. They summarize the group locations in the space defined by the discriminant functions. The pairwise generalized squared distance to position (Table 12) tells how far apart the centroids are from each other in the four dimensional space defined by the discriminant functions. From Table 12, it is apparent that the administrator is most different from the other team members with the nurse closest to the administrator. The other team members were relatively close to each other.

Analysis of variance techniques were also used to test Null Hypothesis I. Tables 14 to 18 contain the statistical summaries for the model utilized. Table 15 contains a summary description of multivariate tests of significance of the differential perceptions made of disciplinary specializations, and the related univariate F-tests. The multivariate tests were found to be significant at the .0001 level, indicating that the perceptions made of the disciplines did vary significantly across disciplines. Tukey's Studentized Range Test indicated which differences between roles were significant. (See Table 19 for details).

#### Results Related to Null Hypothesis II

This hypothesis (there is no significant difference among the placement decision recommendations across the individual MDC team members) was tested by applying the chi-square test to the number of



matching decisions by each position for each staffing type. Table 16 shows the number of matching (i.e. in agreement with the team) decisions for each position by staffing type and the resultant chi-square value (2.8217). This value of chi-square proved to be not significant at the .05 level therefore Null Hypothesis II cannot be rejected. It must be assumed that there is no difference in the decision of the team members.

By looking at the non-matching decisions, perhaps some underlying systematic bias could be uncovered. The most non-matching decisions (18) occurred in the LD type MDC. The teachers made six non-matching decisions calling for EMH placement in each case. The psychologists made four non-matching decisions calling for two regular grade and two EMH placements. The administrators made four non-matching decisions calling for EMH placement in each case. The nurses made two non-matching decisions in favor of EMH. The social workers made two non-matching decisions calling for regular grade placement in each case. This distribution yielded a chi-square of 15.002 for a significance of nearly .05 suggesting that there was a systematic difference between professions in their errors.

For the BD staffings only two non-matching decisions were made; one by the psychologists calling for EMH placement, and one by the teachers calling for LD placement. For the EMH staffings the only non-matching decisions were made by the social workers with three BD and two LD decisions.

While it was not possible to determine the mechanism by which the individuals made their decisions, what were collected were data

concerning what information the individuals considered most important in making their decisions. Generally speaking the psychologists, social workers, and teachers relied most heavily on information they themselves gathered. The psychologists relied on the psychological evaluation, the social workers relied on their social assessment, and the teachers relied heavily on classroom behavior and achievement. The administrators relied on the reports of the teachers concerning the child's achievement and behavior as did the nurses who also looked to the social assessment.

#### Results Related to Null Hypothesis III

Null Hypothesis III (there is no significant difference in the interactional behaviors of MDC members across staffing conditions) was tested utilizing MANOVA on the Bale's data. Table 22 contains the relevant simple descriptive statistics for Null Hypothesis III. Table 26 contains the results of the multivariate tests of significance for the effect of staffing type, and the related univariate F-tests. The multivariate tests were found to be significant beyond the .0036 level, indicating that differences in behavior existed which were related to staffing types. Univariate F-tests indicated that for three of the twelve categories of behavior significant differences did exist across staffing types. The three categories of behavior were: asks for information (.0176), gives suggestions (.005), and shows disagreement (.0001). Therefore Null Hypothesis III must be rejected indicating that staffing type has a demonstrated effect on the interactional behaviors of MDC members during staffings.

#### Results Related to Null Hypothesis IV

Table 18 contains the relevant simple descriptive statistics for Null Hypothesis IV (there is no significant difference in overall interactional behaviors across MDC teams). Table 25 contains the results of the multivariate tests of significance for the effect team, and the related univariate F-tests. The multivariate tests were found to be significant beyond the .0084 level, indicating that differences in behavior existed which were related to teams. The univariate F-tests indicated that for two of twelve categories of behavior significant (.0001 level) differences existed across team. These categories of behavior were: Shows tension release (.0001), and shows disagreement (.0001). Therefore, Null Hypothesis IV must be rejected indicating that team has a demonstrated effect on the interactional behaviors of MDC members during staffings.

#### Results Related to Null Hypothesis V

Null Hypothesis V (there is no significant difference in the interactional behaviors of MDC team members associated with the interaction of the main effects team and staffing type) was tested with analysis of variance techniques. Table 27 contains the results of multivariate tests of significance for the interaction effect and the related univariate F-tests. The multivariate tests were found to be significant beyond the .0025 level, indicating that significant differences in behavior related to the interaction of team and staffing type. The univariate F-tests indicated that the differences were in three of the twelve categories of behavior: shows tension release (.0001), shows disagreement (.0006), and gives information (.0499). Therefore, Null Hypothesis V must be rejected indicating significant differences

in interactional behaviors are associated with the interaction of team and staffing type.

#### Results Related to Null Hypothesis VI

Null Hypothesis VI (there is no significant differences among MDC team member's interactional behaviors across disciplinary specializations) is not directly testable under the experimental design. Disciplinary specialization is nested within team in the present study, thus precluding the collapsing of data along disciplinary specialization and determining if such differences exist directly. Therefore, differences across disciplinary specializations within teams were examined. Table 28 contains univariate F-tests for position within team. These F-tests indicated significant differences (.0444 level and beyond) for seven of the twelve categories of behavior. Unfortunately, these F-values are only approximations and their significance, along with accuracy, cannot be determined. This problem exists because the model does not provide an appropriate error term (i.e. within subject MS) since there was only a single case for each subject. The demonstrator for the F-tests in Table 28 was staffing\*position (team). If this interaction can be assumed to be insignificant then the MS for staffing\*position (team) is an independent estimate of experimental error. The results obtained with the parent present in the model would suggest that this interaction is not significant.

For the seven categories of behavior found to be significant in Table 28, the MS for position (team) equaled or exceeded that of MS for team. This would suggest that the design is not randomized with respect to some factor that has decreased the estimate of team and/or

increased the estimate of position relative to their respective populations. Examination of the interaction plots for position and team classifications for each of the twelve behaviors showed that disordinal interactions existed. Therefore, while it was not possible to statistically test Null Hypothesis VI, some evidence exists suggesting that it should be rejected.

#### Results Related to the Presence of Parents in the Model

Parents are expected to be participants at MDC's under both P. L. 94-142 and the rules and regulations. Therefore, in order to increase the generalizability of the present study and in acknowledgement of the law and its intent, similar behavioral data were collected at staffings with the parent present. The data discussed in the following section were obtained from staffings involving six of the original twelve teams. The basic design remained the same with each team participating in three staffings, one of each type (LD, BD, and MR). Of course, the parent and the teacher changed with each MDC. The analysis for parent related aspects of the study was done only on the data from the upper portion of figure 1.

Table 30 contains the results of the multivariate tests of significance and the related univariate F-tests for the effect of team on the interactional behaviors of MDC members. The multivariate tests were found to be significant beyond the .0297 level for two of three tests. The third test, Pillai's Trace, was found not to be significant. The related univariate F-tests indicated that three of the twelve categories of behavior position had a significant effect beyond the .0236 level. The significant behaviors were: shows tension re-

lease, shows disagreement, and asks for suggestions. Therefore, Null Hypothesis IV (there is no significant difference in the overall interactional behaviors across MDC teams) was rejected.

Table 33 contains the results of the multivariate tests of significance and the related univariate F-tests for the effect of staffing type on the interactional behaviors of MDC members with parents present at the MDC. The multivariate tests were found to be significant beyond the .0001 level, indicating differences in behavior existed which were related to staffing types. Furthermore, univariate F-tests indicated significant differences (beyond .0465) in seven of twelve categories of behavior. The behaviors found to have significant differences across staffing types were: gives suggestions, gives opinions, gives information, asks for information, asks for opinions, asks for suggestions, and shows disagreement. Therefore, Null Hypothesis III (there is no significant difference in the interactional behaviors of MDC members across staffing conditions) was also rejected.

Table 34 contains the results of the multivariate tests of significance and the related univariate F-tests for the effect of team and staffing type interaction with parents present in the model. The multivariate tests were not found to be significant beyond .05 level indicating that no differences existed which were related to team staffing type interaction. Univariate F-tests indicated a significant (beyond .0244) difference in only one of twelve behaviors: shows tension. Therefore, Null Hypothesis V (there is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects team and staffing type) cannot be

rejected when parents are present in the model.

Table 37 contains the univariate F-tests for disciplinary position within team. These F-test results indicated significant differences (.0073 level and beyond) for nine of the twelve categories of behavior. These F-values, however, are also only approximations because again the model does not provide an appropriate error term. The denominator for the F-tests in Table 35 was the MS for parent\*staffing\*position(team) interaction. Similarly if this interaction can be assumed to be insignificant, then this interaction should be an independent estimate of experimental error. As in the previous model, the MS for position(team) equalled or exceeded the MS for team. Again, while it is not possible to statistically test Null Hypothesis VI, some evidence exists suggesting that it may be rejected in future investigations if an appropriate error term can be incorporated in the model. If the teams participated in several MDC's of each staffing type, then the within subjects variance could be determined and used as an error term.

#### Results Related to Null Hypothesis VII

Table 31 contains the results of the multivariate tests of significance for the effect of parent participation and the related univariate F-tests. The multivariate tests were found to be significant at the .0001 level, while the univariate F-test indicated significant (.0078 level or better) differences in nine of the twelve categories of behavior. Therefore, Null Hypothesis VII (There is no significant difference in the interactional behaviors of MDC members associated with the participation of the parent) was rejected indicat-

ing that there is a significant difference in the behavior of MDC members associated with the presence of parents at the MDC.

#### Results Related to Null Hypothesis VIII

Table 32 contains the results of the multivariate tests of significance for the effect, along with the related univariate F-tests. Significance (.0262 level or beyond) was found for two of three tests, while univariate F-tests indicated significant (.0309 or better) differences in only three behaviors: shows tension release, shows agreement, and asks for suggestions. Therefore, Null Hypothesis VIII (there is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects team and parent participation) must be rejected indicating that there are significant differences in the interactional behaviors of MDC members associated with the interaction of the main effects teams and parent participation.

#### Results Related to Null Hypothesis IX

Table 35 contains the multivariate tests of significance for the effect along with the related univariate F-tests. The multivariate tests were significant at the .0027 level, while the univariate F-tests showed significant (.0248 or better) differences in four behaviors (shows tension release, gives opinions, asks for information, and asks for opinions) related to the interaction of parental participation and staffing type. Therefore, Null Hypothesis IX (there is no significant difference in the interactional behaviors of MDC members associated with the interaction of parental participation and staffing type) was rejected, indicating that there are differences in interactional behav-



iors associated with the interaction of the main effects parental participation and staffing type.

#### Results Related to Null Hypothesis X

Table 36 contains the multivariate tests which were significant (.0430 or better) and the related univariate F-tests, which indicated one behavior (gives information) was significantly (.0007) affected by the interaction of the main effects team, parental participation, and staffing type. Therefore, Null Hypothesis X (there is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects team, parental participation, and staffing type) was rejected.

#### Results Related to Null Hypothesis XI

Table 38 contains the related univariate F-tests which indicated significant (.0488) differences in five behaviors (shows solidarity, asks for suggestions, shows disagreement, shows tension, and shows antagonism) were related to the interaction of disciplinary specialization and parental participation. However, as in the case of disciplinary specialization, these F-tests must be viewed with caution as this model does not contain an appropriate error term. Instead, the MS for parent, staffing, position (team) interaction was utilized as the error term. If the interaction can be assumed to be insignificant, then this value could be expected to approximate the variance associated with experimental error. Therefore, there is evidence suggesting that Null Hypothesis XI (there is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects disciplinary specialization and parental

participation) be rejected.

#### Results Related to Null Hypothesis XII

There is no significant difference in the interactional behaviors of MDC members associated with the interaction of the main effects disciplinary specialization and staffing condition. Table 40 contains the F-tests which indicated only one behavior (shows antagonism) had significant (.0113) differences related to the interaction of disciplinary specialization. As in the previous section, these F-tests must be viewed with caution as an appropriate error term is not available in this model.

#### Results Related to Null Hypotheses XIII & XIV

Unfortunately, these two hypotheses (there is no significant difference in the interactional behaviors of team members across high and low levels of experience and there is no significant difference in the interactional behaviors of team members across high and low levels of training) were untestable in the present study. Tables 1 and 2 show the frequency distributions of the relevant data which was gathered through the use of the DDQ. From Table 1 it is apparent that the level of education was not uniformly distributed across positions for the highest degree held. Nor did the number of additional hours of education (graduate or undergraduate) appear to be uniformly distributed. In fact, only 25% of the individuals have additional undergraduate or graduate hours beyond those needed for a degree. From Table 2 it is apparent that the subjects of the study did not possess equal amounts of professional experience. These skewed uneven distributions made it impossible to test these hypotheses statistically.

## DISCUSSION

The MDC has been created and mandated by law to make decisions regarding special education placement. The efforts to implement and follow up P.L. 94-12 have resulted in increased attention being given to the decision-making process. This study was designed to systematically examine the behavior of team members while making placement decisions and factors which might influence the decision-making. The subjects for this study were MDC team members participating in actual MDCs. The literature reviewed strongly suggested that the MDC team is in reality a small group and as such should be affected by factors influencing small groups.

The overall results of this study indicated that members of MDC teams were perceived to be different from one another on a number of constructs. The findings further suggested that disciplinary specialization (position), type of staffing, position-staffing type interaction, along with team membership, appeared to differentially affect the interactional behaviors of the participants. An initial attempt was made to determine if training and experience affected interactional behaviors, but in the final analysis this was not possible due to the skewed and uneven distribution of both the training and experience variables. Interestingly, the present study also failed to show any differences between the individual placement decision recommendation of the team members despite their relying on different data as the main

basis for their individual decisions.

### Discussion of Results Related to Null Hypothesis I

The presence of a set of significant discriminant functions meant that there were systematic differences in the perceptions of the roles and functions of MDC members based upon the disciplinary specializations of the MDC member. These findings suggested a degree of commonality in how individual members of the various professions (i.e. psychologists, social workers, nurses, teachers, and administrators) were perceived on the 17 constructs utilized in this study. This was not an unexpected finding, the literature related to small groups research has shown that how an individual is perceived can be influenced by his/her role, function, or behavior within the group. Each of the professionals has a role and function, defined by his/her profession, along with their function within the MDC. Therefore, they could be expected to have a degree of commonality within profession. This is not to say that the professions were clearly separated despite the significance of the discriminant functions. With only 62% of the individuals correctly classified and a tau of .566, (proportional reduction in error statistics), clearly there was considerable overlap among the professions. Such overlap might suggest some identification with the other members of the MDC teams. From the generalized squared distance to position (Table 12), it appears that the roles of the psychologist, social worker, and teacher were relatively close when compared to the roles of the nurse and administrator (the most distant). Table 15 clearly showed that there were significant differences across roles for 16 of the 17 constructs used in the repertory grid. An

examination of the Tukey's Studentized Range Tests (Table 19) confirmed the findings of the discriminant analysis and graphically depicts the differences and similarities among the roles. The roles of psychologist, social worker and teacher appeared to be identified with friendly, outgoing, sensitive, adaptable, valuable and relaxed descriptors. These adjectives describe concerned, compassionate individuals. The same description did not apply to the roles of nurse and administrator. The roles of nurse and administrator appeared to be identified insecure, self isolating, worthless, insensitive, and anxious. The role of administrator was perceived to be the most ignorant, and most worthless. It should be noted, that there was a considerable overlap among the roles further confirming the findings of the discriminant analysis. There are several explanations for these findings which may be related to the nature of the interaction between the MDC members and the students with whom they work. The psychologist, social worker, and teacher spend a good portion of their time dealing with students on an individual one to one basis providing remedial support, whereas the nurse and administrator are not involved in that much direct support. Their functions suggest contact which is crisis oriented. In addition, the administrator's assigned role of supervision over the other team members may foster isolation by precluding a sense of equality in relationships with other team members.

