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Multidisciplinary team decision-making practices in Iowa schools

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MULTIDISCIPLINARY TEAM DECISION-MAKING

PRACTICES IN IOWA SCHOOLS

A Thesis

Submitted

In Partial Fulfillment

of the Requirements for the Degree

Specialist in Education

Debra S. Meyer

University of Northern Iowa

May 2001
ABSTRACT

The historical legislation mandating multidisciplinary teams (MDTs) in schools is well known. Relatively little attention has been directed toward either evaluating systematic processes that would lead to the desired outcome of better services to all students or educating team members in problem solving content and process. The purpose of the study was to examine the factors that influence problem solving outcomes and other aspects of service delivery in MDT settings. Team members' roles, problem solving steps, family involvement, and team building activities were measured by mailing a confidential Decision-Making Practices in Iowa Schools questionnaire to elementary principals (n = 114), elementary regular education teachers (n = 193), and elementary special education teachers (n = 212), representing each Area Education Agency in Iowa. Data analysis revealed elementary regular education teachers and elementary special education teachers, most responsible for implementation of team decisions, are the individuals who participate in teaming the least and are least satisfied with the process. In addition, lack of parental involvement was one barrier likely to impede the effectiveness of the decision-making process. The results also indicated group process and team effectiveness training activities rarely occurred. Future research is needed to help identify and refine leadership skills necessary for facilitating MDTs.
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Debra S. Meyer
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May 2001
This Study by: Debra S. Meyer

Entitled: Multidisciplinary Team Decision-Making Practices In Iowa Schools

has been approved as meeting the thesis requirement for the Degree of Specialist in Education

Dr. Annette Carmen, Co-Chair, Thesis Committee

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The world we live in, and that lives in us, is far richer and more meaningful than we can begin to realize, given the conceptions of knowledge and ways of knowing that dominate the modern age. For many people, it seems, knowing is simply knowing and knowledge is knowledge, and, the more we do of the one and have of the other, the more we will understand of the world and the better things will be. (Sloan, 1983, p. ix)

The pages of this paper will grow yellow and fade with time, and dust will collect on the shelf where it is stored. My memories of late nights, library searches, armloads of books, and agonizing over countless revisions will fade more quickly that the print on this page. However, time will not diminish my memory of the encouraging words and support of so many individuals.

It is understandably difficult to find words to thank those with whom one shares the most complexities. I am grateful to my parents for all they have given me throughout my lifetime and for being people I have come to so deeply admire and love. My husband, Terry, my intimate partner in love and work for over two decades, I thank for his help with all my projects, including this one. You made this paper important to you only because you knew it was important to me. Finally, our three children, Jennifer, David, and Julie, who are a source of great joy and constant reminders of the importance of family, thank you for our good life.

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CHAPTER 1
INTRODUCTION

One focus of the education reform movement has been an increased reliance on multidisciplinary teams (MDTs) to ensure quality services to all students (Flugum & Reschly, 1994; Graden, Zins, & Curtis, 1988; Reschly, 1988b; Reschly & Ysseldyke, 1995; Rosenfield & Gravois, 1999). The use of MDTs in the schools was mandated in 1975 under the Education For All Handicapped Children Act, Public Law 94-142. The historical legislation mandating MDTs in schools is well known, yet limited literature has been directed toward either evaluating systemic processes that would lead to the desired outcome of better services to all students or educating team members in problem solving content and process (Aksamit & Rankin, 1993; Fleming & Fleming, 1983). Shifts away from the commonly implemented refer-test-place MDT model require school educators to rely on skills and competencies in effective MDT problem solving for which they may not have adequate training (Kratochwill & McGivern, 1996; Reschly, 1988b; Reschly & Grimes, 1991; Reschly & Ysseldyke, 1995; Shapiro, 1991).

The current reform movement to redefine special education service delivery (Cobb, 1990; Cobb & Dawson, 1989; Reschly, 1980, 1986, 1988b; Reschly, Tilly, & Grimes, 1998; Reschly & Wilson, 1990; Reschly & Ysseldke, 1995) has placed all educators in a position to adopt team process procedures that are linked directly to developing school based interventions (Kratochwill & McGivern, 1996; Lenz & Shapiro, 1986; Reschly et al., 1998; Reschly & Ysseldyke, 1995).
One response to the school reform initiative, at both the system and classroom levels, shifts educators' emphasis from diagnosis and classification procedures to intervention design, implementation, and evaluation, all structured to base educational decisions on student outcomes (Christenson & Buerkle, 1999; Flugum & Reschly, 1994; Reschly, 1988a; Reschly et al., 1998). This shift also placed educators in a position of shared responsibility regarding student assessment and intervention decisions (Sarason, 1990; Thousand & Villa, 1992).

MDTs were initiated as part of the reform effort to meet the needs of all children and to achieve better integration of services between regular and special education (Reschly et al., 1998; Reynolds, Wang, & Walberg, 1987; Welch, Brownell, & Sheridan, 1999; Yoshida, 1980). They are composed of educational consultants, guidance counselors, principals, regular education teachers, social workers, speech pathologists, and special education teachers. Based on data gathered from a variety of sources, MDTs make decisions about students' educational programs and placements.

In a collaborative effort to complete discrete mandated functions, school psychologists, families, and other multidisciplinary team members participate in team problem solving assessments and intervention procedures to address problems in a disciplined and structured manner. Known as prereferral teams; child study teams; teacher assistance teams; and many other designations, the school-based MDT has been a key component in educational delivery systems. Though varied in design, teams existed in some systems before MDTs (Pryzwansky & Rzepski, 1983). The law and its accompanying regulations served as a catalyst for professionals working together in
problem solving teams. Although titles and formats for teams may vary considerably, their primary function of assisting teachers in the development of classroom interventions remains the same.

The literature is replete with technical guides for MDT structures, but the role of team member preparation in effective implementation is still unclear. Despite the increased use of MDTs, limited research investigated what contributed to positive outcomes of problem solving (Semmel, Abernathy, Butera, & Lesar, 1991). Although some studies found the multidisciplinary team problem solving structure to be effective (Chalfant & Pysh, 1989), various literature reviews reported limited empirical data on the effectiveness and quality of individualized interventions designed and implemented by MDTs (Cox, 1995; Fuchs & Fuchs, 1996; McGrath, Berdahl, & Arrow, 1995; Rosenfield & Gravois, 1996). Further, relatively limited research focused on the systematic process that contributes to the desired outcomes of the problem solving process (Rosenfield & Gravois, 1996; Semmel et al., 1991). However, the prevalence, formation, composition, and perceived effectiveness of MDTs must first be investigated before questions of quality problem solving outcomes can be answered. It is important to assess the function and procedures of current decision making practices of professional educators in Iowa to determine if they adhere to best practices as defined in the literature. In addition, it is important to understand factors that support or impede the process of multidisciplinary team problem solving.
Purpose of the Study

The central purpose of the present study was to examine MDT members’ reports of their own team’s: (a) practices of systematic problem solving, (b) levels of development and interdisciplinary collaboration, (c) extent of family involvement, and (d) problem solving process training (Fenton, Yoshida, Maxwell, & Kaufman, 1979; Kaiser & Woodman, 1985; Pfleiffer, 1981a). Objectives of the study were to use results to develop recommendations that could enhance MDT functioning.

Statement of the Problem

This study will investigate significant differences in actual team problem solving participation scores within Iowa schools. Several specific factors appear to be undermining the effectiveness of different MDT approaches within schools. These factors include a lack of: (a) role clarity among team members, (b) functioning according to accepted guidelines of effective problem solving processes, (c) interdisciplinary collaboration and trust, (d) family participation, and (e) group process training.

Research Questions

The following research questions were developed around major themes that emerged from the literature:

1. What are the roles assumed by elementary principals, elementary regular education teachers, and elementary special education teachers who serve on MDTs?

2. What steps in the problem solving process did principals, elementary regular education teachers, and elementary special education teachers follow during MDT meetings?
3. Were family members included in MDT decision making?

4. Were team-building activities used to form cohesive teams?

**Importance of the Study**

It is important to understand the characteristics of effective teams. Exploring the key components and barriers to MDT decision making will offer insight into problem solving using a team approach. If personnel are educated in problem solving processes, decision making practices may improve. Huebner and Hahn (1990) contended that MDT problem solving may not go beyond pooling individual input unless team members received additional specialized training and support. This lack of training and other barriers often decrease the quality and undermine the efforts of the team. Ultimately, understanding the MDT problem solving process, its key components and barriers, and conducting further research in MDT problem solving is important to the extent that it contributes to positive student outcomes.

**Limitations of the Study**

Limitations in this study are those inherent in any descriptive research design. They include nonresponse bias, structured item limitations, misunderstanding of items, questionnaire reliability, and indications of correlation but not causality. Assumptions in the proposed study are that the respondents will answer the questions truthfully and honestly, that the questions will specifically relate to the terms as operationally defined, and that all respondents will understand and interpret the questions and responses in a similar fashion.
Explanation of Terms

This study used several widely accepted terms within the fields of school psychology and special education. The following definitions may provide clarity and an understanding of the use of the terms.

**Area Education Agency (AEA)**

These Iowa regional agencies "share responsibility in promoting partnerships to increase family involvement and participation in the social, emotional, and academic development of children" (Reschly et al., 1998, p. 210). Currently 15 such administrative districts provide support to schools in the state. They were created in 1974 to compensate for the inequitable distribution of services to special education students under a system funded by individual counties (Kleve, 1988). AEAs hire support staff such as school psychologists, speech pathologists, social workers, and consultants. They provide additional services to children in educational media, research, and staff development.

**Individual Education Program (IEP)**

An IEP is a written statement that outlines an individual student’s unique needs and describes how these needs should be met through special education in the least restrictive environment.

**Mainstreaming**

This refers to the placement of a child with identified learning or adjustment problems in a regular classroom. It involves a process that incorporates a continuum of steps for educational program changes that progressively include the general education classroom.
Multidisciplinary Team (MDT)

The advent of Public Law 94-142 mandated that the decision making process for assessment and placement into special education programs become a team or group task. Section 121 a.532(e) of P. L. 94-142 states that “the evaluation is made by a MDT or group of persons, including at least one teacher, or other specialist, with knowledge in the area of suspected disability” (Fagan & Warden, 1996, p. 214).

Problem Solving

Problem solving refers to a systematic approach that includes problem identification, problem analysis, the implementation of a solution, and evaluation of the effectiveness of solutions (Bergan, 1977) to address the problematic educational performance problems of individual learners (Reschly et al., 1998).

Regular Education Initiative (REI)

REI is a “partnership between special education and regular education” according to Will (1988, p. 476). This partnership is directed toward combating organizational and administrative impediments to effective instruction of educationally handicapped children in regular education settings.

Renewed Service Delivery System (RSDS)

Reschly et al. (1998) state the Renewed Service Delivery System (RSDS), as implemented in the state of Iowa, is a statewide reform effort (p. 209). Further they stated RSDS is a policy initiative directed toward attaining needed improvements in the delivery of programs and services to students with learning and adjustment difficulties. RSDS mirrors the important components of problem solving assessment coupled with
noncategorical programming and system reform. According to Reschly et al. (1998), over 80% of the schools in Iowa are involved in RSDS activities.

**Organization of the Paper**

Chapter I includes the introduction, purpose of the study, and the questions that were used to guide the study. The assumptions, limitations, and the explanations of terms are also presented. Chapter II reviews the literature related to multidisciplinary teams. An overview of the history of multidisciplinary teams, the barriers that impede the MDT processes, an overview of problem solving, and the problem solving models used in Iowa, are presented. School based problem solving models used in Iowa will be described. Chapter III presents a review of the methodology used in the study. Further, specific subject, instrumentation, and procedural information is presented. Chapter IV presents the results of the investigation including an analysis of the data gathered from the questionnaire. Chapter V includes a summary of the study, synthesizes the topics presented in the earlier chapters and offers implications and recommendations for future research.
CHAPTER II
LITERATURE REVIEW

The chapter includes a review of related literature on MDT problem solving in the following areas: (a) historical overview of MDTs (including team composition and functioning), (b) barriers to MDT problem solving, and (c) overview of problem solving.