#### Discussion of Results Related to Null Hypothesis II

Although a common focus of research on decision-making within small groups has been whether or not the group decision was worse than, the same as, or better than the decision of the group's most proficient

member, the present study was designed to examine if there were significant differences between the MDC members' individual decisions and those of the full MDC team. Analysis utilizing chi-squared techniques proved not to be significant at .05 level; therefore, it must be assumed that no differences existed across team members in terms of their agreement with the MDC recommendations. However, in the final analysis of the data, a systematic bias was discovered on the part of teachers and administrators. Teachers and administrators appeared to demonstrate a rather significant tendency in their non-matching decisions to label children as EMH as opposed to LD. The cause for this systematic bias was not determined nor could it be determined from the data base of the present study. However, it is possible that an uncontrolled confounding variable was making its presence felt. As a result of actual LEA practice, a BD or EMH decision results in an instructional program placement. That is to say, the children would be removed from their regular program placement and be in a self-contained program because few resource programs are available. In some cases the placement would necessitate the transfer of the child to another school building. An LD decision generally results in placement in a resource program with no other change of class or school. Therefore, teachers might feel that it is in their (i.e. the teachers') own interests to favor EMH over LD placement since such an outcome would remove the child from the teacher's class. Administrators may gain by appeasing teachers who do not wish to continue working with a particular child. Another possible explanation would be the placement of a high weighting on in school achievement and a relatively low weighting on adaptive

behavior when making the placement decision. This type of loading would make EMH the placement of choice for all non-achieving students including the "six hour retardates" and learning disabled.

Related data that were collected but not statistically tested were the type of information the team members relied upon in making their individual decisions. As previously reported, it appeared that the MDC team members were most heavily influenced by information which they gathered themselves. Such reliance on self-generated data is not surprising. Data collected by an individual would be expected to be most compatible with the individual's training and biases. Also, each of the members of the team has a professional role which, in part, defines his/her interests and expertise.

The finding that MDC members reached matching decisions (i.e. in agreement with the full MDC decision) individually while relying on primarily independently gathered data was unexpected. A finding of this nature raises questions as to the value of the MDC. Why should a group of well paid professionals meet to make a joint decision that is no different from their individual decisions? Why not let one individual make the decision? It would appear that cost effectiveness perhaps would best be served by letting one individual make the placement decision. However, the safeguards against personal biases might be removed by such an action and such action is clearly not permitted by P.L. 94-142.

#### Discussion of Results Related to Null Hypotheses III, IV, V, VI, & VII

The findings of the present study suggested that position, type of staffing, the interaction of team and staffing type, along with the

team of membership differentially affected the interactional behaviors of MDC participants. Such findings were consistent with previous small group research results and as such reinforce the idea that MDC teams can be treated as small groups.

Certainly each position (i.e. disciplinary specialization) defines, both formally and informally, a role to be played by each individual. The actual behavior of a person occupying a position would be dependent upon expectations that are externally imposed as well as the internal tendencies generated by the individuals personality. An examination of the relevant means (tables 21 and 31) indicated where the differences in interactional behaviors were to be found. The administrator asked for information, opinions, and suggestions, not an unusual thing for the group leader to do. The psychologist appeared to be the major supplier of data to the MDC, with higher means in giving information, opinions and suggestions. The teacher and nurse demonstrated the most agreement and disagreement. This differential pattern of behaviors indicated that the psychologist played a focal role and was the most influential member of the MDC. The teacher and nurse provided minimal input.

The changes in interactional behaviors related to staffing seem to be more difficult to explain and may be attributed to by uncontrolled confounding variables. No attempt was made to control for the severity of handicap either within or across staffing conditions. Nor was any attempt made to control for any possible social stigma attached to the underlying handicapping conditions. In addition, circumstances within the LEA made the ultimate placement of a child in an instruc-



tional or resource program an arbitrary decision based solely on the exceptional characteristic without reference to the severity of the handicap. It is possible that the MDC participants are influenced by these variables and changed their behavior accordingly. An examination of the means (tables 22 and 29) revealed another unexpected finding. The greatest frequencies for the interactional behaviors occurred under the LD staffing condition with the exception of giving suggestions, which was more frequent under the BD condition. The experimenter had anticipated higher frequencies at MR staffings, the most restrictive and stigmatizing of the placements.

One possible explanation is that LD staffings involved more marginal cases, and that the team members needed more confirmation to make the LD decision. In the case of MR staffings, more blatant deficits of notable severity may have been involved.

The lack of significant interaction between disciplinary specializations and staffing conditions interaction was also unexpected. The role of the psychologist changes significantly across staffing type, from not ever being needed for an LD resource placement, to being required to state eligibility for MR in the case of an MR placement. (It should be noted, however, that LEA policy requires a psychological evaluation of all children being placed in special education.) Small group research findings suggest that a change in roles alters group members' expectation and their subsequent behavior, so a change in the behavior of at least the psychologist had been anticipated.

The differences in behavior across teams could be the result of differing expectations across teams. An examination of the means

suggested that teams which showed more disagreement showed more tension release.

The significance of the presence of the parent at the staffing was expected. The staffings took longer, providing greater opportunities for interactional behaviors to take place. An examination of the means (table 32) indicated higher frequencies for every behavior when the parent was present at the staffing.

There were several possible explanations for why parental participation increased the frequencies of interactional behaviors: the teams may have been trying to insure parents had adequate information to make a decision, the teams may have been trying to overwhelm the parents with their expertise, the teams may have been responding to the requests or needs of the parents.

#### Discussion of Results Related to Null Hypotheses VIII & IX

It appears from the findings of the present study that parental participation manifested itself in a number of first order interactions. The presence of these significant interaction effects complicates any explanations of what took place at the MDC's. The effect of the interaction of parental participation and staffing type was clearly evident at LD staffings when the parent was present. Under these circumstances, increases in the frequencies of showing tension release, giving opinions, asking opinions, and giving information occurred. The parent-team and the parent-disciplinary specialization interactions are very difficult to explain. They may reflect differing willingness of the MDC members or teams to accommodate to the needs of the parents.

Several factors appear to limit the importance of parent and

teachers at MDC's, despite their knowledge of the student. Team members have more experience with MDC's, therefore they may be more comfortable with what is to transpire. Team members have frequent contact with one another, increasing the likelihood that they have established mutual confidence and understanding. In addition, they tend to make up the majority of the people present at the MDCs. Under such circumstances it is unlikely that two relative strangers (i.e. to the MDC team) could exert much influence. This is especially true when considering the findings of the present study, which suggests that individuals prefer to rely on information they gather themselves when making decisions. It would be extremely difficult for either the parent or the teacher to overcome these difficulties. Though the issue of influence may be a moot point, another finding of the present study indicated that team members, including teachers, independently arrived at the same decision. If this is true, how could it be possible to determine who was more important at an MDC? It is possible that one person is simply voicing a view held by the group and not truly influencing the decision of the group.

#### Suggestions for Future Research

The present investigation was an observational field study and, as such, suffers from many limitations. It was not possible to manipulate variables, nor was it possible to randomize the sample. Therefore, direct experimental control could not be achieved and two null hypotheses were untestable, while the results related to the other hypotheses might be questioned due to the presence of numerous confounding variables. Training and professional experience were so

highly skewed that hypotheses concerning them could not be considered, nor could effects caused by training and experience be discounted when considering the other hypotheses due to the inability to isolate, block, or randomize for training and experience. In addition, the severity of the handicapping conditions was not controlled for within or across staffing types.

Parental presence and participation at the MDC's appeared to represent a significant problem in the present study. Parents were present at only 1/3 of the MDC's utilized in this study. When present at the MDC's, the parents appeared to take a rather passive role. As far as could be determined from observation of the schools and their environs, there were no differences in the demographics of the parents who attended or did not attend the MDC's (all MDC's took place in Title I qualified schools). More extensive demographic data was not available because conditions imposed upon the experimenter limited access to the parents. Future research needs to focus more extensively on the parents to determine what factors influence parental presence and participation at MDC's.

The ability to interpret and generalize from the results of this study was called to task by two factors. First, the experimenter also served as one of the observers recording of the Bales' based frequency counts. This introduced the possibility of personal bias in that the experimenter could have systematically influenced the recording of data. Secondary, no attempt was made to run reliability tests of the IPA based data. These two problems need to be carefully considered if this study is to stand up to close scientific scrutiny. Only with

adequate checks on the reliability of the measurements, can the relationship between independent and dependent variables be determined with confidence. However, Bales (1950) reported high reliability between observers scores. He indicated that Pearson product moment correlations of 0.9 were common among trained observers.

The results of this study should be generalizable within the Chicago Public Schools. While some of the anomalous practices of the LEA may have confounded the results of the present study, and the reliability of the results appear questionable, the results obtained were generally congruent with those expected from a review of the literature on small groups.

Future research needs to be done in both naturalistic and simulated laboratory settings. The naturalistic studies provide the practicality of the so-called "real world," and the laboratory studies provide the needed experimental control, so that hypotheses can be tested and theories be developed. The information about handicapped individuals utilized in experimental studies should be obtained from actual cases as frequently as is practical and possible to do so. Such a practice would insure a tie between the laboratory and the real world, allowing comparisons between the two. Within the laboratory it should be possible to control for factors directly related to team members (e.g. education, experience, sex, perception of others, etc.) With these variables controlled it should be possible to examine other factors (e.g. sex, age, intelligence, handicapping conditions, severity of handicapping condition) directly related to handicapped students, which might influence MDC team decisions and thus determine their

significance, if any, to the overall decision-making process. Finally, it might become possible to determine how and why the actual decisions are made. Having this kind of knowledge available will make it possible to speculate as to whether or not MDCs have been making appropriate decisions and if not, what kind of training needs to be undertaken to insure consistent, appropriate decisions.

•

## SUMMARY

The overall purpose of this study was to investigate the decision making process of individuals (school psychologists, social workers, nurses, teachers, etc.) and small groups (multidisciplinary conference teams) in the determination of appropriate special education placement for exceptional children. Over the years, there has been an increased reliance on the use of multidisciplinary staffing teams in the planning and development of educational programs for exceptional children. Prior to the implementation of Public Law (P.L.) 94-142 (The Education of all Handicapped Children Act), the composition, development, and reliance on the multidisciplinary team was informally and pragmatically determined. However, since the passage of P.L. 94-142 in 1975, the adaption of a medical model to special education; the introduction of legislation specifying due process procedures; and numerous court decisions have forced the development of new procedures to correct injustices and protect the rights of individuals.

In the present investigation data were collected within the context of 12 actual functioning multidisciplinary conference teams. The data base consisted of reperatory grid responses, individual team members placement decisions, and the responses to Bale's (1950) Interaction Process Analysis. This data base was acquired at staffings with three different placement recommendation outcomes (learning disabled, behavior disordered, and mentally handicapped). The study was designed

to address a number of research questions. Are the various disciplinary specializations perceived differently? Do disciplinary specializations make different placement decisions? Are the interactional behaviors of MDC team members affected by their disciplinary specialization, their team, the type of staffing, or the presence of parents? Do training and experience differentially affect interactional behaviors?

The overall results of the study indicated that members of MDC teams were perceived to be different from one another on a number of constructs: self oriented/group oriented, friendly/hostile, insecure/secure, submissive/dominant, goal oriented/affect oriented, self-isolating/outgoing, sensitive/insensitive, leader/follower, aggressive/passive, autocratic/democratic, nonadaptable/adaptable, competent/incompetent, worthless/valuable, anxious/relaxed, nonconforming/conforming, knowledgeable/ignorant, influential/inconsequential.

The findings further suggested that professional specialty (psychologist, social worker, nurse, teacher, administrator); type of staffing (learning disabled, behavior disordered, mentally handicapped); parental participation; and team membership, appeared to significantly affect the interactional behavior of the participants. An attempt was made to determine if training and experience affected behavior, though this did not prove possible due to the skewed and uneven distribution of both training and experience across subjects. Interestingly, the results of the present study indicated that there were no significant differences between the decisions of the team members despite their relying on a different data base for their individual placement decisions.



## REFERENCES

- Abelson, M. A., & Woodman, R. W. (1983). Review of research on team effectiveness: implications for teams in schools. School Psychology Review 12 (2), 125-135.
- Algozzine, B., & Ysseldyke, E. J. (1980). Decision maker's predictions of student's academic difficulties on a function of referral information. Journal of Educational Research 73 (3), 145-150.
- Armer, B., & Thomas, B. K. (1978). Attitudes toward interdisciplinary collaboration in pupil personnel services teams. Journal of School Psychology 16 (2), 167-176.
- Asch, S. E. (1946). Forming impressions of personality. Journal of Abnormal and Social Psychology 41, 258-290.
- Backman, S. P. (1975). Capturing the admission policies of a program for TMR's. Dissertation Abstract International 36 (2-B), 900-901.
- Bales, R. F. (1950a). A set of categories for the analysis of small group interaction. American Sociological Review 15, 257-263.
- Bales, R. F. (1950b). Interaction process analysis: A method for the study of small groups. Cambridge, MA: Addison-Wesley.
- Bales, R. F. (1955). How people interact in conferences. Scientific American 192 (3), 31-35.
- Bales, R. F. (1958). Task roles and social roles in problem solving groups. In E. E. Maccoby, T. M. Newcomb, and E. C. Hartley (Eds.). Readings in social psychology, NY: Holt.
- Bales, R. F. & Borgatta, E. F. (1955). Size of Group as a factor in

- the interaction profile. In A. P. Hare, E. F. Borgatta, and R. F. Bales (Eds.), Small groups: studies in social interaction. NY: Knopf.
- Bales, R. F. & Slater, P. E. (1955). Role differentiation. In T. Parsons, R. F. Bales, et al., The family, socialization, and interaction process. Glencoe, IL: Free Press.
- Barbandel, L., & Hoffenberg-Ruttman, J. (1974). Attitudes toward job responsibilities and training satisfaction of school psychologists: A comparative study. Psychology in the Schools 11, 425-429.
- Benne, K. D. & Sheats (1948). Functional roles of group members. Journal of Social Issues 4 (2), 41-49.
- Bennett, V. D. C. (1970). Who is a school psychologist? (and what does he do?) Journal of School Psychology 8, 166-171.
- Bernal, E. (1975). A response to educational uses of tests with disadvantaged subjects. American Psychologist 30, 93-95.
- Bernard, R., & Clarizio, H. (1981). Socio-economic bias in special education placement decisions. Psychology in the Schools 18, 178-183
- Berscherd, E. & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.), Advances in experimental social psychology, (Vol. 7). NY: Academic Press.
- Bigler, M. (1975). Parental use of household literature to reinforce secondary school reading instruction. Dissertation Abstracts 35, 7146.
- Bion, W. R. (1959). Experiences in groups New York: Basic Books.
- Bittle, R. G. (1975). Improving parent-teacher communication through a duly recorded telephone message: Evaluation of effects on academic

- and non-academic performance. Dissertation Abstracts 35, 7522.
- Blake, R. R., Mouton, J. S., & Fruchter, B. (1954). The consistency of interpersonal behavioral judgements made on the basis of short term interaction in three-man groups. Journal of Abnormal and Social Psychology 58, 573-578.
- Bond, M. H., & Dutton, D. G. (1973). The effect of interaction anticipation upon the extremity of tract ratings. Canadian Journal of Behavioral Science 5 226-233.
- Buktenica, N. A. (1970). A multidisciplinary training team in the public schools. Journal of School Psychology 8 (3), 220-225.
- Cartwright, D., & Zander, A. (1968). Leadership and group performance: Introduction. In W. Cartwright & A. Zander (Eds.), Group dynamics (3rd ed.). NY: Harper & Row.
- Cartwright, D. (1952). Emotional dimensions of group life. In M. L. Reymert (Ed.), Feelings and emotions. NY: McGraw-Hill.
- Cartwright, D. (1968). The nature of group cohesiveness. In D. Cartwright and A. Zander (Eds.), Group dynamics: research and theory, (3rd ed.), NY: Harper & Row.
- Caterall, C. D. (1972). Special education in transition: Implications for school psychology. Journal of School Psychology 10, 91-98.
- Cattell, R. B., & Stice, G. F. (1954). Four formulae for selecting leaders on the basis of personality. Human Relations 7, 493-507.
- Chapple, E. D. (1953). The standard experimental (stress) interview as used in interaction chronograph investigations, Human Organization 12 (2), 23-32.