Historical Overview of Multidisciplinary Teams

The earliest uses of teamwork according to Julia and Thompson (1994, cited in Rosenfield & Gravois, 1999) were for medical practices in the 1920s. References to multiprofessional team concepts in the health care, mental health, and rehabilitation fields began appearing in the 1940s (Rosenfield & Gravois, 1999). However, teams as defined in the literature were not used in schools until the 1960s when the federal government provided incentives to develop interdisciplinary services for the disabled (Armer & Thomas, 1978; Maher & Yoshida, 1985). According to Wasley (1994), it is still unclear why teams in schools were initiated in the 1960s and then diminished until the mid-1970s.

During the 1970s, reform efforts gained momentum as a result of growing public optimism for what education might do to enhance the learning of children with disabilities. In 1975, following critical court decisions on the education of students with special needs, President Gerald Ford signed Public Law 94-142 (Skrtic, 1991). This legislation mandated that a team using multiple criteria and sources must be the decision-making body and guaranteed families the right to participate in decision-making (Silverstein, Springer, & Russo, 1992). Section 121a. 532(e) of Public Law 94-142
(Reschly et al., 1998) denotes that the MDT, including professionals knowledgeable about children, determines placement options based on evaluative data.

Public Law 94-142 and its amendments continue to be a critical force in ensuring the educational rights of children with disabilities. The law details several MDT components: (a) teams are responsible for assessing referred students' suspected areas of disability based on educational and developmental needs; (b) formal assessment procedures are followed by a determination of eligibility for special education placement in the least restrictive environment (LRE); (c) teams formulate IEPs (Maher & Yoshida, 1985), develop short term instructional objectives, and may even project long term educational goals for those students who qualify for special education services; and (d) teams are required to involve parents in the problem solving MDT process.

Reynolds, Gutkin, Elliott, and Witt (1984) summarized the legislative and professional expectations of MDTs:

Multidisciplinary teams have been expected to provide a number of functional benefits beyond those provided by any single individual. These benefits include: greater accuracy in assessment, classification, and placement decisions; a forum for sharing different views; provision for specialized consultative services to school personnel, parents, and community agencies; and the resource for developing and evaluating individualized educational programs for exceptional students. (p. 63)

The MDT approach also grew out of concern that minority group members were being misclassified as handicapped (Maher & Yoshida, 1985) and the belief that a group decision reduces bias and errors in assessment and judgment while enhancing adherence to due process requirements (Huebner & Hahn, 1990; Kabler & Genshaft, 1983; Pfeiffer, 1980; Rosenfield & Gravois, 1999; Yoshida, 1983). Educational decision-making teams
were composed of at least three of the following: school psychologists, families, regular education teachers, special education teachers, school consultants, and principals (Abelson & Woodman, 1983).

A recent MDT approach mandate in Iowa was an attempt to replace the refer-test-place process, re-emphasize shared responsibility and decision-making, and solve educational problems in regular education classrooms. The refer-test-place process was expensive, time consuming, required coordination of many professionals, and was typically implemented with the sole purpose of determining eligibility for special services placement (Sheridan & Kratochwill, 1991). Numerous studies reported the practice to be both inconsistent and unreliable (Algozzine & Ysseldyke, 1981; Christenson, Ysseldyke, & Algozzine, 1982; Epps, Ysseldyke, & Algozzine, 1983; Ysseldyke, Algozzine, & Epps, 1983). The typical outcome of the refer-test-place process was predictable. Once the student was tested there was a high probability that they would be placed and remain in a special education program through high school graduation (Christenson et al., 1982). A major reason for refining the MDT process in Iowa was to reduce the number of children referred for psychoeducational evaluation by having teams determine functional or instructional recommendations to implement in regular and special education classrooms.

According to Pfeiffer (1981a), "The key elements of a multidisciplinary team are a common purpose, cooperative problem solving by different professionals who possess unique skills and orientations, and a coordination of activities" (p. 330). Given these
elements, multidisciplinary teams have been expected to provide a number of functional benefits beyond those provided by any single individual.

Iowa's current MDT approach requires interdisciplinary collaboration for organizing, delivering, and evaluating services for all children, not only children eligible for special education programs. MDT members are to collectively generate innovative solutions to attain mutually shared goals. The team determines the most appropriate intervention based on need rather than on labels or categories.

Public Law 94-142 prescribed minimal team composition guidelines but not the specific procedures for teams to follow, leaving those decisions to the states. Thus, the composition of school based teams and their procedures for making decisions were likely to vary (Poland, Thurlow, Ysseldyke, & Mirkin, 1982). As predicted, states interpreted the federal law differently and mandated different composition requirements and operational procedures for teams (Reschly et al., 1998). Regardless of team composition, MDTs were to limit the decision-making authority of any one professional, make sure different perspectives from diverse group members were considered, and involve parents in the decision-making about their children. Yet, despite mandated guidelines, state interpretation and inadequate training have hindered MDT implementation and decision-making effectiveness.

Barriers to Multidisciplinary Team Problem Solving

The effort to teach group process skills to teams is frequently not overt. Instead, team members are put in situations in which they have to develop processes for working together. Thus, despite the intended goals of MDTs, in actual practice barriers have
emerged that have prevented quality problem solving outcomes. Barriers to optimal MDT problem solving have been identified, including organizational barriers (Abelson & Woodman, 1983; Bardon, 1983; Fleming & Fleming, 1983; Kabler & Genshaft, 1983; Maher & Pfeiffer, 1983; Pfeiffer, 1981a; Pfeiffer, 1981b; Rosenfield & Gravois, 1999). Yoshida (1983) argued that "organizational barriers must be overcome before an environment is created for productive MDT operations... An organizational perspective recognizes that team members represent different constituents and philosophies of service delivery. Most of the time these separate perspectives produce mutually exclusive expectations for job function" (p. 140). MDTs have been allowed to function neither as they were intended (Yoshida, 1983) nor with the latitude to use their creative potential to solve the problems facing special education (Pfeiffer, 1980).

Anderlini (1983) and Pfeiffer (1980, 1981a) analyzed and categorized the various barriers experienced by MDTs. This analysis resulted in the delineation of four categories of barriers affecting team functioning: (a) lack of systematic decision-making processes, (b) lack of interdisciplinary collaboration and trust, (c) lack of family involvement, and (d) lack of education and training in multidisciplinary team processes (Fenton et al., 1979; Kaiser & Woodman, 1985; Pfeiffer, 1981a).

**Lack of Systematic Decision-making Processes**

Researchers have suggested one of the underpinnings of quality MDTs is the systematic decision-making process. Interestingly, MDTs in education have been criticized for their loosely structured and nonsystematic decision-making processes (Ysseldyke, Algozzine, & Mitchell, 1982). Skill and knowledge deficits in the
preliminary, basic areas of obtaining, organizing, and presenting information often doom the decision-making process to failure before the actual group problem solving occurs (Curtis, Curtis, & Graden, 1988). Since team members rarely receive training in decision-making processes, this is a particularly troublesome issue for MDTs in school systems.

In discussing team decisions, Yoshida, Fenton, Maxwell, and Kaufman (1978) applied social psychology theory of organizations to MDTs. Specifically, they hypothesized that participation in the group process is related to member satisfaction with decisions that should result in commitments to implement them (Cooper & Wood, 1974). This relationship was confirmed; more participation led to increased levels of satisfaction (Yoshida et al., 1978). Thus, including the contributions of all team members coupled with training in team efforts is essential in facilitating effective quality decision-making (Jones, White, Benson, & Aeby, 1995). Ysseldyke (1983) concluded that MDTs do not meet the criteria of effective decision-making practices. Effective MDT decision-making practices consist of four major components.

First, the purpose of the meeting must be made explicit. Based on extensive research, Pfeiffer (1980) and Ysseldyke (1983) found that the purpose of meetings was seldom explicitly stated.

Second, sufficient time must be allowed to make effective decisions. Fleming and Fleming (1983) found that team decision-making was adversely affected by time constraints and found that MDT members said lack of sufficient time to problem solve and make decisions was their most frequent concern. They also reported members of
MDTs frequently complained that the quality of their decisions was impaired by the apparent need to rush through cases in order to stay on schedule. Bergan and Tombari (1975) contend adequate time in the decision-making process is essential. If problems are defined incompletely or incorrectly, problem solving will likely be ineffective. Given the importance of this stage in the problem solving process, adequate time and energy should be expended in efforts to identify the problem. Often times the problems are multifaceted and limited discussion or quick decisions can lead to inefficiency of team decision-making and inadequate decisions (Fleming & Fleming, 1983).

Third, role expectations must be clear. Pfeiffer (1980) and Ysseldyke (1983) found that team roles were rarely defined clearly. MDTs are particularly vulnerable to confusion over role expectations due to the extensive overlap in training and areas of expertise among team members (Pfeiffer, 1980; Pryzwansky, 1981). Fenton, Yoshida, Maxwell, and Kaufman (1977) analyzed the responses made by principals, school psychologists, special education teachers, and regular education teachers to determine the role expectations of team members, both within and across roles. Yoshida (1980) defined role ambiguity within a role as “disagreement about appropriate behavior and activities for a given role among members’ function in that role” and role ambiguity across roles as “disagreement between others’ expectations for a given role and the expectations of the members functioning in that role” (p. 223). They concluded that without role clarity both within and across roles, MDT members are seriously hindered in their ability to make appropriate decisions.
Fourth, all members must contribute in an organized manner. MDT effectiveness is maximized when all team members contribute to the decision-making process in an organized and structured manner (Abelson & Woodman, 1983). Yet, the literature has repeatedly cited a lack of training in systematic decision-making processes as a major barrier for MDTs (Pfeiffer, 1981a; Yoshida et al., 1978).

Lack of Interdisciplinary Collaboration

One of the primary objectives of any team is to effectively use the resources of each individual member. School psychology literature usually cites the inappropriate or poor management of resources as the reason behind ineffective MDT decision-making (Fenton et al., 1979; Yoshida, 1980).

Interprofessional tension is another powerful inhibitory barrier to successful team functioning (Ysseldyke, Algozzine, & Mitchell, 1982). According to Fleming and Fleming (1983), when team members feel their area of expertise is infringed upon, they view team collaboration as a surrender of power and influence. Therefore, they often develop negative attitudes toward MDT decision-making. It is important for team members to feel secure both as individuals and within their respective disciplines to avoid the frequent territoriality concerns that arise in multidisciplinary teams.

Groups may be dominated by one or a select few members with strong personalities who may persuade the remaining members to accept underdeveloped solutions or inadequate recommendations (Abelson & Woodman, 1983; Hyman, Duffey, Caroll, Manni, & Winikur, 1973). In order for MDTs to function as teams, Kaiser and Woodman (1985) and Fiorelli (1988) suggest that more powerful members
must recognize their authoritative position and strive to work with others to redistribute power.

Elliott and Sheridan (1992) reported a disproportionately larger input from school psychologists and special educators when compared to other members of the MDT. Researchers concluded that classroom teachers and families lack of active participation led to less satisfaction with team decisions and little internalization of the team’s proposed educational plan (Yoshida et al., 1978; Ysseldyke, Algozzine, & Allen 1982).

Armer and Thomas (1978) analyzed attitudes of school personnel toward MDTs and concluded that teacher involvement was critical. They found that school personnel gave more favorable ratings to teams that possessed the highest degree of collaboration. In short, whether a single intervention, a modification for a classroom, a program change, or the restructuring of an entire service delivery system, the change will be more readily accomplished if all MDT members are included in the planning. Doing so allows opportunities to feel invested in outcomes. Change becomes less threatening and the potential for resistance is decreased.

Yoshida et al. (1978) concluded that MDT problem solving participation is highly related to individual satisfaction with the decision. Instructional personnel, the individuals most responsible for implementation of team decisions, are the individuals who participate the least. Teachers who are lowest in participation and satisfaction may not implement MDT decisions.
Lack of Family Involvement

The regulations that mandate families’ integral participation in all phases of MDT decision-making have been recognized as a catalyst in educational improvement. Promoting family involvement in the MDT problem solving process implies that families have skills to offer, the exchange of information and assistance is a mutually beneficial process, and families offer different and valuable perspectives (Christenson & Buerkle, 1999; Christenson & Cleary, 1990; Conoley, 1987; Mowder, Widerstrom, & Sandall, 1989).