- Clements, S. D. (1966). Minimal for pupil services in elementary schools. (NINDB Monograph No. 3, U. S. Public Health Service Publication No. 1415). Washington, DC: U. S. Government Printing Office.
- Coates, B. (1972). White adult behavior toward black and white children. Child Development 43, 143-154.
- Collins, E. G., & Guetzkow, H. (1964). A social psychology of group processes for decision-making. NY: Wiley.
- Conrad, D. C. & Conrad, R. (1956). The use of personal pronouns as categories for studying small group interaction. Journal of Abnormal and Social Psychology 52, 277-279.
- Corrado, J. (1975). The family hour: an experiment in parent involvement. NY: Play School Association.
- Coulter, W. A., Morrow, H. W., & Zucker, J. A. (1978). You always wanted to know about adaptance behavior but were too hostile and angry to ask. Paper presented at NASP. NY.
- Cromwell, R. L. (1975). Criteria for classification systems. In N. Hobbs (Ed.), Issues in the classification of children. San Francisco: Josey-Bass.
- Crowell, L., Katcher, A., & Miyamoto, S. F. (1955). Self concepts of communication skill and performance in small group discussions. Speech Monographs 22, 20-27.
- Davie, J. S., & Hare, A. P. (1956). Button-down collar culture: A study of undergraduate life at a men's college. Human Organization 14 (4), 13-20.
- Davis, J. H. & Restle, F. (1963). The analysis of problems and prediction of group problem solving. Journal of Abnormal Social Psy-

- chology 66, 103-116.
- Dunn, L. M. (1968). Special education for the mildly retarded - is much of it justified? Exceptional Children 35, 5-22.
- Edgerly, R. F. (1975). Effectiveness of parent counseling in treatment of children with learning disabilities. Dissertation Abstracts 36, 1301.
- Effrat, A. (1968). Editors Introduction. Sociological Inquiry 38, 97-103.
- Falick, L., Grimm, M., Preston, F., & Konno, T. (1971). Evaluating the impact of the counseling-learning team on the elementary school. School Counselor 19, 25-37.
- Faust, W. L. (1959). Group versus individual problem-solving. Journal of Abnormal Social Psychology 59, 68-72.
- Fenton, K. S., Yoshida, R. K., Maxwell, J. P., & Kaufman, M. J. (1979). Recognition of team goals: An essential step toward rationale decision making. Exceptional Children 45 (8), 638-644.
- Ferguson, D. (1970). National trends in pupil services. NAPPA News 4 (3), 7.
- Ferguson, D. G. (1969). Models for pupil services in elementary schools. College Park, MD: Maryland University. (ERIC Document Reproduction Service No. ED040504)
- Fransella, F., & Bannister, D., (1977). A manual for repertory grid technique NY: Academic Press.
- French, J. R. P., Jr. (1956). A formal theory of social power. Psychological Review 63, 181-194.
- Gajar, A. H. (1980). Characteristics across exceptional categories:

- EMR, LD and ED. Journal of Special Education 14 (2), 165-173.
- Gerry, M. (1973). Cultural Myopia: The need for corrective lens. Journal of School Psychology 11, 307-316.
- Gibb, C. A. (1947). The principles and tracts of leadership. Journal of Abnormal and Social Psychology 42, 267-284.
- Gibb, C. A. (1969a). Leadership: selected readings. Baltimore: Penquin.
- Gibb, C. A. (1969b). Leadership. In G. Lindzey & E. Aronson (Eds.), The handbook of social psychology (Vol. 4). Reading, MA: Addison-Wesley Publishing Company.
- Gillespie, A. (Feb., 1978). A planned change approach to the implementation of the IEP provision of P.L. 94-142. Washington, DC Department of Health, Education, and Welfare.
- Gilliam, J. E. (1979). Contributions and status rankings of educational planning committee participants. Exceptional Children 45, 466-468.
- Gilliam, J. E. & Coleman, M. C. (1981). Who influences IEP committee decisions? Exceptional Children 47, 642-644.
- Goffman, I. (1957). Alienation from interaction. Human Relations 10, 47-60.
- Goldstein, H., Arkell, C., Ashcroft, S. C., Hurley, O. L., & Lilly, M. S. (1975). In N. Hobbs (Ed.) Issues in the classification of children, (Vol. 2), San Francisco: Jossey-Bass.
- Goldstein, S. Strickland, B., Turnbull, A. P., & Carry, L. (1980). An observational analysis of the IEP conference, Exceptional Children 46 (4), 278-286.

- Goodenough, F. L. (1930). Interrelationships in the behavior of young children Child Development 1, 29-47.
- Gottlieb, J., Gumpel, D. H., & Budoff, M. (1975). Classroom behavior of retarded children before and after integration into regular class. Journal of Special Education 9, 304-315.
- Guba, E. G. (1978). Toward a methodology of natural inquiry in education evaluation. Monograph series in evaluation, Los Angeles: Center for the Study of Evaluation.
- Gurnee, H. (1937). A comparison of collective and individual judgments of facts. Journal of Experimental Psychology 21, 106-112.
- Hackman, J. R., & Morris, C. F. (1976). Group tasks, group interaction process and group performance effectiveness: A review and proposed integration in L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 8). NY: Academic Press.
- Hackman, J. R. & Vidmar, N. (1970). Effects of size and task type on group performance and member reactions. Sociometry 33 (1, March), 37-54.
- Hanawalt, N. C., Hamilton, C. E., & Morris, M. L. (1943). Level of aspiration in college leaders and non-leaders. Journal of Abnormal Social Psychology 38, 545-548.
- Hanneford, A. E., Simon, J., Ellis, D. (1975). Criteria for special class placement of the mentally retarded: Multidisciplinary comparison. Mental Retardation 13, 7-10.
- Hare, A. P. (1952). A study of interaction and consensus in different sized groups. American Sociological Review 17, 261-267.
- Hare, A. P. (1957). Situational differences in leader behavior.

- Journal of Abnormal and Social Psychology 55, 132-135.
- Hare, A. P. (1976). Handbook of small group research. NY: Free Press.
- Heald, J. E., Romano, L. G., & Georgiady, N. P. (Eds.) (1970). Selected readings on supervision. NY: Mac Millan.
- Hemphill, J. K. (1949). Situational factors in leadership. Ohio State University Educational Research Monographs 32, cited in Hare, A. P. (1976) Handbook of small group research. NY: Free Press.
- Henry, W. E. (1949). The business executive: The psychodynamics of a social role. American Journal of Sociology 54, 286-291.
- Hewett, F. M. & Forness, S. R. (1974). Education of exceptional learners. Boston: Allyn & Bacon.
- Hill, G. W. (1982). Group versus individual performance: Are n+1 heads better than one? Psychological Bulletin 91 (3), 517-539.
- Hoff, M. K., Fenton, K. S., Yoshida, R. K. & Kaufman, M. J. (1978). Notice and consent: the schools responsibility to inform parents. Journal of School Psychology 16 (3), 265-273.
- Hoffman, L. R. (1965). Group problem solving. In L. Berkowitz (Ed.), Advances in experimental social psychology (pp. 99-132) NY: Academic Press.
- Hoffman, L. R., Burke, R. J., & Maier, N. R. F. (1965). Participation, influence, and satisfaction among members of problem solving groups. Psychological Reports 16, 661-667.
- Holland, R. P. (1980). An analysis of the decision-making process in special education. Exceptional Children 46 (7), 551-553.
- Hogenson, D. (1973). A multidisciplinary approach to the in-school management of acutely anxious depressed students in a large urban



- senior high school setting. Pupil Personnel Services Journal 3, 29-31.
- Hollander, E. P. (1964). Leaders, groups, and influence. NY: Oxford University Press.
- Hollander, E.P., & Julian, J.W. (1969). Contemporary trends in the analysis of leadership processes. Psychological Bulletin 71 (5), 387-397.
- Holtzman, A. (1966). Interest groups and lobbying. NY: MacMillan.
- Holtzman, W. H. (1952). Adjustment and leadership. Journal of Social Psychology 36, 179-189.
- Homans, G. C. (1950). The human group. NY: Harcourt Bruce.
- Hudgins, B. B. (1960). Effects of group experience on individual problem solving. Journal of Educational Psychology 51, 37-42.
- Jackson, G. (1975). Another psychological view from the association of black psychologists. American Psychologist 22, 89-93.
- Jackson, P. J., & Lahaderne, H. (1967). Inequalities of teacher-pupil contacts. Psychology in the Schools 4, 204-211.
- Jastak, J. F., McPhee, H. M., & Whitman, M. (1963). Mental retardation its nature and occurrence. NY: University Publishers.
- Johnson, V. M. (1980). Analysis of factors influencing special education placement decisions. Journal of School Psychology 18 (3), 191-202.
- Jones, E. E., & Gerard, H. B. (1967). Foundations of social psychology NY: John Wiley & Sons, Inc.
- Kane, R. A. (1975). The interpersonal team as a small group. Social Work In Health Care 1, 19-32.

- Katz, D., & Kohn, R. (1966). The social psychology of organizations NY: Wiley.
- Kaufman, M. J. (1977). Characteristics of children's behavior disorders. Columbus, OH: Merrill.
- Kaufman, M. J., Gottlieb, J., Agard, J. A., & Kukic, M. B. (1975). Mainstreaming: Toward an explication of the construct. Focus on Exceptional Children 7 (3), 1-11.
- Kaufman, M. J., & Hallahan, D. P. (1974). The medical model and the science of special education. Exceptional Children 41, 97-102.
- Kelley, H. H. (1950). The warm-cold variable in first impressions of persons. Journal of Personality 18, 431-439.
- Kelley, H. H., & Thibaut, J. W. (1954). Experimental studies of group problem solving and process. In G. Lindzey (Ed.), Handbook of Social Psychology, Cambridge, MA: Addison-Wesley.
- Kelley, H. H., & Thibaut, J. W. (1969). Group problem solving. In G. Lindzey & E. Aronson (Eds.), The Handbook of Social Psychology (Vol. 4). Reading, MA: Addison-Wesley Publishing Company.
- Kelley, G. A. (1955). The psychology of personal constructs NY: W. W. Norton.
- Keogh, B. K., Kuic, S. J., Becker, L. D., McLaughlin, R. J., & Kulic, M. B. (1975). School psychologists' services in special education programs. Journal of School Psychology 13, 142-148.
- Knoff, H. M. (1983). Investigating disproportionate influence and status in multidisciplinary child study teams. Exceptional Children 49 (4), 367-370.
- Lambert, N., Windmiller, M., Cole, L. & Figueroa, R. (1974). Adap-

- tive behavior scale-public school version. Washington, DC: American Association on Mental Deficiency.
- Laughlin, P. R., & Bitz, D. S. (1975). Individual versus dyadic performance on a disjunctive task as a function of initial ability level. Journal of Personality and Social Psychology 31, 487-496.
- Laughlin, P. R., & Branch, L. C. (1972). Individual versus Tetradec performance on a complementary task as a function of initial ability level. Organizational Behavior and Human Performance 8, 201-216.
- Laughlin, P. R., & Jaccard, J. J. (1975). Social facilitation and observational learning of individuals and cooperative pairs. Journal of Personality and Social Psychology 32, 873-879.
- Laughlin, P. R., & Johnson, H. H. (1966). Group and individual performance on a complementary task as a function of initial ability level. Journal of Experimental Social Psychology 2, 407-414.
- Laughlin, P. R., & Kodowski, C. A., Metizer, M. E., Ostap, K.M., & Vendovas, S. M. (1968). Concept identification as a function of sensory modality, information, and number of persons. Journal of Experimental Psychology 77, 335-340.
- Laughlin, P. R., McGlynn, R. P., Anderson, J. A., & Jacobson, E. S. (1968). Concept attainment by individuals versus cooperative pairs as a function of memory, sex, and concept rules. Journal of Personality and Social Psychology 8, 410-417.
- Likert, R. (1967). The Human Organization: Its Management and Value. NY: McGraw-Hill.
- Lippit, R., Polansky, N., & Rosen, S. (1952). The dynamics of power: A field study of social influence in groups of children. Human

Relations 5, 37-64.

- Locke, W. (1976). The effect of frequency of home visits on parent behavior and child achievement. Dissertation Abstracts 37, 4217.
- Lorge, I., Fox, D., Davitz, J., and Brenner, N. (1958). A survey of studies contrasting the quality of group performance and individual performance, 1920-1957. Psychological Bulletin 55, 337-372.
- Lynch, E. (1976). Measuring involvement in an early interaction project, Paper presented at the Annual International Convention of the Council for Exceptional Children, Chicago, IL.
- Maher, C. (1982). Decision analyses: An approach for multidisciplinary teams in planning special service programs. Journal of School Psychology 19, 340-349.
- Maher, C. A., and Barbrack, C. R. (1980). A framework for comprehensive evaluation of the IEP. Learning Disabilities Quarterly 3 (3), 49-55.
- Maier, N. and Soalem, A. R. (1952). The contribution of a discussion leader to the quality of group thinking: The effective use of minority opinions. Human Relations 5, 277-288.
- Manis, M. (1955). Social interaction and the self concept. Journal of Abnormal and Social Psychology 51, 362-370.
- Mann, R. D. (1959 July 4). A review of the relationships between personality and performance in small groups. Psychological Bulletin 56, 241-270.
- Martin, F. (1979). Is it necessary to retest children in special education classes? Journal of Learning Disabilities 12 (6), 388-392.
- Matuszek, P., Oakland, T. (1979). Factors influencing teachers' and

- psychologists' recommendations regarding special class placement. Journal of School Psychology 17 (2), 116-125.
- McKenna, B. What's wrong with standardized testing. Today's Education 66 (2), 35-38.
- Mendelson, M. A. (1967). Interdisciplinary approach to the study of the exceptional infant: A large scale research report. In J. Hellmuth (Ed.), Exceptional infant (Volume 1). NY: Bruner/Mazel, Inc.
- Merton, R. K. (1957). Social theory and social structure (Rev. ed.), Glencoe, IL: Free Press.
- Meyer, W., and Thompson, G. (1956). Sex differences in the distribution of teacher approval and disapproval among sixth grade children. Journal of Educational Psychology 47, 385-396.
- Meyers, C. E. (1973). The school psychologist and mild retardation-report of an Ad Hoc Committee. Mental Retardation 11, 15-20.
- Mills v. Board of Education of District of Columbia (125), 348F. Supp. 666, 968, 8255.
- Miyamoto, F. S., and Dornbusch, S. M. (1956). A test of interationist hypothesis of self-conception. American Journal of Sociology 61.
- Morrow, H., Powell, G., and Ely, D. (1976). Placement or Place for: does additional information change special education placement decisions? Journal of School Psychology 14, 186-191.
- National Education Association. (1978). Education for all handicapped children: conflict and challenge. Washington, DC: National Education Association.
- Oakland, T., and Loasa, L. (1977). Professional, legislative, and

- judicial influences on psychoeducational assessment practices in schools. In T. Oakland (Ed.), Psychological and educational assessment of minority children. NY: Brunner/Mazel.
- Palmer, L. M. (1962). Task ability and effective leadership. Psychological Reports 10, 863-866.
- Parsons, T. (1961). An outline of the social system. In T. Parsons (etds.) Theories of society. NY: Free Press.
- Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania, 344 F. Supp, 1257 (ed. Pa. 1971); 343 F. Supp, 279 (ed. Pa. 1972).
- Perlmutter, H. V. (1953). Group memory of meaningful material. Journal of Psychology 35, 361-370.
- Pfeiffer, S. (1980). The influence of diagnostic labeling on special education placement decisions. Psychology in the Schools 17, (1), 346-350.
- Pfeifer, S. I. (1980). The school-based interprofessional team: Recurring problems and some possible solutions. Journal of School Psychology 18, 388-394.
- Pfeifer, S. I. (1982a). Special education placement decisions made by teams and individuals: A cross cultural perspective. Psychology in the Schools 19, 335-340.
- Pfeifer, S. I. (1982b) Sept, 68-69. The superiority of team decision making. Exceptional Children.
- Poland, S. F., Thurlow, M. L., Ysseldyke, J. E. and Mirkin, P. K. (1982). Current psychoeducational assessment and decision making practices as reported by directors of special education. Journal of

School Psychology 20, 171-174.

- Proshansky, H. Seidenberg, B. (1965). Basic studies in social psychology. NY: Holt, Rinehart, and Winston.
- Quay, H. C., and Werry, J. S.(1972) (Eds.) Psychopathological disorders of children. NY: Wiley.
- Rettke, G. H. (1968-69). Psychological services: a developing model. Journal of School Psychology 7 (1), 34-35.
- Rioch, M. J. The work of Wilfred Bion on Groups. Psychiatry 33 (1), 55-56.
- Ross, M. B., S. Saliva, J. (1975). Attractiveness as a biasing factor in teacher judgements. American Journal of Mental Deficiency 80, 96-98.
- Rubovitz, P., and Moehr, M. (1979). Pygmalion black and white. Journal of Personality and Social Psychology 25, 30-36.
- Ryack, B. L. (1965). Individuals versus groups. Journal of Personality and Social Psychology 2, 296-299.
- Sabatino, D. (1972). School psychology--special education: To acknowledge a relationship. Journal of School Psychology 10, 99-108.
- Salvia, J., and Ysseldyke, J. E. (1978). Assessment in special and remedial education. Boston: Houghton-Mifflin.
- Schacter, S. (1951). Deviation, rejection, and communication. Journal of Abnormal and Social Psychology 46, 190-207.
- Schipper, W. V., Wilson, W. C., and Wolf, J. M. (1977). Public education of the handicapped. In E. Sontag (Ed.), Educational Programming for the Severely and Profoundly Handicapped. Reston, VA: Division on Mental Retardation, council for Exceptional Children.

- Schlosser, L., and Algozzine, B. (1979). The disturbing child: He or She? The Alberta Journal of Educational Research 25, 30-36.
- Schmuck, R. A., Runkel, P. J., Saturen, S. L., Mortell, R. T., and Derr, C. B. (1972). Handbook of Organization Development in Schools, Palo Alto, CA: Mayfield Publishing Co.
- Shartle, C. L., and Stogdill, R. M. (1952). Studies in naval leadership Columbus: Ohio State University Research Foundation.
- Shaw, M. E. (1961). Some factors influencing the use of information in small groups. Psychological Reports 8, 187-198.
- Shaw, M. E., and Ashton, N. (1976). Do assembly affects occur on disfuncitive tasks? Bulletin of the Psychonomic Society 8, 469-471.
- Sherif, M. (1948). An outline of social psychology. NY: Harper.
- Sherif, M. (1954). Sociocultural influences in small group research. Sociology and Social Research 39, 1-10.
- Silverstein, A. B. (1963). Psychological testing practices in state institutions for the mentally retarded. American Journal of Mental Deficiency 68, 440-445.
- Simches, R. F. (1975). The parent-professional partnership. Exceptional Children 41 (5), 565-566.
- Slater, P. E. (1958). Contrasting correlates of group size. Sociometry 21, 129-139.
- Slovic, P., and Lichtenstein, S. (1973). Comparison of bayesian and regression approaches to the study of information processing in judgment. In L. Rappoport and D. A. Summes (Eds.) Human Judgment and Social Interaction. NY: Holt.
- Smith, C. R., and Knoff, H. M. (1981). School psychology and special



- education students placement decisions: IQ still tips the scale. Journal of Special Education 15 (1), 55-64.
- Smith, G. F., & Murdoch, P. (1970). Performance of informed versus noninformed treads and quartets in the "minimal social situation". Journal of Personality and Social Psychology 15 (4), 391-396.
- Smith, M. (1945). Social situation, social behavior, social group. Psychological Review 52, 224, 229.
- Sorrentino, R. M. (1973 3, June). An extension of theory of achievement motivation to the study of emergent leadership. Journal of Personality and Social Psychology 26 356-368.
- Steiner, D. (1966). "Models for Inferring Relationships Between Group Size and Potential Group Productivity." Behavioral Science 11, 273-283.
- Steiner, I. D. (1972). Group Process and Productivity. NY: Academic Press.
- Stock, D. and Thelan, H. A. (1958). Emotional dynamics and group culture: Experimental studies of individual and group behavior. NY: New York University Press.
- Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. Journal of Psychology 25, 35-71.
- Stogdill, R. M. (1974). Handbook of leadership: A survey of theory and research. NY: Free Press.
- Sutherland, J. H., and Algozzine, B. (1979). The learning disabilities label as a biasing factor in the visual-motor performance of normal children. Journal of Learning Disabilities 12, 17-23.
- Thelan, H. A. (1954). Dynamics of groups at work. Chicago: Univer-

- sity of Chicago Press.
- Thomas, B. K. (1972). Collaboration of Pupil Services and Instructional Personnel. Journal of School Psychology 10 (1), 83-87.
- tion. In T. M. Newcomb and E. L. Hartley (Eds.), Readings in social-psychology. NY: Holt.
- Thorndike, R. L. (1938). The effect of discussion upon the correctness of group decisions, when the factor of majority influence is allowed for. Journal of Social Psychology 9, 343-362.
- Thurlow, M. L., and Ysseldyke, J. E. (1979). Current assessment and decision-making practices in model programs for learning disabled students. Learning Disability Quarterly 2, 15-24.
- Tombari, M. L., Bergan, J. R. (1978). Consultant cues and teacher verbalization, judgments, and expectances concerning children's adjustment problems. Journal of School Psychology 16, 212-319.
- Trippe, M. J. (1966). Educational therapy. In J. Hellmuth (Ed.), Educational therapy (Vol. 1). Seattle, WA: Special Child Publications.
- Trudeau, E., Nye, R., & Bolick, N. (1973). State laws and administrative procedures relating to the placement of exceptional children. Arlington, VA: State-Federal Information Clearinghouse for Exceptional Children.
- Vroom, V. H. (1969). Industrial social psychology. In G. Lindzey and E. Aronson (Eds.) The handbook of social psychology, Vol. 5. (2nd Ed.). Reading, MA: Addison-Wesley.
- Wegner, N., and Zeaman, D. (1956). Team and individual performance on a motor learning task. Journal of General Psychology 55, 127-142.

- Weintraub, F. J. Abeson, A. R., and Braddock, D. L. (1971). State law education of handicapped children: issues of recommendations. Arlington, VA.: The Council for Exceptional Children.
- Wiggins, N. (1973). Individual differences in human judgment: a multivariate approach. In L. Rapaport and D. A. Summers (Eds.) Human judgment and social intersection. NY: Holt.
- Williams, S. B., Leavitt, H. J. (1947). Group opinion as a prediction of military leadership. Journal of Consulting Psychology 11, 283-281.
- Wood, M. T. (1972a). Effects of decision processes and task situations on influence perceptions. Organizational Behavior and Human Performance 7 (3), 417-427.
- Wood, M. T. (1972b). Participation, influence, and satisfaction in group discussion making. Journal of Vocational Behavior 2 (4), 389-399.
- Yoshida, R. K. (1978). The principal and special education placement. National Elementary Principal 58 (1), 34-38.
- Yoshida, R. K. (1980). Multidisciplinary decision making in special education: A review of issues. School Psychology Review 9, 221-227.
- Yoshida, R., Fenton, K., Kaufman, M. J., and Maxwell, J. P. (1978). Parental involvement in the special education pupil planning process: The schools perspective. Exceptional Children 44, 531-533.
- Yoshida, R. K., Fenton, K. S., Maxwell, J. P. and Kaufman, M. J. (1978). Ripple effect: communication of planning team decisions to program implementers. Journal of School Psychology 16 (2), 177-183.
- Yoshida, R. K., Fenton, K. S., Maxwell, J. P. and Kaufman, M. J. (1978b). Group decision making in the planning team process: myth or reality. Journal of School Psychology 16 (3), 237-244.

- Ysseldyke, J. E. and Algozzine, B. (1982). Bias among professionals who erroneously declare students eligible for special services. Journal of Experimental Education 50, 223-224.
- Ysseldyke, J. E., Algozzine, B., and Allen, D. (1981). Regular education teacher participation in special education team decision making. Elementary School Journal 82, 160-165.
- Ysseldyke, J. E., Algozzine, B., and Mitchell, J. (1982). Special education team decision making: an analysis of current practice. Personal and Guidance Journal 60, 308-313.
- Ysseldyke, J., Algozzine, B., Regan, R. and McGue, M. (1981). The influence of test scores and naturally-occurring pupil characteristics on psychoeducational decision making with children. Journal of School Psychology 19 (2), 167-177.
- Ysseldyke, J. E., Algozzine, B., Rostollan, D., and Shinn, M. A. (1981). A content analysis of the data presented at special education placement team meetings. Journal of Clerical Psychology 37, 655-662.
- Ysseldyke, J. E. and Regan, R. (1980). Nondiscriminatory assessment: A formative model. Exceptional Children 46, 465-467.
- Zander, A. (1958). Group membership and individual security. Human Relations 11, 99-111.
- Zander, A., Stotland, E., and Wolfe, D. (1960). Unity of group, identification with group, and self-esteem of members. Journal of Personality 28, 463-478.
- Zigon, R. J., and Cannon, J. R. (1974 5, Jan.). Processes and outcomes of group discussions as related to leader behaviors. Journal

of Educational Research 67, 199-201.

Ziller, R. C., and Behringer, R. D. (1960). Assimilation of the knowledgeable newcomer under conditions of group success and failure.

Journal of Abnormal Social Psychology 60, 288-291.

Znaniecki, F. (1939). Social groups as a product of participating individuals. American Journal of Sociology 44, 799-812.

## TABLES

TABLE 1

## Frequency Distributions of Demographic Data

	Psychologist	Social Worker	Nurse	Teacher	Admin.
Male	8	3		3 ( 1)	10
Female	4	9	12	51 (11)	2
	<u>Highest Degree Held</u>				
BS			11	36 ( 8)	
MS	7	12	1	18 ( 4)	12
PHD	5				
	<u>Additional Undergraduate Hours</u>				
0	10	10	5	36 ( 8)	12
9				4 ( 1)	
12		1	2		
15				4 ( 1)	
16			1	2	
19			1	2	
20			1	1	
24	1			2 ( 1)	
28				2 ( 1)	
30				1 ( 1)	
36		1			
48	1				
60			2		

TABLE 1 (continued)

## Frequency Distributions of Demographic Data (continued)

	Psychologist	Social Worker	Nurse	Teacher	Admin.
		<u>Additional Graduate Hours</u>			
0	10	11	6	35 ( 7)	11
3		1		2	
4			1	3	
7				3 ( 1)	
12			1	4	
18			2		
28				2 ( 1)	
36				4 ( 2)	1
40				1 ( 1)	
50			2		
63					
140					

Note: The number in parenthesis is the frequency distribution for those teachers who completed the rating grid.



TABLE 2

Frequency Distribution of Professional Experience (A)  
 Professional Experience in Schools (B)  
 Professional Experience in Current Position (C)

Years	Psychologist			Social Worker			Nurse			Teacher			Admin.			Total		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1																		
2																		
3					4	8						1					4	9
4					4	2											4	2
5				2	1												2	1
6			3															3
7		5		6	2					1	1	3				7	8	3
8	2		3	3		1				3	3	3			1	8	3	8
9	1						2	2	2	1	1					4	3	2
10	2		1							2	2	1			1	4	2	3
11															1			1
12	1	1	1		1	1		4	4						1	1	6	7
13							3										3	
14	1	1	1													1	1	1
15		2	3					1	1	2	2	2	1	3	4	3	8	10
16	2								2							2		2
17	1	1		1			1		1				1	1		4	2	1
18															4			4
19								2									2	
20								1		1	1	1				1	2	1
21																		
22								1	1	1	1	1	2	1		3	3	2
23													3	2		3	2	
24							3									3		
25							1						2	2		3	2	
26													1	1		1	1	
27								1	1				1	1		1	2	1
28										1	1		1	1		2	2	
32	1	1														1	1	
33	1	1														1	1	
36							1									1		
42							1									1		

TABLE 3  
Discriptive Statistics for Rating Grid Constructs by Position

Construct	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Self Oriented/Group Oriented	3.616	2.059	3.183	1.926	2.733	2.238	3.600	1.915	2.966	2.185
Friendly/hostile	2.550	1.048	2.350	1.447	3.216	1.966	3.083	1.543	3.283	1.823
Insecure/Secure	4.416	1.618	5.016	1.770	4.066	1.998	4.750	1.988	3.333	2.282
Submissive/Dominant	5.000	1.484	5.083	1.649	4.483	1.952	4.283	1.341	4.866	1.721
Goal Oriented/Affect Oriented	3.450	1.826	2.800	1.929	3.550	2.265	3.600	2.156	2.083	1.532
Self Isolating/Outgoing	4.116	1.090	4.600	1.531	3.133	1.512	4.583	1.639	3.516	1.489
Sensitive/Insensitive	2.600	1.167	3.183	1.346	4.650	1.981	3.233	1.769	5.000	1.841
Leader/Follower	3.666	1.997	2.933	1.876	4.300	1.889	3.800	1.570	3.516	1.863
Aggressive/Passive	3.533	1.692	2.733	1.560	3.383	1.823	3.666	1.271	2.816	1.610
Autocratic/Democratic	4.550	1.691	3.550	1.750	3.050	1.779	3.783	1.737	2.983	1.854
Nonadaptable/Adaptable	5.483	1.420	4.133	2.003	3.533	1.952	4.700	1.843	3.200	2.056
Competent/Incompetent	1.716	1.194	2.750	1.514	2.983	2.127	2.316	1.455	3.933	2.049
Worthless/Valuable	5.583	1.356	5.033	1.625	4.116	1.923	4.783	1.869	3.766	1.898
Anxious/Relaxed	3.783	1.878	4.400	1.786	3.133	1.917	4.566	1.779	2.766	1.619
Nonconforming/Conforming	5.100	1.633	4.483	1.935	4.900	1.503	5.216	1.563	5.316	1.808
Knowledgeable/Ignorant	1.600	1.107	2.300	1.168	2.633	1.540	2.433	1.499	4.166	2.026
Influential/Inconsequential	2.566	1.212	3.083	1.730	3.883	1.860	3.600	1.531	3.400	1.842

Note: Note=60 for each position

TABLE 4  
Canonical Discriminant Functions

FUNCTION	EIGENVALUE	PERCENT OF VARIANCE	CUMULATIVE PERCENT	CANONICAL CORRELATION	AFTER FUNCTION	WILKS' LAMBDA	CHI-SQUARED	D.F.	SIGNIF.
					0	0.2869183	336.08	68	0.0000
1	0.47430	40.07	40.07	0.688700	1	0.5078446	188.82	48	0.0000
2	0.32514	27.46	67.53	0.570213	2	0.7023620	98.77	30	0.0000
3	0.24719	20.88	88.42	0.497182	3	0.8936420	33.749	14	0.0022
4	0.13703	11.57	100.00	0.370179					

TABLE 5

WILKS' LAMBDA (U-STATISTIC) AND UNIVARIATE F-RATIO  
4 AND 295 DEGREES OF FREEDOM

CONSTRUCT	WILKS'LAMBDA	F	SIGNIFICANCE
Self Oriented/Group Oriented	0.97211	2.116	0.0788
Friendly/hostile	0.94679	4.145	0.0028
Insecure/Secure	0.91547	6.810	0.0000
Submissive/Dominant	0.96540	2.643	0.0339
Goal Oriented/Affect Oriented	0.91743	6.638	0.0000
Self Isolating/Outgoing	0.86137	11.87	0.0000
Sensitive/Insensitive	0.75779	23.57	0.0000
Leader/Follower	0.94488	4.302	0.0021
Aggressive/Passive	0.94576	4.229	0.0024
Autocratic/Democratic	0.90423	7.811	0.0000
Nonadaptable/Adaptable	0.83705	14.36	0.0000
Competent/Incompetent	0.84087	13.96	0.0000
Worthless/Valuable	0.87737	10.31	0.0000
Anxious/Relaxed	0.86728	11.29	0.0000
Nonconforming/Conforming	0.97023	2.263	0.0625
Knowledgeable/Ignorant	0.75721	23.65	0.0000
Influential/Inconsequential	0.92915	5.624	0.0002

TABLE 6

## LINEAR DISCRIMINANT FUNCTION

	CONSTANT = $-.5 X_j \text{COV}^{-1} X_j$		COEFFICIENT VECTOR = $\text{COV}^{-1} X_j$		
	Administrator	Nurse	Psychologist	Social Worker	Teacher
Constant	-1.64951407	-0.75369164	-1.10446241	-0.43378887	-0.65856929
Self Oriented/Group Oriented	-0.33323336	-0.13391907	-0.15636099	-0.17774633	-0.13304510
Friendly/Hostile	-0.13706088	-0.23492862	0.07807482	-0.16677070	0.46068538
Insecure/Secure	0.07157090	0.50157269	-0.67981852	0.02650686	0.08016806
Submissive/Dominant	-0.41510047	-0.06517924	0.78031309	-0.05177975	-0.24825363
Goal Oriented/Affect Oriented	-0.41552632	0.26574440	-0.07570577	-0.03281113	0.25829881
Self Isolating/Outgoing	-0.25368801	-0.45776158	-0.05026371	0.28441332	0.47729999
Sensitive/Insensitive	0.44034902	0.62856793	-0.30506434	-0.30822008	-0.45563254
Leader/Follower	-0.54146291	0.32642689	0.17661984	0.03411070	0.00430547
Aggressive/Passive	-0.21618914	-0.23017342	0.29833768	-0.12969904	0.27772391
Autocratic/Democratic	-0.10929110	-0.17103825	0.48424319	-0.02091274	-0.18300111
Nonadaptable/Adaptable	0.27345245	-0.12840590	0.29416883	-0.24431555	-0.19489983
Competent/Incompetent	-0.43383888	0.05340549	-0.04528464	0.32160567	0.10411236
Worthless/Valuable	-0.51806865	-0.04185772	0.20027989	0.19849494	0.16115154
Anxious/Relaxed	-0.48995913	-0.09540646	-0.07464549	0.23216248	0.42784860
Nonconforming/Conforming	0.17658462	-0.05077146	-0.06310828	-0.20070586	0.13800097
Knowledgeable/Ignorant	1.38284607	-0.58407651	-0.53291217	-0.26116292	-0.00469477
Influential/Inconsequential	-0.94057679	0.37646591	-0.19706529	0.29646380	0.46471237