The need to promote family involvement in the MDT problem solving process is apparent. Many conflicts between the school and the home can be attributed to the lack of a systematic process for involving families (Christenson & Buerkle, 1999). MDTs too often narrowly focus on the referred child to the relative neglect of conceptualizing the family as a systemic set of influential factors, which has led Conoley (1987) and Pfeiffer and Tittler (1983) to encourage teams to consider adopting a school-family system orientation.

Despite the mandates, there is little evidence that genuine collaboration between family and school occurs. Moreover, when home and school systems are required to engage one another, generally around a child problem, the relationship is frequently characterized by crisis, tension, defensiveness, blame, and miscommunication (Lightfoot, 1981).

Various barriers inhibit teams working well with families: (a) the stereotype educators hold for certain types of parents, (b) previous experiences of parents and
educators, and (c) the level of interpersonal skill development of the educator (Seligman, 1979). Many families, although concerned with their child’s education, are fearful, suspicious, and mistrust school personnel because of their own negative experiences as students (Hansen, Hines, & Meier, 1990). Finders and Lewis (1994) suggested that family involvement practices were too often based on the assumption that educators are the experts and family involvement is for the purpose of educating parents and family members.

Conoley (1987) and Pfieffer (1980) are among those who have called for more family participation in MDT activities. Family involvement has typically only included families playing a relatively passive role of involvement rather than becoming active participants in team problem solving (Yoshida et al., 1978; Ysseldyke, 1983). On the whole, families have essentially served as consent givers, with the decision-making power resting primarily with the professionals (Harry, 1992).

Harry (1992) suggested families must be offered and must assume new roles if they are to have greater power in the educational partnership. The first step, she argued, is to truly engage families in the decision-making process. When families actively participate in problem identification and the planning phase of the intervention program, the likelihood for their increased understanding, acceptance, and commitment is enhanced (Christenson & Cleary, 1990; Mowder et al., 1989).

Christenson and Cleary (1990) reported that successful family involvement includes sharing of information and mutual problem identification. When families are not involved in problem identification, they are unlikely to be an integral part of the
implementation efforts, for how a problem is defined reflects the underlying attributions for the problem, and these attributions will strongly influence the exploration and development of outcome strategies (Weiner, 1986).

**Lack of Professional Development**

Another barrier that may militate against the work of teams is lack of continuing education in respect to preparing individuals for complex team decision-making. The MDT's ability to attain success may be limited by the abilities of its members. Furthermore, for a team to attain success, members must continue skill development, even beyond that provided through an academy of team building, which cannot fully compensate for gaps in the knowledge and commitment of team members (Green, 1995). Therefore, the content and delivery of continuing education must be a primary concern if the needs of the team are to be met effectively.

In a comprehensive review of the literature on continuing education, Showers, Joyce, and Bennett (1987) concluded that the most effective training involved not only the presentation of information but also provided opportunities for practice and feedback. During the 1970s, researchers found that fewer than 10% of educators involved in continuing education programs implemented what they had learned (Showers & Joyce, 1996). Participants were more likely to adopt techniques and strategies when the training incorporated a variety of hands on activities (Powers, 1983). Equally important, Joyce and Showers (1980) reported practitioners' attitudes often do not change until they see the learned strategies at work in the classroom.
MDT effectiveness was facilitated when members were trained and understood
the criteria for team effectiveness, the stages of development that teams go through, and
the dynamics of group processes (Rosenfield & Gravois, 1999). Staff development goals
should be directed toward involvement, commitment, and renewal. Professional
development needs to be tailored to accommodate individual styles and skill levels.
Clear and explicit planned activities that provide practice, feedback, and support transfer
of new skills are essential.

Team approaches that fostered shared participation among team members seemed
to be appropriate ways to assure that a range of educational decision options are
considered, especially when decisions to be made were complex, involved numerous
elements, and occurred at different points in time (Abelson & Woodman, 1983; Reschly
et al., 1998; Schein, 1980). There is considerable empirical evidence that team building
activities can increase the effectiveness of teams (Woodman & Sherwood, 1980).
Tuckman and Jensen (1977) defined 5 developmental stages for teams: forming,
storming, norming, performing, and adjourning. Team building elements show team
members how to work together as equal partners, respect diversity, and build the trust
necessary for collaborative teams to solve problems and create new opportunities.

Beninghof (1996) suggested three factors that are essential for effective
professional development in support of collaboration for more inclusive educational
services. First, the district must offer a spectrum of professional development activities
to address the individual needs of staff and students. Second, planning for professional
development should take into consideration that staff members will be at varied stages of
readiness to accept major changes. Specific development activities should be tailored to the needs of participants as they move through different levels of the change process. Third, implementation is most successful when broad input is encouraged and staff is involved in the planning of professional development options from the beginning.

Beninghof's model proved effective in creating quality continuing education programs. However, the evaluation of professional training programs was relatively underdeveloped (Grant & Anderson, 1977). West and Idol (1987) reported that staff development for school collaboration had received little attention.

Paradoxically, professionals recognize the importance of continuing education yet often view the training as irrelevant to real life issues (Smylie & Conyers, 1991). Traditional continuing education training tends to be the least effective method for professional growth. Fullan (1990) suggested staff development has not been successful because it is poorly practiced. Continuing education training typically consists of a single session in which a presenter, often from outside the area, offers information and then leaves with no provision for ongoing assistance and support. Showers et al. (1987) analyzed the effects on acquisition of knowledge, skill mastery, and transfer of training to professional roles of different components of continuing education. Although presentation of information and demonstration of skills had significant effects on knowledge, attitudes, and to a lesser degree, skill development, the additional training components of practice with feedback and coaching on site were necessary to effect persistent changes in professionals' daily practices.
Based on Zins and Curtis' (1984) findings, staff development in systematic problem solving process skills was needed to minimize the shortcomings of [MDT] conferences. Implementing the problem solving process successfully was dependent on team members' skill and ability to address issues systematically and efficiently.

Educational training creates fear among many professionals. According to Menlo (1982), fear about the personal impact of change is the category into which most professional resistance falls. Professionals may anticipate that they do not have the skills to participate in the change, and they may perceive that they cannot acquire them. This sense of potentially diminished competence can create a tremendous fear for professionals who are used to working in isolation and deriving reinforcement from their personal sense of competence.

Teamwork implies a high level of interpersonal skill is needed for genuine collaboration (Kane, 1975; Orlando, 1981). Unfortunately, no team process model is guaranteed to produce a team that will, without fail, be sufficiently imbued with and knowledgeable about group relations and the change process. However, MDT member training in team processes may facilitate effective collaborative problem solving, which enhances quality decision-making.

**Overview of Problem Solving Approaches**

In response to the barriers impeding MDT decision-making, problem solving was introduced to enhance effective team decision-making. The next few sections will address the problem solving approach, and its models, including two specific problem solving models used in Iowa.
Educational literature, especially that of the last several years, features problem solving consultation as an effective method of service delivery to children in school settings (Kratochwill, Elliott, & Busse, 1995; Reschly et al., 1998; Sheridan, Welch, & Orme, 1996; West & Idol, 1987; Zins, Kratochwill, & Elliott, 1993). The MDT problem solving model (Reschly et al., 1998) is based on the behavioral and process consultation models (Bergan, 1977; Schein, 1980). A strength of the problem solving model is the utilization of a systematic data base for identifying problems and evaluating outcomes (Bergan & Kratochwill, 1990).

According to Reschly and Ysseldyke (1995), a systematic problem solving approach can provide the overall structure for an alternative delivery system and is viewed as an essential component to implementing advances in assessment and interventions. Reschly et al. (1998) reported that problem solving systems improve on historical special education systems by assessing problems directly, providing assistance to students before special education qualification is determined, and by providing a continuum of possible resources that can be matched to problem severity.

Problem Solving Models

Numerous and varied problem solving approaches or models appear in the literature (Bergan, 1977; Bergan & Kratochwill, 1990; Kratochwill, Elliott, & Carrington Rotto, 1995). These models share four common stages or questions in the problem solving process: (a) problem definition and identification, (b) problem analysis, (c) intervention design, (d) progress monitoring (with data-based intervention revisions as needed) and outcomes evaluation (Flugum & Reschly, 1992; Reschly et al., 1998;
Reschly & Ysseldyke, 1995). Reschly et al. (1998) emphasized “problem solving is not a collection of practices; it is a systematic way of thinking about how to help the individual succeed in performance problems" (p. 223).

Although MDTs are no longer optional as a means of deciding services for disabled children, the methods by which school personnel implement MDTs are matters for local determination (Reschly et al., 1998). It is relatively easy to develop an MDT problem solving model, and a variety of systematic problem solving models are currently used in Iowa.

**Problem Solving Models: Two Iowa Area Education Agencies**

Iowa’s Area Education Agencies (AEAs) were created in 1974 by the legislature to ensure equal educational opportunities for all children. Fifteen AEA support service sites currently operate in Iowa. Each agency serves a specific region of the state and employs professionals who provide a wide variety of support services to schools, families, and children. AEAs have assumed a leadership role in defining the philosophies and practices that drive efforts to solve problems experienced by children, families, educators, and schools. Problem solving and solution focused models are two of the problem solving approaches implemented throughout the state. Two specific AEA models are Heartland AEA’s Problem Solving Approach Model (Appendix A) and Grant Wood AEA’s Solution Focused Model (Appendix B).

**Heartland’s problem solving approach.** Heartland Area Education Agency 11, located in central Iowa, is the largest of the state’s 15 area education agencies. Heartland’s support staff serves one-fifth (119,000) of Iowa’s total students (Heartland
Area Education Agency 11, 1999). The agency has developed and implemented a four-stage problem solving alternative service delivery system (Heartland Area Education Agency 11, 1994). Each level increases the intensity and resources necessary to develop plans to address the identified concern and resolve the problem. The problem solving process includes the following components: clearly defined problems, direct measures of behavior, baseline data, problem analysis, interventions designed and implemented, progress monitoring, and data based decision-making (Reschly & Ysseldyke, 1995).

The model illustrated (Appendix A) represents Heartland’s approach. At Levels I and II, participants engage in informal problem solving processes. Problem solving at levels III and IV becomes more intensive and systematic as the nature of the problem warrants. These levels involve more related support personnel and require more intensive and systematic data collection to define problems, develop interventions, and evaluate solutions (Heartland Area Education Agency 11, 1994).

Informal Problem Solving

Level I problem solving involves consultation between the parent and teacher (e.g., communication with parent through notes, phone calls, or conferencing) to address concerns. This is a first step procedure and resolves a significant number of student related concerns. Level II includes the parent and teacher from Level I along with a team of teachers trained in problem solving. This team is referred to as the Building Assistance Team (BAT) and usually consists of three to six team members, who may be fellow teachers, a special education teacher, school counselors, the principal, or other support staff (Heartland AEA 11, 1996). At this level the problem is functionally
defined, and an intervention is developed and implemented. Progress monitoring is used to determine intervention success. Interventions at Level II vary based on the collective experience of the BAT members. Both Level I and II problem solving occurs primarily within the general education setting, where support service personnel participate only as needed.

In the model illustrated, as the intensity of the problem increases so does the amount of resources needed to solve the problem. Problem solving at Level III involves Heartland support staff members and is a data driven intervention effort that involves a description of the problem, systematic data collection, problem analysis, an intervention goal, intervention plan development and implementation, progress monitoring, and decision-making. Interventions that meet these criteria standards must be implemented and monitored for a reasonable period of time (Gresham, 1991). Level IV problem solving for entitlement may be initiated under two conditions: lack of change in target behaviors as a function of the intervention criterion or too many regular education resources to be feasible long-term.

Additional resources at Level IV may be required to address the problem. At this level it may be determined that an Individual Education Plan is needed to begin special education services based on academic peer norm data discrepancies, behavioral peer norm data discrepancies, and insufficient improvement through interventions implemented in the regular education setting.

The problem solving process, as illustrated in the largest circle (Appendix A), describes the steps used to define the problems and generate and evaluate solutions from
information gathered from numerous sources. The Heartland problem solving model focuses less on the attributes of the child and more on variables in the classroom and school that can be altered to better support the child.