TABLE 7  
UNSTANDARDIZED CANONICAL FUNCTION COEFFICIENTS

	FUNC 1	FUNC 2	FUNC 3	FUNC 4
Self Oriented/Group Oriented	-0.131282	0.011735	-0.081039	0.073755
Friendly/Hostile	0.083120	-0.004321	0.181747	0.380857
Insecure/Secure	-0.110959	0.368168	-0.068708	-0.030136
Submissive/Dominant	0.188576	-0.277942	-0.232408	-0.068531
Goal Oriented/Affect Oriented	0.113819	0.186876	-0.073049	0.126152
Self Isolating/Outgoing	0.125758	0.031410	0.397183	0.030038
Sensitive/Insensitive	-0.224464	0.112992	-0.392804	-0.015414
Leader/Follower	0.159881	0.093635	-0.218287	-0.056453
Aggressive/Passive	0.118636	-0.096903	0.086446	0.262247
Autocratic/Democratic	0.079121	-0.228503	-0.078376	-0.053778
Nonadaptable/Adaptable	-0.059279	-0.217641	-0.081403	0.124335
Competent/Incompetent	0.131643	0.123186	0.046014	-0.225573
Worthless/Valuable	0.186910	0.025983	0.028125	-0.086231
Anxious/Relaxed	0.169479	0.150147	0.191001	0.017245
Nonconforming/Conforming	-0.051456	-0.004235	0.047865	0.238942
Knowledgeable/Ignorant	-0.432782	-0.158179	0.423842	0.270560
Influential/Inconsequential	0.267363	0.379905	-0.015127	-0.062442

TABLE 8  
 STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

	FUNC 1	FUNC 2	FUNC 3	FUNC 4
Self Oriented/Group Oriented	-0.28116	0.02513	-0.17355	0.15795
Friendly/Hostile	0.12486	-0.00649	0.27302	0.57213
Insecure/Secure	-0.22531	0.74760	-0.13951	-0.06119
Submissive/Dominant	0.30211	-0.44528	-0.37233	-0.10979
Goal Oriented/Affect Oriented	0.21957	0.36051	-0.14092	0.24336
Self Isolating/Outgoing	0.20645	0.05156	0.65203	0.04931
Sensitive/Insensitive	-0.43985	0.22141	-0.76973	-0.03020
Leader/Follower	0.29818	0.17463	-0.40711	-0.10528
Aggressive/Passive	0.19135	-0.15630	0.13943	0.42299
Autocratic/Democratic	0.14649	-0.42309	-0.14512	-0.09957
Nonadaptable/Adaptable	-0.12126	-0.44523	-0.16652	0.25435
Competent/Incompetent	0.24954	0.23351	0.08722	-0.42759
Worthless/Valuable	0.33807	0.04699	0.05087	-0.15597
Anxious/Relaxed	0.33661	0.29822	0.37936	0.03425
Nonconforming/Conforming	-0.08076	-0.00664	0.07512	0.37502
Knowledgeable/Ignorant	-0.77317	-0.28259	0.75720	0.48336
Influential/Inconsequential	0.46179	0.65618	-0.02612	-0.10785

TABLE 9  
 WITHIN GROUP STRUCTURE COEFFICIENTS

	FUNC 1	FUNC 2	FUNC 3	FUNC 4
Knowledgeable/Ignorant	-0.7482	0.1089	0.1727	0.1449
Sensitive/Insensitive	-0.6827	0.3195	-0.3056	0.1018
Competent/Incompetent	-0.6030	0.1869	0.0470	-0.1745
Nonadaptable/Adaptable	0.5552	-0.3629	-0.0942	0.2505
Worthless/Valuable	0.5129	-0.3000	0.1066	-0.1627
Insecure/Secure	0.4018	0.1306	0.2318	-0.2519
Goal Oriented/Affect Oriented	0.4009	0.1746	-0.2294	0.3303
Autocratic/Democratic	0.3938	-0.3565	-0.0593	-0.1324
Influential/Inconsequential	-0.1627	0.4467	-0.0756	0.2226
Self Isolating/Outgoing	0.3444	-0.0688	0.6276	-0.1317
Anxious/Relaxed	0.4460	0.1246	0.4678	-0.0790
Aggressive/Passive	0.2288	0.0286	-0.1384	0.5383
Nonconforming/Conforming	-0.1110	-0.1151	-0.0092	0.4972
Friendly/Hostile	-0.2569	0.1769	-0.1197	0.4919
Leader/Follower	-0.0003	0.1492	-0.3659	0.4666
Submissive/Dominant	-0.0231	-0.2540	0.0184	-0.4274
Self Oriented/Group Oriented	0.1753	-0.1430	0.1769	0.1704



TABLE 10

## CANONICAL DISCRIMINANT FUNCTIONS EVALUATED AT GROUP MEANS (GROUP CENTROIDS)

GROUP	FUNC 1	FUNC 2	FUNC 3	FUNC 4
Psychologist	0.5971	-0.8251	-0.2802	0.0713
Social Worker	0.2358	0.1530	0.3567	-0.5848
Nurse	-0.0846	0.5948	-0.7200	-0.0003
Teacher	0.3998	0.3848	0.4916	0.4427
Administrator	-1.1481	-0.3075	0.1517	0.0712

TABLE 11

## TEST OF EQUALITY OF GROUP COVARIANCE MATRICES USING BOX'S M

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

GROUP LABEL	RANK	LOG DETERMINANT
1 Psychologist	17	-5.744584
2 Social Worker	17	1.586060
3 Nurse	17	0.708606
4 Teacher	17	0.579696
5 Administrator	17	3.945979
Pooled within-groups covariance matrix	17	9.650914

BOX'S M	APPROX. F.	DEGREES OF FREEDOM		SIGNIFICANCE
2783.6	3.9920	612.	151184.2	0.0001

TABLE 12

## PAIRWISE SQUARED GENERALIZED DISTANCES BETWEEN GROUPS

$$D^2(I|J) = (X_I - X_J)' \text{COV}^{-1} (X_I - X_J)$$

## GENERALIZED SQUARED DISTANCE TO POSITION

From position	Administrator	Nurse	Psychologist	Social Worker	Teacher
Administrator	0.0000	5.37534260	7.91387174	5.45533940	6.86043954
Nurse		0.0000	5.08161204	2.97501092	3.30500338
Psychologist			0.0000	3.32314066	3.92605225
Social Worker				0.000	1.69425034
Teacher					0.0000

TABLE 13

## DISCRIMINANT ANALYSIS CLASSIFICATION SUMMARY

GENERALIZED SQUARED DISTANCE FUNCTION: POSTERIOR PROBABILITY OF MEMBERSHIP IN EACH POST:

$$D^2_J(X) = (X - X_J)' \text{COV}^{-1} (X - X_J)$$

$$\text{PR}(J|X) = \text{EXP}(-.5 D^2_J(X)) / \text{SUM EXP}(-.5 D^2_K(X))$$

NUMBER OF OBSERVATIONS AND PERCENTS CLASSIFIED INTO POSTIONS:

From Position	A	N	P	S	T	Total
Administration	47 78.33	2 3.33	5 8.33	2 3.33	4 6.67	60 100.00
Nurse	3 5.00	35 58.33	6 10.00	8 13.33	8 13.33	60 100.00
Psychologist	2 3.33	3 5.00	40 66.67	8 13.33	7 11.67	60 100.00
Social Worker	3 5.00	2 3.33	9 15.00	29 48.33	17 28.33	60 100.00
Teacher	4 6.67	12 20.00	1 1.67	8 13.33	35 58.33	60 100.00
Total	59	54	61	55	71	300
Percent	19.67	18.00	20.33	18.33	23.67	100.00

TABLE 14  
 SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
 FOR EFFECT . . . TEAM  
 ERROR . . . POSITION (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 11, M = 12.5, N = 15.0)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	(187,332)	1.07	.3012
Pillai's Trace	(187,462)	1.03	.4092
Wilk's Criterion	(187,320)	1.05	.3412
Roy's Maximum Root	( 11,48 )	8.40	

UNIVARIATE F-TESTS WITH (11,48) DF

CONSTRUCT	HYPOTH. SS	ERROR SS	F	SIG. OF F
Self Oriented/Group Oriented	44.6000	154.0800	1.26	.2742
Friendly/Hostile	46.1966	208.0000	.97	.4864
Insecure/Secure	22.4366	206.8800	.49	.9071
Submissive/Dominant	42.2766	166.9600	1.10	.3781
Goal Oriented/Affect Oriented	48.4366	292.5600	.72	.7115
Self Isolating/Outgoing	13.7700	74.4000	.81	.6322
Sensitive/Insensitive	23.7066	115.3600	.90	.5501
Leader/Follower	8.8366	219.2000	.18	.9982
Aggressive/Passive	18.6666	157.5200	.52	.8823
Autocratic/Democratic	41.3166	150.8000	1.20	.3156
Nonadaptable/Adaptle	57.0500	170.3200	1.46	.1776
Competent/Incompetent	11.4800	147.8400	.34	.9723
Worthless/Valuable	10.4366	232.0000	.20	.9971
Anxious/Relaxed	31.0500	123.1466	1.10	.3825
Nonconforming/Conforming	50.3566	233.4400	.94	.5105
Knowledgeable/Ignorant	16.1866	100.0000	.71	.7263
Influential/Inconsequential	21.1466	130.6400	.71	.7263

TABLE 15  
 SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
 FOR EFFECT . . . ROLE  
 ERROR . . . POSITION (TEAM)\*ROLE

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 4, M = 6.0, N = 87.0)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 68,698)	5.64	.0001
Pillai's Trace	( 68,716)	5.21	.0001
Wilk's Criterion	( 68,692)	5.43	.0001
Roy's Maximum Root	( 4,192)	48.84	

UNIVARIATE F-TESTS WITH (4,192) DF

CONSTRUCT	HYPOTH. SS	ERROR SS	F	SIG. OF F
Self Oriented/Group Oriented	36.2466	915.9200	1.90	.1121
Friendly/Hostile	42.3466	419.6000	4.84	.0010
Insecure/Secure	103.0333	796.3200	6.21	.0001
Submissive/Dominant	28.5533	478.6400	2.86	.0246
Goal Oriented/Affect Oriented	101.9133	719.4400	6.80	.0001
Self Isolating/Outgoing	101.8866	444.0000	11.01	.0001
Sensitive/Insensitive	259.9000	597.4400	20.64	.0001
Leader/Follower	58.5868	672.0000	4.18	.0028
Aggressive/Passive	43.4200	506.4800	4.11	.0032
Autocratic/Democratic	97.2000	633.2000	7.37	.0001
Nonadaptable/Adaptable	200.7200	674.8800	14.28	.0001
Competent/Incompetent	162.5866	611.3600	12.77	.0001
Worthless/Valuable	126.0200	591.6000	10.22	.0001
Anxious/Relaxed	146.1466	681.5200	10.29	.0001
Nonconforming/Conforming	26.0466	475.3600	2.63	.0357
Knowledgeable/Ignorant	214.1866	490.0000	20.98	.0001
Influential/Inconsequential	61.4866	560.5600	5.27	.0005

TABLE 16  
 SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
 FOR EFFECT . . . ROLE\*TEAM  
 ERROR . . . POSITION (TEAM)\*ROLE

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 17, M = 13.0, N = 87.0)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	(748,2960)	.81	.9998
Pillai's Trace	(748,3264)	.81	1.0000
Wilk's Criterion	(748,2881)	.81	.998
Roy's Maximum Root	( 44,192)	2.53	

UNIVARIATE F-TESTS WITH (44,192) DF

CONSTRUCT	HYPOTH. SS	ERROR SS	F	SIG. OF F
Self Oriented/Group Oriented	148.6333	915.9200	.71	.9122
Friendly/Hostile	79.6533	419.6000	.83	.7671
Insecure/Secure	90.2466	796.3200	.49	.9966
Submissive/Dominant	108.8066	478.6400	.99	.4938
Goal Oriented/Affect Oriented	71.8466	719.4400	.44	.9992
Self Isolating/Outgoing	100.9133	444.0000	.99	.4941
Sensitive/Insensitive	67.2600	597.4400	.49	.9968
Leader/Follower	104.2133	672.0000	.68	.9371
Aggressive/Passive	74.5000	506.4800	.64	.9586
Autocratic/Democratic	92.4000	633.2000	.64	.9612
Nonadaptable/Adaptable	128.8000	674.8000	.83	.7604
Competent/Incompetent	88.4533	611.3600	.63	.9639
Worthless/Valuable	67.5800	591.6000	.50	.9963
Anxious/Relaxed	119.1333	681.5200	.76	.8556
Nonconforming/Conforming	89.7933	475.3600	.82	.7732
Knowledgeable/Ignorant	61.8133	490.0000	.55	.9896
Influential/Inconsequential	93.9533	560.5600	.73	.8901

TABLE 17

SUMMARY OF UNIVARIATE TESTS  
 FOR EFFECT . . . POSITION (TEAM)  
 ERROR . . . POSITION (TEAM)\*ROLE

## UNIVARIATE F-TESTS WITH (48,192) DF

CONSTRUCT	HYPOTH. SS	ERROR SS	F	SIG. OF F
Self Oriented/Group Oriented	154.0800	915.9200	.67	.9470
Friendly/Hostile	208.0000	419.6000	1.98	.0006
Insecure/Secure	206.8800	796.3200	1.04	.4151
Submissive/Dominant	166.9600	478.6400	1.40	.0607
Goal Oriented/Affect Oriented	292.5600	719.4400	1.63	.0115
Self Isolating/Outgoing	74.4000	444.0000	.67	.9487
Sensitive/Insensitive	115.3600	597.4400	.77	.8540
Leader/Follower	219.2000	672.0000	1.30	.1077
Aggressive/Passive	157.5200	506.4800	1.24	.1537
Autocratic/Democratic	150.8000	633.2000	.95	.5657
Nonadaptable/Adaptable	170.3200	674.8800	1.01	.4653
Competent/Incompetent	147.8400	611.3600	.97	.5395
Worthless/Valuable	232.0000	591.6000	1.57	.0179
Anxious/Relaxed	123.2800	681.5200	.72	.9070
Nonconforming/Conforming	233.4400	475.3600	1.96	.0007
Knowledgeable/Ignorant	100.0000	490.0000	.82	.7948
Influential/Inconsequential	130.6400	560.5600	.93	.6021



TABLE 18

SUMMARY TABLE OF SIGNIFICANT UNIVARIATE F-TESTS  
FOR RATING GRID DATA UNDER VARIOUS EXPERIMENTAL EFFECTS

CONSTRUCT	TEAM	ROLE	ROLE & TEAM	POSITION (TEAM)
Self Oriented/Group Oriented	.1121			
Friendly/Hostile	.0010			.0006
Insecure/Secure	.0001			
Submissive/Dominant	.0246			
Goal Oriented/Affect Oriented	.0001			.0115
Self Isolating/Outgoing	.0001			
Sensitive/Insensitive	.0001			
Leader/Follower	.0028			
Aggressive/Passive	.0032			
Autocratic/Democratic	.0001			
Nonadaptable/Adaptable	.0001			
Competent/Incompetent	.0001			
Worthless/Valuable	.0001			.0179
Anxious/Relaxed	.0001			
Nonconforming/Conforming	.0357			.0007
Knowledgeable/Ignorant	.0001			
Influential/Inconsequential	.0005			

TABLE 19  
SUMMARY OF TUKEY'S STUDENTIZED RANGE TESTS FOR THE RATING GRID CONSTRUCTS

Construct	Minimum Significant Difference	Mean		Mean		Mean		Mean		Mean	
		Role	Role	Role	Role	Role	Role	Role	Role	Role	Role
Self Oriented/Group Oriented	1.098	3.617	Psy	3.600	Tea	3.183	Soc	2.967	Adm	2.733	Nur
Friendly/Hostile	0.743	3.283	Adm	3.217	Nur	3.083	Tea	2.550	Psy	2.350	Soc
Insecure/Secure	1.024	5.017	Soc	4.750	Tea	4.417	Psy	4.067	Nur	3.333	Adm
Submissive/Dominant	0.794	5.083	Soc	5.000	Psy	4.867	Adm	4.483	Nur	4.283	Tea
Goal Oriented/Affect Oriented	.974	3.600	Tea	3.550	Nur	3.450	Psy	2.800	Soc	2.083	Adm
Self Isolating/Outgoing	0.765	4.600	Soc	4.583	Tea	4.116	Psy	3.517	Adm	3.133	Nur
Sensitive/Insensitive	0.887	5.000	Adm	4.650	Nur	3.233	Tea	3.183	Soc	2.600	Psy
Leader/Follower	.941	4.300	Nur	3.800	Tea	3.667	Psy	3.517	Adm	2.9	Soc
Aggressive/Passive	.817	3.667	Tea	3.533	Psy	3.383	Nur	2.817	Adm	2.733	Soc
Autocratic/Democratic	.913	4.550	Psy	3.783	Tea	3.550	Soc	3.050	Nur	2.983	Adm
Non Adaptable/Adaptable	.943	5.483	Psy	4.700	Tea	4.133	Soc	3.533	Nur	3.200	Adm
Competent/Incompetent	.897	3.933	Adm	2.983	Nur	2.750	Soc	2.317	Tea	1.717	Psy
Worthless/Valuable	.883	5.583	Psy	5.033	Soc	4.783	Tea	4.167	Nur	3.767	Adm
Anxious/Relaxed	.947	4.567	Tea	4.400	Soc	3.783	Psy	3.133	Nur	2.767	Adm
Nonconforming/Conforming	.791	5.317	Adm	5.217	Tea	5.10	Psy	4.900	Nur	4.483	Soc
Knowledgeable/Ignorant	.803	4.167	Adm	2.633	Nur	32.433	Tea	2.300	Soc	1.600	Psy
Influential/Inconsequential	.859	3.883	Nur	3.600	Tea	3.400	Adm	3.083	Soc	2.567	Psy

Note: Means underscored by the same line are not significantly different (.05)

TABLE 20  
 NUMBER OF MATCHING DECISIONS  
 BY POSITION FOR EACH STAFFING TYPE

	Staffing Type		
	LD	BD	MR
Psychologist	8	11	12
Social Worker	10	12	7
Nurse	10	12	12
Teacher	6	11	12
Administrator	8	12	12

$\chi^2 = 2.8217$

TABLE 21

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION - NO PARENT MODEL

Behavior	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Shows Solidarity	0.861	1.046	0.444	0.969	0.111	0.318	0.250	0.769	1.166	2.144
Shows Tension Release	0.833	1.055	0.777	1.017	0.333	0.717	0.777	1.173	0.444	0.843
Shows Agreement	0.833	1.000	0.944	1.040	1.250	1.079	1.527	1.081	2.000	1.820
Gives Suggestions	2.083	1.204	1.750	1.857	1.388	1.694	1.166	1.362	0.361	0.761
Gives Opinion	17.055	7.815	10.583	8.026	9.222	6.710	8.944	5.291	1.388	2.194
Gives Information	10.111	9.452	8.916	7.028	9.972	7.141	5.750	4.753	7.472	7.307
Asks for Information	0.444	0.734	0.611	1.021	0.472	1.027	0.361	0.723	2.722	1.683
Asks for Opinion	0.277	0.659	0.027	0.166	0.694	2.081	0.361	0.723	4.166	2.431
Asks for Suggestions	0.083	0.368	0.111	0.666	0.361	1.853	0.361	1.125	1.972	1.403
Shows Disagreement	0.722	1.256	0.500	1.108	0.305	0.786	0.694	1.190	0.138	0.487
Shows Tension	0.111	0.398	0.000	0.000	0.277	1.209	0.136	0.592	0.250	0.691
Shows Antagonism	0.305	0.855	0.055	0.232	0.000	0.000	0.138	0.592	0.166	0.845

Note: N=36 For Each Position

TABLE 22

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY STAFFING TYPE - NO PARENT MODEL

	LD STAFFING		BD STAFFING		MR STAFFING	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
<b>Behavior</b>						
Shows Solidarity	3.750	3.018	3.333	2.534	1.750	1.912
Shows Tension Release	4.000	4.631	3.500	4.602	2.250	1.764
Shows Agreement	5.750	2.261	6.500	3.801	7.416	3.825
Gives Suggestions	5.538	3.864	9.000	3.015	6.083	3.117
Gives Opinion	49.166	16.781	46.666	17.259	46.750	17.152
Gives Information	45.000	20.257	42.333	23.910	34.333	10.798
Asks for Information	4.833	2.124	3.666	3.143	5.333	2.269
Asks for Opinion	5.750	3.222	4.833	2.037	6.000	4.767
Asks for Suggestions	3.333	3.524	2.666	2.208	3.166	2.329
Shows Disagreement	3.333	3.524	1.333	4.618	2.416	2.968
Shows Tension	1.416	2.234	.416	.900	.416	1.164
Shows Antagonism	1.166	2.037	.750	1.138	.166	.577

Note: N=12 For Each Staffing Type

TABLE 23

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION AND STAFFING - NO PARENT MODEL

	<u>LD Staffing</u>									
	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Behavior										
Shows Solidarity	1.000	1.477	0.250	0.452	0.083	0.288	0.333	0.651	1.666	2.498
Shows Tension Release	1.000	0.953	0.666	0.887	0.333	0.778	0.666	1.073	0.666	1.073
Shows Agreement	1.416	1.311	0.916	0.900	1.000	0.738	1.750	1.356	1.416	1.240
Gives Suggestions	1.833	1.114	1.083	1.564	1.333	1.556	1.083	1.444	0.500	0.904
Gives Opinion	19.750	7.387	9.083	7.115	6.416	6.459	9.916	5.728	1.750	2.490
Gives Information	13.083	13.090	6.833	7.346	8.833	6.671	7.333	5.175	9.500	10.220
Asks for Information	0.583	0.792	0.666	0.887	0.916	1.564	0.416	0.792	3.250	1.422
Asks for Opinion	0.250	0.621	0.083	0.288	0.333	0.492	0.416	0.792	4.166	2.790
Asks for Suggestions	0.083	0.288	0.000	0.000	0.916	3.175	0.833	1.800	1.833	1.337
Shows Disagreement	1.333	1.669	0.666	1.302	0.416	0.996	1.083	1.729	0.333	0.778
Shows Tension	0.000	0.000	0.000	0.000	0.666	2.015	0.416	0.996	0.416	0.996
Shows Antagonism	0.416	0.792	0.083	0.288	0.000	0.000	0.000	0.000	0.083	0.288

TABLE 23 (continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION AND STAFFING - NO PARENT MODEL

	<u>BD Staffing</u>									
	<u>Psychologist</u>		<u>Social Worker</u>		<u>Nurse</u>		<u>Teacher</u>		<u>Administrator</u>	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Behavior										
Shows Solidarity	0.500	0.522	1.000	1.477	0.166	0.389	0.000	0.000	1.000	1.595
Shows Tension Release	0.833	0.937	0.500	0.797	0.500	0.797	0.833	1.193	0.416	0.792
Shows Agreement	0.583	0.514	0.583	0.668	1.083	0.792	1.250	0.753	2.416	2.314
Gives Suggestions	2.416	1.378	2.916	2.234	2.083	2.065	1.333	1.497	0.416	0.792
Gives Opinion	12.833	5.407	12.583	9.894	11.750	4.731	8.333	5.432	0.666	0.984
Gives Information	16.250	6.510	10.416	5.089	10.333	7.679	6.083	4.907	6.166	5.905
Asks for Information	0.166	0.577	0.500	1.167	0.166	0.389	0.416	0.514	1.750	1.138
Asks for Opinion	0.166	0.577	0.000	0.000	0.166	0.389	0.333	0.651	4.666	2.229
Asks for Suggestions	0.000	0.000	0.333	1.154	0.000	0.000	0.000	0.000	2.000	1.279
Shows Disagreement	0.250	0.866	0.333	1.154	0.000	0.000	0.083	0.288	0.000	0.000
Shows Tension	0.083	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.166	0.389
Shows Antagonism	0.500	1.243	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TABLE 23 (continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION AND STAFFING - NO PARENT MODEL

	<u>MR Staffing</u>									
	<u>Psychologist</u>		<u>Social Worker</u>		<u>Nurse</u>		<u>Teacher</u>		<u>Administrator</u>	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Behavior										
Shows Solidarity	1.083	0.900	0.083	0.288	0.083	0.288	0.416	1.164	0.833	2.329
Shows Tension Release	0.666	1.302	1.166	1.267	0.166	0.577	0.833	1.337	0.250	0.621
Shows Agreement	0.500	0.797	1.333	1.370	1.666	1.497	1.583	1.083	2.166	1.749
Gives Suggestions	2.000	1.128	1.250	1.138	0.750	1.215	1.083	1.240	0.166	0.577
Gives Opinion	18.583	8.979	10.083	7.025	9.500	7.971	8.583	5.017	1.750	2.710
Gives Information	11.000	6.619	9.500	8.350	10.750	7.521	3.833	3.761	6.750	4.864
Asks for Information	0.583	0.792	0.666	1.073	0.333	0.651	0.250	0.866	3.166	2.037
Asks for Opinion	0.416	0.792	0.000	0.000	1.583	3.476	0.333	0.778	3.666	2.348
Asks for Suggestions	0.166	0.577	0.000	0.000	0.166	0.577	0.250	0.621	2.083	1.676
Shows Disagreement	0.583	0.900	0.500	0.904	0.500	0.904	0.916	0.900	0.083	0.288
Shows Tension	0.250	0.621	0.000	0.000	0.166	0.577	0.000	0.000	0.166	0.577
Shows Antagonism	0.000	0.000	0.083	0.288	0.000	0.000	0.166	0.389	0.416	1.444



TABLE 24

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY TEAMS - NO PARENT MODEL

	<u>Teams 1 thru 6</u>											
	<u>Team 1</u>		<u>Team 2</u>		<u>Team 3</u>		<u>Team 4</u>		<u>Team 5</u>		<u>Team 6</u>	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
<b>Behavior</b>												
Shows Solidarity	3.667	3.055	1.333	1.527	2.666	1.154	5.000	3.464	3.333	1.154	4.666	3.785
Shows Tension Release	8.667	4.041	1.000	1.000	1.000	1.732	5.333	5.507	2.000	2.000	0.666	1.154
Shows Agreement	7.000	4.359	9.666	5.507	7.666	1.527	3.666	3.511	8.333	2.081	7.000	3.605
Gives Suggestions	7.333	5.507	7.666	1.527	5.333	3.214	11.333	6.658	6.000	1.732	6.333	3.055
Gives Opinion	70.667	4.726	68.000	2.646	42.333	5.033	57.000	16.643	40.333	5.773	34.333	10.115
Gives Information	39.333	13.796	38.333	38.734	39.333	4.509	49.666	17.925	38.333	15.502	66.000	18.734
Asks for Information	6.333	1.527	4.666	3.214	2.666	1.527	6.000	1.732	3.333	1.527	6.333	2.516
Asks for Opinion	5.000	0.000	6.000	2.645	8.000	6.557	6.000	5.567	4.666	2.081	6.000	5.000
Asks for Suggestions	3.333	2.887	8.000	0.000	2.333	2.081	0.666	1.154	2.333	0.577	5.666	8.144
Shows Disagreement	6.000	5.292	8.000	6.928	0.333	0.577	2.666	2.309	1.000	1.732	0.000	0.000
Shows Tension	0.000	0.000	2.333	2.081	0.000	0.000	0.333	0.577	1.000	0.000	2.000	1.732
Shows Antagonism	0.666	1.155	1.000	1.732	0.000	0.000	2.666	1.154	0.000	0.000	0.000	0.000

TABLE 24 (continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY TEAMS - NO PARENT MODEL

	<u>Teams 7 thru 12</u>											
	Team 7		Team 8		Team 9		Team 10		Team 11		Team 12	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Behavior												
Shows Solidarity	4.333	4.932	0.000	0.000	0.666	1.154	3.666	3.055	2.666	1.154	3.333	1.154
Shows Tension Release	4.666	6.424	1.333	1.154	2.333	0.577	8.666	4.041	1.333	1.527	2.000	2.000
Shows Agreement	4.666	1.527	5.333	4.041	2.666	0.577	7.000	4.358	7.333	1.527	8.333	2.081
Gives Suggestions	9.333	3.511	3.333	2.081	6.666	3.055	7.333	5.507	5.666	2.886	6.000	1.732
Gives Opinion	43.666	21.221	30.666	10.016	31.666	4.725	67.333	4.725	40.666	3.214	40.333	5.773
Gives Information	61.000	22.912	29.333	10.408	32.000	18.734	39.333	13.796	35.666	8.020	38.333	15.502
Asks for Information	6.000	2.645	4.333	3.785	0.666	1.154	8.333	1.527	4.666	4.041	3.333	1.527
Asks for Opinion	4.000	1.732	5.666	3.214	5.000	2.645	5.000	2.865	6.333	7.505	4.666	2.081
Asks for Suggestions	2.666	2.000	2.000	1.732	1.333	0.577	3.333	2.886	2.666	1.527	2.333	0.577
Shows Disagreement	2.000	1.527	.333	0.577	0.666	1.154	6.000	5.291	0.333	0.577	1.000	1.732
Shows Tension	1.333	1.527	0.000	0.000	2.333	4.041	0.000	0.000	0.666	1.154	0.000	0.000
Shows Antagonism	2.000	3.464	0.000	0.000	0.333	0.577	0.666	1.154	1.000	1.732	0.000	0.000

TABLE 25

SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
FOR EFFECT . . . TEAM  
ERROR . . . POSITION (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 11, M = 0, N = 17.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	(132,387)	2.15	.0001
Pillai's Trace	(132,517)	1.57	.0084
Wilk's Criterion	(132,319)	1.72	.0001
Roy's Maximum Root	( 11,48 )	17.68	

UNIVARIATE F-TESTS WITH (11,48) DF

Behavior	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	17.6666	90.5333	.85	.5914
Shows Tension Release	49.9333	29.2000	7.46	.0001
Shows Agreement	27.5277	134.0000	.90	.5504
Gives Suggestions	25.4000	160.4000	.69	.7403
Gives Opinions	1490.9333	6273.2000	1.04	.4302
Gives Information	807.3111	3138.2666	1.12	.3653
Asks for Information	18.3777	194.5333	.41	.9436
Asks for Opinions	8.7277	498.0000	.08	1.0000
Asks for Suggestions	28.1777	140.4000	.88	.5692
Shows Disagreement	49.7944	28.4000	7.65	.0001
Shows Tension	6.0444	23.6000	1.12	.3689
Shows Antagonism	5.2166	17.3333	1.31	.2464

TABLE 26

SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
 FOR EFFECT . . . STAFFING TYPE  
 ERROR . . . POSITION (TEAM)\*STAFFING

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 2, M = 4.5, N = 41.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 24,168)	2.44	.0005
Pillai's Trace	( 24,172)	2.09	.0036
Wilk's Criterion	( 24,170)	2.27	.0013
Roy's Maximum Root	( 2,96 )	30.10	

UNIVARIATE F-TESTS WITH (2,96) DF

Behavior	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	.9333	144.6666	.31	.7344
Shows Tension Release	.1000	47.6000	.10	.9042
Shows Agreement	2.1777	92.4000	1.13	.3269
Gives Suggestions	19.7333	169.2000	5.60	.0050
Gives Opinions	13.4333	3278.4000	.20	.8218
Gives Information	41.9444	4158.5333	.48	.6177
Asks for Information	10.1777	115.8666	4.22	.0176
Asks for Opinions	1.0777	238.8000	.22	.8056
Asks for Suggestions	2.3111	138.4000	.80	.4516
Shows Disagreement	12.2111	60.0000	9.77	.0001
Shows Tension	2.0111	44.0000	2.15	.1215
Shows Antagonism	.0333	26.6666	.06	.9418

TABLE 27

SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS  
 FOR EFFECT . . . TEAM\*STAFFING  
 ERROR . . . POSITION (TEAM)\*STAFFING