Grant Wood’s solution focused process. Grant Wood Area Education Agency 10, located in eastern Iowa, has implemented a problem solving model focusing on solutions. The Solutions Focused Process (SFP) is a problem solving process that focuses on solutions within the general education environment that can be generated and implemented by those most closely involved with the student. It recognizes the possibility of multiple solutions. This process is believed to improve a student’s school success (Grant Wood Area Education Agency, 1999a). An extended solutions focused diagram (Appendix B) illustrates the Grant Wood solutions focused process (Grant Wood Area Education Agency 10, 1999b). Levels one and two represent more informal problem solving strategies, while levels three and four are more comprehensive and data intensive evaluations.

In the first level, the emphasis is on customary adjustments implemented by the teacher/parent/caregiver in collaboration with other support individuals. The team oriented activities at the next level result in a student team evaluation plan. The first two levels of activities represent general education interventions that can be repeated as often as necessary. If the concerns persist, a full and individual evaluation is initiated to determine the educational interventions required to resolve a student’s problem or behavior of concern, including whether the necessary educational interventions are special education (Grant Wood Area Education Agency, 1999a).
In spite of the fact AEA models have different names, the problem solving processes remain nearly identical. Iowa's AEA problem solving models are designed to assist MDT members in making appropriate intervention decisions. Although the systematic concept has garnered great interest, the problem solving process is not always practiced as prescribed in the AEA best practices handbooks (Stack, 1997).

**Efficacy of Iowa's Problem Solving Models**

According to Tilly, Flugum, and Reschly, over 2100 educators, support staff, and administrators were asked to rate their agreement with the statement, "[Renewed Service Delivery Service] RSDS will produce better outcomes for students in comparison with the 'Old System'" (cited in Reschly et al., 1998, see p.11). Responses indicated overwhelming optimism toward RSDS.

Despite the positive response, barriers to problem solving implementation occurred in Iowa. Flugum and Reschly (1992) studied the implementation of prereferral interventions, a proactive form of problem solving consultation in which school psychologists helped teachers address problems they had with students who were at-risk of special education placement. Prereferral interventions were being endorsed as a means of preventing the growth of special education enrollment. Only 40% of surveyed school psychologists developed an intervention plan. Only 13% of teachers and school psychologists who actually developed an intervention plan utilized baseline data in evaluating their interventions. Finally, less than 3% of the respondents employed all of the necessary steps for a standard behavioral intervention (Flugum & Reschly, 1992).
In a study of Iowa educators' perceptions of RSDS, over 70% of those surveyed stated that RSDS would involve the use of data-driven models of intervention for students with special needs (Tilly, Reschly, Flugum, Atkinson, & Sullivan, 1992). However, more than a quarter of the respondents failed to answer the question pertaining to this issue, indicating diminishing use of data-driven problem solving models (Flugum & Reschly, 1992). Perhaps the individuals most involved in implementation had the least favorable attitudes because of lack of problem solving skills.

Bone (1992) conducted a survey on fourth grade teachers' perceptions of the premises of RSDS in Iowa. RSDS relies on problem solving interventions and teacher consultation in the delivery of services. While attitudes were generally favorable, the survey elicited many comments pertaining to a perceived lack of support from school psychologists and state officials when it came to assistance in providing an education to mainstreamed students.

A replication of Bone's (1992) research was conducted by Petersberg (1993) two years later. Similar concerns were voiced by respondents regarding a lack of support from AEA officials. The author offered limited statements noting only those who were most involved with the implementation of problem solving and mainstreaming for at-risk students had the least favorable attitudes toward the entire process.

In summary, multidisciplinary teams were created as part of an effort to lend greater accuracy in assessment, classification, and placement decisions for referred students. However, these teams often experience barriers which decrease quality and undermine decision-making efforts. Schools in Iowa state they are using the problem
solving model within teams, but variance of outcomes displays inconsistency in the use of effective systematic practices. Furthermore, limited literature has been published on group processes that contribute to effective decision-making practices. Ultimately, understanding current MDT implementation is crucial to helping Iowa schools develop skilled, multidisciplinary, problem solving teams that can realize enhanced student outcomes. Composition and processes have been studied, but research in MDT participation and understanding of effective decision-making processes is still needed. The methods used to examine the MDT decision-making practices in Iowa are presented in the next chapter.
CHAPTER III
METHODOLOGY

This chapter focuses on the methodology and related necessary information by which this research survey was conducted. This chapter will include descriptions of the following: (a) the pilot research procedure and instrument, (b) the population sample, (c) the final research instrument, and (d) the data collection procedure.

Pilot Instrument

Based on a review of the literature and problem solving practices outlined in the professional literature as essential to the effective development of a team or implementation of decision-making practices (Aksamit & Rankin, 1993; Anderlini, 1983; Fleming & Fleming, 1983; Reschly et al., 1998; Rosenfield & Gravois, 1996) the Decision-Making Practices Questionnaire (Appendix C) was developed. The questionnaire examined the MDT decision making practices, levels of development and interdisciplinary collaboration, extent of family involvement, and problem solving training in Iowa schools.

The Decision-Making Practices Questionnaire initially was developed and evaluated during the spring of 2000 in a pilot study of 65 graduate students representing principals, regular education teachers, and special education teachers enrolled at the University of Northern Iowa and Drake University. Participants answered specific questions relating to the decision making practices in their schools. Items on the pilot questionnaire required participants to check responses that applied to their experiences in multidisciplinary team decision making practices during the 1999-2000 school year.
Based on the input received regarding content validity and clarity of language from the pilot study participants, the questionnaire was revised and further developed. Changes were made in the wording on about 35% of the items, redundant items were eliminated, and definitions of certain terms specific to this study were also added to increase clarity. The definition of multidisciplinary team was explained at the beginning of the questionnaire.

The pilot study also clearly indicated that although family/parent involvement with problem solving teams is limited, it is more likely to occur at the elementary school level than at the junior high/middle school or high school level. Also, the pilot study participants revealed 76% implementation of MDTs at the elementary level as compared to only 35% at the high school level. Elementary schools were chosen for this investigation because of this prevalence and the inherent preventive nature of improving team effectiveness at this level. Lastly, elementary principals, elementary regular education teachers, and elementary special education teachers were chosen because of their direct involvement with referred students. This group generally has the most contact with students; therefore, they often serve as the catalyst for team formation based on student referrals. No single team member is more important than the others, but understanding MDT composition as a whole will offer insights to further investigations.