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 12 M = 4.5 N = 41.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hottelling - Lawley Trace	(264,998)	1.54	.0001
Pillai's Trace	(264,1152)	1.30	.0025
Wilk's Criterion	(264,931)	1.41	.0001
Roy's Maximum Root	( 22,96 )	7.91	

UNIVARIATE F-TESTS WITH (22,96) DF

Behavior	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	30.4000	144.6666	.92	.5736
Shows Tension Release	46.9666	47.6000	4.31	.0001
Shows Agreement	48.0888	92.4000	2.27	.0034
Gives Suggestions	45.0666	169.2000	1.16	.3000
Gives Opinions	420.8333	3278.4000	.56	.9395
Gives Information	1576.8555	4158.5333	1.65	.0499
Asks for Information	17.9555	115.8666	.68	.8523
Asks for Opinions	76.7888	238.8000	1.40	.1328
Asks for Suggestions	34.6222	138.4000	1.09	.3695
Shows Disagreement	36.4555	60.0000	2.65	.0006
Shows Tension	11.1888	44.0000	1.09	.3713
Shows Antagonism	7.3000	26.6666	1.19	.2713

TABLE 28

SUMMARY OF UNIVARIATE TESTS  
 FOR EFFECT . . . POSITION (TEAM)  
 ERROR . . . RESIDUAL

## UNIVARIATE F-TESTS WITH (48.96) DF

Behavior	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	90.5333	144.6666	1.25	.3969
Shows Tension Release	29.2000	47.6000	1.23	.1973
Shows Agreement	134.0000	92.4000	2.90	.0001
Gives Suggestions	160.4000	169.2000	1.90	.0040
Gives Opinions	6273.2000	3278.4000	3.83	.0001
Gives Information	3138.2666	4158.5333	1.51	.0444
Asks for Information	194.5333	115.8666	3.36	.0001
Asks for Opinions	498.0000	238.8000	4.17	.0001
Asks for Suggestions	140.4000	138.4000	2.03	.0017
Shows Disagreement	28.4000	60.0000	0.95	.5753
Shows Tension	23.6000	44.8000	1.05	.4066
Shows Antagonism	17.3333	26.6666	1.30	.1384

TABLE 29

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY STAFFING TYPE - PARENT MODEL

	LD STAFFING MEAN	BD STAFFING MEAN	MR STAFFING MEAN
Behavior			
Shows Solidarity	1.067	0.900	.950
Shows Tension Release	1.650	0.767	1.150
Shows Agreement	3.867	3.200	3.250
Gives Suggestions	3.050	4.183	2.350
Gives Opinion	25.050	21.467	16.550
Gives Information	25.267	14.650	13.300
Asks for Information	20.667	2.400	1.750
Asks for Opinion	3.183	2.900	1.250
Asks for Suggestions	2.837	1.117	1.667
Shows Disagreement	1.967	1.317	1.833
Shows Tension	2.500	0.283	0.417
Shows Antagonism	0.317	0.483	0.133

Note: N=60 For Each Staffing Type

TABLE 30  
 DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY TEAMS - PARENT MODEL

	<u>Teams 1 thru 6</u>											
	<u>Team 1</u>		<u>Team 2</u>		<u>Team 3</u>		<u>Team 4</u>		<u>Team 5</u>		<u>Team 6</u>	
	<u>Mean</u>	<u>Stan. Dev.</u>	<u>Mean</u>	<u>Stan. Dev.</u>	<u>Mean</u>	<u>Stan. Dev.</u>	<u>Mean</u>	<u>Stan. Dev.</u>	<u>Mean</u>	<u>Stan. Dev.</u>	<u>Mean</u>	<u>Stan. Dev.</u>
<b>Behavior</b>												
Shows Solidarity	1.333	1.144	0.767	1.044	0.667	1.467	1.067	1.722	1.167	2.088	1.033	2.040
Shows Tension Release	2.900	2.144	1.100	2.077	6.333	1.989	1.067	2.022	0.833	1.955	.600	1.956
Shows Agreement	4.067	3.611	4.967	4.200	3.167	2.585	2.633	2.788	2.833	2.200	2.967	2.545
Gives Suggestions	2.333	2.400	3.667	3.433	3.033	4.300	3.800	4.478	3.000	4.300	3.333	4.533
Gives Opinion	23.733	25.540	26.700	25.054	19.233	17.678	19.967	17.211	19.167	19.288	17.767	17.978
Gives Information	16.500	16.777	18.267	21.077	12.667	12.245	15.767	12.488	16.333	18.755	17.400	12.189
Asks for Information	2.633	2.367	3.233	3.911	1.400	2.850	2.633	3.411	2.100	3.533	2.667	3.556
Asks for Opinion	1.667	2.800	2.400	4.033	2.100	3.256	2.467	3.922	2.867	5.778	2.467	4.078
Asks for Suggestions	1.500	2.530	2.967	3.445	2.400	4.267	0.300	1.322	2.333	0.733	0.800	2.433
Shows Disagreement	3.233	3.380	3.500	3.788	1.500	2.944	0.967	1.967	1.400	2.489	0.700	1.933
Shows Tension	0.000	0.000	0.500	1.200	2.667	1.010	0.133	0.566	0.867	2.289	0.267	0.778
Shows Antagonism	0.167	0.650	0.300	0.888	0.000	0.000	0.867	2.011	0.000	0.000	0.600	1.922



TABLE 31

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION - PARENT MODEL

Behavior	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.	Mean	Stan. Dev.
Shows Solidarity	2.083	1.911	0.889	1.222	0.361	0.711	0.444	0.778	1.083	2.000
Shows Tension Release	1.805	2.088	2.056	2.666	0.611	1.311	0.861	0.151	0.611	1.044
Shows Agreement	2.111	1.811	3.056	2.733	3.583	3.089	3.833	0.306	4.611	3.078
Gives Suggestions	4.388	3.150	2.583	2.322	2.417	2.467	2.667	0.411	3.917	5.078
Gives Opinion	33.250	19.450	23.138	19.255	19.111	14.300	21.306	13.08	8.667	10.544
Gives Information	20.861	19.378	14.972	12.011	14.028	11.056	12.500	8.99	18.667	16.022
Asks for Information	1.722	2.089	2.833	2.650	1.389	2.111	1.417	1.711	5.611	3.849
Asks for Opinion	1.250	2.067	0.083	0.333	1.583	2.711	2.472	3.445	6.250	4.767
Asks for Suggestions	0.583	1.389	0.417	1.000	1.389	2.211	2.500	4.05	2.194	1.911
Shows Disagreement	2.750	2.967	1.889	2.667	1.500	2.344	2.694	2.956	0.583	1.455
Shows Tension	0.472	0.967	0.000	0.000	0.833	1.867	0.833	0.486	0.305	1.089
Shows Antagonism	1.305	2.122	0.222	0.489	0.000	0.000	0.833	0.256	0.000	0.689

Note: N=36 For Each Position

TABLE 32  
 DESCRIPTIVE STATISTICS FOR BALES CATEGORIES  
 BY PARENTAL PARTICIPATION - PARENT MODEL

Behavior	NO PARENT		PARENT	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Shows Solidarity	0.689	1.256	1.256	1.833
Shows Tension Release	0.589	0.989	1.789	2.755
Shows Agreement	1.433	1.300	5.444	3.133
Gives Suggestions	1.456	1.533	4.933	4.767
Gives Opinion	10.467	8.011	31.722	20.689
Gives Information	9.033	7.367	23.378	18.422
Asks for Information	9.788	1.411	3.911	3.944
Asks for Opinion	1.189	2.144	3.467	5.033
Asks for Suggestions	0.711	1.389	2.022	3.611
Shows Disagreement	0.600	1.022	3.167	3.650
Shows Tension	0.144	0.700	.533	1.611
Shows Antagonism	0.144	0.560	.500	1.650

Note: N=12 For Each Staffing Type

TABLE 33

DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION AND PARENTIAL PARTICIPATION

Behavior	MEANS									
	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent
Shows Solidarity	1.000	3.167	0.500	1.278	0.167	0.556	0.389	.500	1.389	0.778
Shows Tension Release	0.833	2.778	0.722	3.889	0.278	0.944	0.722	1.000	0.389	0.833
Shows Agreement	1.000	3.222	1.111	5.000	1.056	6.111	1.778	5.889	2.222	7.000
Gives Suggestions	2.222	6.556	1.611	3.556	1.722	3.111	1.278	4.056	0.444	7.389
Gives Opinion	18.222	48.278	12.222	34.056	9.944	28.278	10.444	32.167	1.500	15.833
Gives Information	11.944	29.778	8.833	21.111	9.278	18.778	6.556	18.444	8.556	28.778
Asks for Information	0.555	2.889	0.667	3.500	0.278	2.500	0.500	2.333	2.888	8.333
Asks for Opinion	0.444	2.056	0.000	0.167	0.778	2.389	0.444	4.500	4.278	8.222
Asks for Suggestions	0.111	1.056	0.222	0.611	0.722	1.556	0.556	4.444	1.944	2.444
Shows Disagreement	0.944	4.556	0.778	3.000	0.389	2.611	0.778	4.611	0.111	1.055
Shows Tension	0.164	0.778	0.000	0.000	0.167	1.500	0.167	0.000	0.222	3.889
Shows Antagonism	0.556	2.056	0.111	0.333	0.000	0.000	0.056	0.111	0.000	0.000

TABLE 33 (Continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY POSITION AND PARENTAL PARTICIPATION

## STANDARD DEVIATIONS

Behavior	Psychologist		Social Worker		Nurse		Teacher		Administrator	
	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent
Shows Solidarity	1.05	2.31	0.97	1.49	0.32	1.10	0.77	0.79	2.14	1.70
Shows Tension Release	1.06	2.92	1.02	3.90	0.72	2.01	1.17	2.06	0.84	1.34
Shows Agreement	1.00	2.05	1.05	3.03	1.08	3.27	1.08	3.66	1.82	2.25
Gives Suggestions	1.20	3.73	1.86	2.71	1.69	3.32	1.36	5.16	0.88	6.69
Gives Opinion	7.82	19.12	8.03	25.19	6.71	16.99	5.18	13.60	2.17	13.84
Gives Information	9.45	26.71	7.03	15.59	7.14	14.89	4.57	9.57	7.20	19.45
Asks for Information	0.73	2.89	1.02	3.73	1.03	2.98	0.72	2.30	1.68	4.27
Asks for Opinion	0.66	3.19	0.17	0.51	2.08	3.47	0.72	4.90	2.50	6.80
Asks for Suggestions	0.37	2.26	0.67	1.42	1.85	2.68	1.13	6.70	1.40	2.68
Shows Disagreement	1.26	3.73	1.11	3.91	0.79	3.47	1.19	3.68	0.49	2.36
Shows Tension	0.40	1.52	0.00	0.00	1.21	2.62	0.59	0.00	0.69	1.65
Shows Antagonism	0.86	3.21	0.23	0.77	0.00	0.00	0.23	0.32	0.85	0.00

TABLE 34

DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY PARENTAL PARTICIPATION AND STAFFING TYPE

	MEANS					
	LD STAFFING		BD STAFFING		MR STAFFING	
	NO PARENT	PARENT	NO PARENT	PARENT	NO PARENT	PARENT
<b>Behavior</b>						
Shows Solidarity	1.000	1.333	0.567	1.233	0.500	1.400
Shows Tension Release	.733	2.567	0.667	0.867	0.367	1.933
Shows Agreement	1.500	6.233	1.300	5.100	1.500	5.000
Gives Suggestions	1.667	4.933	2.100	6.266	1.100	3.600
Gives Opinion	11.100	39.433	10.530	32.400	9.767	23.333
Gives Information	11.133	30.200	8.233	21.067	7.733	18.867
Asks for Information	1.100	5.267	0.700	4.100	1.133	2.367
Asks for Opinion	1.333	4.333	1.067	4.733	1.667	1.333
Asks for Suggestions	1.000	2.833	0.600	1.633	1.533	1.600
Shows Disagreement	0.966	4.033	0.267	2.267	0.567	3.100
Shows Tension	0.233	0.400	0.067	0.500	0.133	0.700
Shows Antagonism	1.667	5.333	0.200	0.767	0.067	0.200

TABLE 34 (Continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY PARENTAL PARTICIPATION AND STAFFING TYPE

	STANDARD DEVIATIONS					
	LD STAFFING		BD STAFFING		MR STAFFING	
	NO PARENT	PARENT	NO PARENT	PARENT	NO PARENT	PARENT
Behavior						
Shows Solidarity	1.43	1.55	1.07	1.65	1.27	2.25
Shows Tension Release	0.95	3.11	0.90	1.80	1.11	2.99
Shows Agreement	1.15	3.23	1.35	2.80	1.41	3.28
Gives Suggestions	1.37	3.95	1.84	6.00	1.27	3.82
Gives Opinion	8.38	25.69	7.33	16.58	8.39	15.62
Gives Information	8.93	23.70	6.17	17.36	6.80	10.17
Asks for Information	1.53	4.62	0.99	3.47	1.59	3.16
Asks for Opinion	2.05	6.02	2.10	5.04	2.31	2.99
Asks for Suggestions	1.81	3.83	1.08	4.10	1.16	2.72
Shows Disagreement	1.36	2.79	0.65	3.67	0.87	3.40
Shows Tension	1.09	1.30	0.22	1.91	0.45	1.60
Shows Antagonism	0.42	2.03	0.57	1.94	0.68	0.55

TABLE 35

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY TEAM AND PARENT PARTICIPATION

## MEANS

Teams 1 thru 6

	Team 1		Team 2		Team 3		Team 4		Team 5		Team 6	
	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent
Behavior												
Shows Solidarity	0.733	1.533	0.266	1.266	0.533	0.800	1.000	1.133	0.666	1.666	0.933	1.133
Shows Tension Release	1.533	4.266	0.200	2.000	0.200	1.066	1.066	1.066	0.400	1.266	0.133	1.066
Shows Agreement	1.400	6.733	1.933	8.000	1.533	4.800	0.733	4.533	1.600	4.066	1.400	4.533
Gives Suggestions	1.466	3.200	1.533	5.800	1.066	5.000	2.200	5.400	1.200	4.800	1.266	5.400
Gives Opinion	14.266	33.200	13.600	39.800	8.466	30.000	11.400	28.533	8.066	30.266	7.000	28.533
Gives Information	7.866	25.133	7.666	28.866	7.866	17.466	9.933	21.600	7.666	25.600	13.200	21.600
Asks for Information	1.266	4.000	0.933	5.533	0.533	2.266	1.200	4.066	0.666	3.533	1.266	4.066
Asks for Opinion	1.000	2.333	1.200	3.600	1.600	2.600	1.200	3.733	0.933	4.800	1.200	3.733
Asks for Suggestions	0.666	2.333	1.600	4.333	0.266	4.533	0.133	0.466	0.466	0.000	1.133	0.466
Shows Disagreement	1.200	5.266	1.600	5.400	0.066	2.933	0.533	1.400	0.200	2.600	0.000	1.400
Shows Tension	0.000	0.000	0.466	0.533	0.000	0.533	0.066	0.200	0.000	1.733	0.333	0.200
Shows Antagonism	0.133	0.200	0.200	0.400	0.000	0.000	0.533	1.200	0.000	0.000	0.000	1.200

TABLE 35 (continued)

## DESCRIPTIVE STATISTICS FOR BALES CATEGORIES BY TEAM AND PARENT PARTICIPATION

## STANDARD DEVIATIONS

Teams 1 thru 6

	Team 1		Team 2		Team 3		Team 4		Team 5		Team 6	
	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent	No Parent	Parent
Behavior												
Shows Solidarity	1.03	1.13	0.54	1.16	1.13	1.78	1.36	2.07	1.45	2.53	2.09	1.07
Shows Tension Release	.99	2.12	0.56	2.62	0.77	2.69	1.10	2.69	0.74	2.63	0.52	2.69
Shows Agreement	1.18	3.22	1.44	3.84	1.19	2.60	1.10	2.67	1.92	1.75	1.06	2.67
Gives Suggestions	1.85	2.62	1.25	3.61	1.33	5.32	2.11	5.62	1.57	5.37	1.33	5.62
Gives Opinion	9.54	24.40	8.21	21.96	6.41	18.92	8.93	19.41	8.56	20.80	6.70	19.41
Gives Information	8.68	18.64	10.10	24.02	8.25	13.91	5.84	14.71	6.00	22.82	7.33	14.71
Asks for Information	1.16	2.48	1.53	4.24	0.92	3.79	1.52	4.17	1.29	4.44	2.15	4.17
Asks for Opinion	1.69	3.52	2.18	5.08	2.61	3.83	2.21	4.85	2.09	7.54	2.76	4.85
Asks for Suggestions	1.50	3.09	1.88	4.13	0.80	5.24	0.92	1.81	0.99	0.00	2.95	1.81
Shows Disagreement	1.21	3.65	1.92	4.26	0.26	3.67	0.99	2.59	0.77	3.02	0.00	2.59
Shows Tension	0.00	0.00	0.99	1.41	0.00	1.41	0.26	0.77	0.00	3.03	0.82	0.77
Shows Antagonism	0.52	0.77	0.56	1.21	0.00	0.00	1.13	2.62	0.00	0.00	0.00	2.62



TABLE 36  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . TEAM  
ERROR . . . POSITION (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 5, M = 3.0, N = 5.5 )

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 60,57 )	2.10	.0027
Pillai's Trace	( 60,85 )	1.30	.1297
Wilk's Criterion	( 60,64 )	1.62	.0297
Roy's Maximum Root	( 5,24 )	37.83	

UNIVARIATE F-TESTS WITH (5,24) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	6.3611	111.3333	.27	.9227
Shows Tension Release	111.9777	85.9333	6.25	.0008
Shows Agreement	121.2277	255.6000	2.28	.0791
Gives Suggestions	42.4277	323.2666	.86	.6505
Gives Opinions	1737.3611	16227.8666	.51	.7631
Gives Information	559.8277	7367.4000	.36	.8676
Asks for Information	58.5777	619.5333	.45	.8063
Asks for Opinions	24.6944	1019.8000	.12	.9876
Asks for Suggestions	191.6666	287.4666	3.20	.0236
Shows Disagreement	211.7666	254.6666	3.99	.0089
Shows Tension	14.1611	59.3333	1.15	.3640
Shows Antagonism	18.1777	88.8000	.98	.4487

TABLE 37  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . PARENT  
ERROR . . . POSITION\*PARENT(TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 1, M = 5.0, N = 5.5 )

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 12,12 )	54.43	.0001
Pillai's Trace	( 12,13 )	54.43	.0001
Wilk's Criterion	( 12,13 )	54.43	.0001
Roy's Maximum Root	( 1,24 )	1205.86	

UNIVARIATE F-TESTS WITH (1,24) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	14.4500	103.7333	3.34	.9227
Shows Tension Release	64.8000	53.5333	29.05	.0001
Shows Agreement	724.0055	104.5333	166.23	.0001
Gives Suggestions	544.2722	295.2666	44.24	.0001
Gives Opinions	20330.9388	3268.1333	149.30	.0001
Gives Information	9259.3388	2537.4000	87.58	.0001
Asks for Information	387.2000	161.0000	57.72	.0001
Asks for Opinions	233.4722	235.4000	23.80	.0001
Asks for Suggestions	77.3555	220.1333	8.43	.0078
Shows Disagreement	296.4500	153.3333	46.40	.0001
Shows Tension	6.8055	56.5333	2.89	.1021
Shows Antagonism	5.6888	38.5333	3.54	.0720

TABLE 38  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . TEAM\*PARENT  
ERROR . . . POSITION\*PARENT (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 5, M = 3.0, N = 5.5 )

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 60,57 )	1.91	.0075
Pillai's Trace	( 60,85 )	1.39	.0788
Wilk's Criterion	( 60,64 )	1.64	.0262
Roy's Maximum Root	( 5,24 )	30.43	

UNIVARIATE F-TESTS WITH (5,24) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	6.3166	103.7333	.29	.9125
Shows Tension Release	33.3333	53.5333	2.99	.0309
Shows Agreement	72.9611	104.5333	3.35	.0195
Gives Suggestions	32.9611	295.2666	.54	.7471
Gives Opinions	359.0949	3268.1333	.53	.7532
Gives Information	1000.7611	2537.4000	1.89	.1330
Asks for Information	32.1333	161.0000	.96	.4627
Asks for Opinions	38.9611	235.4000	.79	.5643
Asks for Suggestions	141.8444	220.1333	3.09	.0271
Shows Disagreement	61.0500	152.3333	1.91	.1298
Shows Tension	18.1611	56.5333	1.54	.2144
Shows Antagonism	8.7777	38.5333	1.09	.3895

TABLE 39  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . STAFFING  
ERROR . . . POSITION\*STAFFING (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 2, M = 4.5, N = 17.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	( 24,72 )	3.10	.0001
Pillai's Trace	( 24,76 )	3.24	.0001
Wilk's Criterion	( 24,74 )	3.17	.0001
Roy's Maximum Root	( 2,48 )	28.64	

UNIVARIATE F-TESTS WITH (2,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	.8777	113.8666	.19	.8317
Shows Tension Release	23.5444	211.0666	2.68	.0790
Shows Agreement	16.5444	193.8000	2.05	.1400
Gives Suggestions	102.7111	599.9333	4.11	.0225
Gives Opinions	2291.8777	7616.9333	7.22	.0018
Gives Information	1845.8111	7868.6000	5.63	.0064
Asks for Information	61.8111	295.0666	5.03	.0104
Asks for Opinions	104.6777	544.8000	4.61	.0147
Asks for Suggestions	27.3000	200.1333	3.27	.0465
Shows Disagreement	42.2333	257.9333	3.93	.0263
Shows Tension	.5777	42.8666	.32	.7252
Shows Antagonism	3.7444	68.4000	1.31	.2783

TABLE 40  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . TEAM\*STAFFING  
ERROR . . . POSITION\*STAFFING (TEAM)

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 10, M = .5, N = 17.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	(120,353)	1.23	.0739
Pillai's Trace	(120,460)	1.05	.3587
Wilk's Criterion	(120,301)	1.13	.1965
Roy's Maximum Root	( 10,48 )	9.23	

UNIVARIATE F-TESTS WITH (10,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	13.9222	113.8666	.59	.8165
Shows Tension Release	43.0555	211.0666	.98	.4738
Shows Agreement	60.6555	193.8000	1.50	.1679
Gives Suggestions	23.3555	599.9333	.19	.9965
Gives Opinions	1470.8555	7616.9333	.93	.5173
Gives Information	2733.2555	7868.6000	1.67	.1165
Asks for Information	44.4555	295.0666	.72	.6988
Asks for Opinions	122.1888	544.8000	1.08	.3983
Asks for Suggestions	45.2333	200.1333	1.08	.0908
Shows Disagreement	95.5000	257.9333	1.78	.0908
Shows Tension	20.8888	42.8666	2.34	.0244
Shows Antagonism	3.1888	68.4000	.22	.9927

TABLE 41  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . PARENT\*STAFFING  
ERROR . . . POSITION (TEAM)\*PARENT\*STAFFING

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 2, M = 4.5, N = 17.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hottelling - Lawley Trace	( 24,72 )	2.38	.0026
Pillai's Trace	( 24,76 )	2.35	.0027
Wilk's Criterion	( 24,74 )	2.36	.0026
Roy's Maximum Root	( 2,48 )	26.29	

UNIVARIATE F-TESTS WITH (2,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	4.6333	77.4666	1.44	.2480
Shows Tension Release	23.0333	138.2666	4.00	.0248
Shows Agreement	12.4111	156.8666	1.90	.1608
Gives Suggestions	22.7111	753.5333	.72	.4903
Gives Opinions	1643.8111	8347.4666	4.73	.0134
Gives Information	523.4111	6247.0000	2.01	.1450
Asks for Information	69.4333	184.8000	9.02	.0005
Asks for Opinions	103.6111	399.6000	6.22	.0040
Asks for Suggestions	6.1444	251.0666	.59	.5597
Shows Disagreement	7.0333	160.8666	1.05	.3581
Shows Tension	1.2444	31.2666	.96	.3919
Shows Antagonism	1.4111	35.0666	.97	.3880

TABLE 42  
SUMMARY OF MULTIVARIATE AND UNIVARIATE TESTS

FOR EFFECT . . . TEAM\*PARENT\*STAFFING  
ERROR . . . POSITION (TEAM)\*PARENT\*STAFFING

MULTIVARIATE TESTS OF SIGNIFICANCE (S = 10, M = .5, N = 17.5)

TEST NAME	DF	APPROX. F	SIG. OF F
Hotelling - Lawley Trace	(120,352)	1.55	.0012
Pillai's Trace	(120,460)	1.27	.0430
Wilk's Criterion	(120,301)	1.42	.0092
Roy's Maximum Root	( 10,48 )	8.78	

UNIVARIATE F-TESTS WITH (10,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	17.9000	77.4666	1.11	.3750
Shows Tension Release	35.0333	138.2666	1.22	.3050
Shows Agreement	39.7222	156.8666	1.22	.3054
Gives Suggestions	57.7555	753.5333	.37	.9546
Gives Opinions	1403.0555	8347.4666	.81	.6231
Gives Information	5046.5888	6247.0000	3.88	.0007
Asks for Information	48.4333	184.8000	1.26	.2805
Asks for Opinions	102.4555	399.6000	1.23	.2983
Asks for Suggestions	39.4555	251.0666	.75	.6706
Shows Disagreement	67.7666	160.8666	2.02	.0515
Shows Tension	12.4888	31.2666	1.92	.0657
Shows Antagonism	5.5222	35.0666	.76	.6692

TABLE 43  
SUMMARY OF UNIVARIATE TESTS

FOR EFFECT . . . POSITION (TEAM)  
ERROR . . .

UNIVARIATE F-TESTS WITH (24,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	111.3333	77.4666	2.87	.5633
Shows Tension Release	85.9333	138.2666	1.24	.2555
Shows Agreement	255.6000	156.8666	7.42	.0001
Gives Suggestions	323.2666	753.5333	.86	.6505
Gives Opinions	16227.8666	8347.4666	3.89	.0001
Gives Information	7367.4000	6247.0000	2.36	.0057
Asks for Information	619.5333	184.8000	6.70	.0001
Asks for Opinions	1018.0000	399.6000	5.10	.0001
Asks for Suggestions	287.4666	251.0666	2.29	.0073
Shows Disagreement	254.6666	160.8666	3.17	.0003
Shows Tension	59.3333	31.2666	3.80	.0001
Shows Antagonism	88.8000	35.0666	5.06	.0001



TABLE 44  
SUMMARY OF UNIVARIATE TESTS

FOR EFFECT . . . POSITION\*PARENT (TEAM  
ERROR . . .

UNIVARIATE F-TESTS WITH (24,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	103.7333	77.4666	2.68	.0018
Shows Tension Release	53.5333	138.2666	.77	.7479
Shows Agreement	104.5337	156.8666	1.33	.1955
Gives Suggestions	295.2666	753.5333	.78	.7373
Gives Opinions	3268.1333	8347.4666	.78	.7381
Gives Information	2537.4000	6247.0000	.81	.7044
Asks for Information	161.0000	184.8000	1.74	.0507
Asks for Opinions	235.4000	399.6000	1.18	.3072
Asks for Suggestions	220.1333	251.0666	1.75	.0488
Shows Disagreement	153.3333	160.8666	1.91	.0285
Shows Tension	56.5333	31.2666	3.62	.0001
Shows Antagonism	38.5333	35.0666	2.20	.0101

TABLE 45  
SUMMARY OF UNIVARIATE TESTS

FOR EFFECT . . . POSITION\*STAFFING (TEAM)  
ERROR . . .

UNIVARIATE F-TESTS WITH (48,48) DF

BEHAVIOR	HYPOTH. SS	ERROR SS	F	SIG. OF F
Shows Solidarity	113.8666	77.4666	1.47	.0929
Shows Tension Release	211.0666	138.2666	1.53	.0732
Shows Agreement	193.8000	156.8666	1.24	.2333
Gives Suggestions	599.9333	753.5333	.80	.7837
Gives Opinions	7616.9333	8347.4666	.91	.6238
Gives Information	7868.6000	6247.0000	1.26	.2131
Asks for Information	295.0666	184.8000	1.60	.0542
Asks for Opinions	544.8000	399.6000	1.36	.1432
Asks for Suggestions	200.1333	251.0666	.80	.7825
Shows Disagreement	257.9333	160.8666	1.60	.0527
Shows Tension	42.8666	31.2666	1.37	.1389
Shows Antagonism	68.4000	35.0666	1.95	.0113

## APPENDIX A

DEMOGRAPHIC DATA QUESTIONNAIRE

Position: \_\_\_\_\_

Sex: \_\_\_\_\_

Educational Experience:

Highest Degree Held: \_\_\_\_\_

Additional Undergraduate Semester Hours \_\_\_\_\_ Date \_\_\_\_\_ Credits \_\_\_\_\_

Additional Graduate Semester Hours \_\_\_\_\_ Date \_\_\_\_\_ Credits \_\_\_\_\_

Work Experience:

Years Of Professional Work Experience: \_\_\_\_\_

Years Of Professional Work Experience Within Schools: \_\_\_\_\_

Length Of Time In Your Current Position: \_\_\_\_\_

How Long Has The Majority Of Your Team Worked Together? \_\_\_\_\_

How Long Have You Been With The Team? \_\_\_\_\_

**APPENDIX B**

## REPERTORY RATING GRID

Self Oriented	_____	_____	_____	_____	_____	_____	_____	Group Oriented
Friendly	_____	_____	_____	_____	_____	_____	_____	Hostile
Insecure	_____	_____	_____	_____	_____	_____	_____	Secure
Submissive	_____	_____	_____	_____	_____	_____	_____	Dominant
Goal Oriented	_____	_____	_____	_____	_____	_____	_____	Affect Oriented
Self Isolating	_____	_____	_____	_____	_____	_____	_____	Outgoing
Sensitive	_____	_____	_____	_____	_____	_____	_____	Insensitive
Leader	_____	_____	_____	_____	_____	_____	_____	Follower
Aggressive	_____	_____	_____	_____	_____	_____	_____	Passive
Autocratic	_____	_____	_____	_____	_____	_____	_____	Democratic
Nonadaptable	_____	_____	_____	_____	_____	_____	_____	Adaptable
Competent	_____	_____	_____	_____	_____	_____	_____	Incompetent
Worthless	_____	_____	_____	_____	_____	_____	_____	Valuable
Anxious	_____	_____	_____	_____	_____	_____	_____	Relaxed
Nonconforming	_____	_____	_____	_____	_____	_____	_____	Conforming
Knowledgeable	_____	_____	_____	_____	_____	_____	_____	Ignorant
Influential	_____	_____	_____	_____	_____	_____	_____	Inconsequential

**APPENDIX C**

PRE-MDC QUESTIONS

Having reviewed the records, what do you as an individual feel is the appropriate academic placement for this child?

What piece of information most influenced your decision?

Comments:



**APPENDIX D**

POST-MDC QUESTIONS

What did the team as a group feel to be the most appropriate academic placement for this child?

What piece of information most influenced the team decision?

Comments:

**APPENDIX E**

Bales' Set of Observation Categories

Social-emotional area:

- Positive reactions
- 1 Shows solidarity; raises other's status; gives help and reward
  - 2 Shows tension release; jokes, laughs, and shows satisfaction
  - 3 Agrees, showing passive acceptance; understands, concurs, and complies
- 

Task area:

- Attempted answers
- 4 Gives suggestion and direction, implying autonomy for others
  - 5 Gives opinion, evaluation, and analysis, expresses feelings and wishes
  - 6 Gives orientation and information; repeats, clarifies and confirms
- 

Task area:

- Questions
- 7 Asks for orientation, information, repetition, and confirmation
  - 8 Asks for opinion, evaluation, analysis, and expression of feeling
  - 9 Asks for suggestion, direction, and possible ways of action
- 

Second-emotional area:

- Negative reactions
- 10 Disagrees, showing passive rejection and formality; withholds help
  - 11 Shows tension and asks for help; withdraws out of field
  - 12 Shows antagonism, deflating other's status and defending or asserting self
- 

- Legend:
- a. Problems of orientation
  - b. Problems of evaluation
  - c. Problems of control
  - d. Problems of decision
  - e. Problems of tension-management
  - f. Problems of integration

APPROVAL SHEET

The dissertation submitted by Mark M. Zebrowski has been read and approved by the following committee:

Dr. Ronald R. Morgan  
Associate Professor, Education, Loyola  
Director of School Psychology: Division of Educational  
Psychology

Dr. Joy J. Rogers  
Associate Professor, Education, Loyola

Dr. Jack A. Kavanagh  
Associate Professor, Foundation of Education  
Associate Dean, School of Education, Loyola

Dr. Joseph A. Durlak  
Associate Professor, Psychology, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Date

4/19/84

  
Director's Signature