Subjects

A stratified random sample was created using a database from the Iowa Department of Education. A total of 200 elementary principals, 400 elementary regular
education teachers, and 400 elementary special education teachers were randomly selected to voluntarily complete the Decision-Making Practices Questionnaire (Appendix C). Urban, suburban, and rural demographic areas were included representing each Area Education Agency in Iowa.

**Final Instrument**

The Decision-Making Practices Questionnaire (Appendix C) is an 18-item questionnaire with two sections. Section one contains decision-making questions and section two contains demographic questions.

The first section of the questionnaire contains 13 questions reflecting multidisciplinary team participation and the methods employed in the decision-making process. They are based on the problem solving practices outlined in the professional literature as essential to the effective development of a team or implementation of decision-making practices (Aksamit & Rankin, 1993; Anderlini, 1983; Christenson & Conoley, 1992; Fleming & Fleming, 1983; Reschly et al., 1998; Rosenfield & Gravois, 1996). Respondents were asked to answer questions regarding their individual perceptions of multidisciplinary team activities, methods, and systematic problem solving decision processes such as generating and evaluating solution activities and selecting and finalizing decisions.

The second section of the questionnaire includes five demographic questions. Questions 14 through 18 were designed to provide information regarding school enrollment, area education agency, teaching level, years of experience, educational level, and gender. The rationale for the selection of the descriptive design was based on the
primary objectives of investigating role differences within teams based on personal characteristics.

**Procedure**

During June of 2000, the questionnaire was approved by Dr. Annette Carmer and Dr. John Henning, the Co-Chairs of the Research Committee. The research proposal and the questionnaire were approved in June of 2000 by the Human Subjects Committee at the University of Northern Iowa.

On September 15, 2000, a cover letter (Appendix D), Decision-Making Practices Questionnaire form, complimentary packet of tea, and a stamped return envelope were mailed to the randomly selected participants for completion. Respondents were asked to complete and return the questionnaire within 10 days.
CHAPTER IV

RESULTS

This chapter includes data about demographic information, roles assumed by MDT members, problem solving steps followed during MDT meetings, extent of family involvement, team building activities used when forming teams, and perceived effectiveness of MDTs (including post hoc analysis).

Demographic Data

A total of 1000 Decision-Making Practices Questionnaires were mailed, with 576 questionnaires (57.6%) returned. Of those, 57 were not included in the analysis due to incomplete information (less than 85% complete). The final research sample respondents included 519 elementary principals, elementary regular education teachers, and special education teachers. Table 1 shows a final tabulation of the Decision-Making Practices Questionnaire. The return rate was equally represented among elementary principals, elementary regular education teachers, and elementary special education teachers.

Table 1

Decision-Making Practices Questionnaire Return Rate by Profession

<table>
<thead>
<tr>
<th>Profession</th>
<th>Ratio (Returned/Sent)</th>
<th>Return Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Principal</td>
<td>114/200</td>
<td>57%</td>
</tr>
<tr>
<td>Elementary Regular Education Teacher</td>
<td>193/400</td>
<td>48%</td>
</tr>
<tr>
<td>Elementary Special Education Teacher</td>
<td>212/400</td>
<td>53%</td>
</tr>
<tr>
<td>Total</td>
<td>519/1000</td>
<td>52%</td>
</tr>
</tbody>
</table>
Of the 519 respondents who participated in the study 83% were females and 17% were males. Most of the regular education teacher respondents (91.0%) and special education teacher respondents (94.3%) were female, while only half of the principal respondents (47.3%) were female. Principals reported their highest academic degree to be a masters degree (69.9%), while most regular education teachers (61.9%) and special education teachers (51.4%) reported a bachelors degree as their highest academic degree. When asked to indicate the total number of years served as a teacher or administrator, 40.0% of the respondents reported serving 20 plus years. About half of the principals (50.9%) reported 20 plus years experience in comparison to regular education teachers (43.5%) and special education teachers (33.2%).

Questionnaires were distributed according to a stratified random sample categorized by district size (less than 600, 600-1,199, and more than 1,200). Table 2 represents the responses according to district enrollment size. The highest percentage of questionnaires was returned from smaller school districts (36.0%) with less than 600 students, and the lowest percentage was returned from medium sized districts (18%) of 600-1,200 students.
Table 2

**District Certified Enrollment Reported by Multidisciplinary Participants**

*Number Represents Returned Questionnaires*

<table>
<thead>
<tr>
<th>Size</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 599</td>
<td>185/519</td>
<td>36.0%</td>
</tr>
<tr>
<td>600 – 1,199</td>
<td>94/519</td>
<td>18.0%</td>
</tr>
<tr>
<td>1,200 plus</td>
<td>146/519</td>
<td>28.0%</td>
</tr>
<tr>
<td>Missing*</td>
<td>94/519</td>
<td>18.0%</td>
</tr>
<tr>
<td>Total</td>
<td>519/519</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Missing – questionnaires that omitted the response to this question.

A breakdown by AEA of the Decision-Making Practices Questionnaire return rate is reported in Table 3. Figures in parentheses represent the AEA overall return rate percentage by role. The data in Table 3 demonstrate the response rate by each AEA and participating role members.
### Table 3

**Return Rate by Area Education Agency (AEA) and Participating Role Members**

<table>
<thead>
<tr>
<th>AEA</th>
<th>Principal</th>
<th>Regular Education Teacher</th>
<th>Special Education Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/13 (7.3%)</td>
<td>6/26 (5.0%)</td>
<td>14/26 (7.9%)</td>
</tr>
<tr>
<td>2</td>
<td>9/13 (8.3%)</td>
<td>9/26 (7.5%)</td>
<td>14/26 (7.9%)</td>
</tr>
<tr>
<td>3</td>
<td>6/13 (5.5%)</td>
<td>12/26 (10.0%)</td>
<td>12/26 (6.7%)</td>
</tr>
<tr>
<td>4</td>
<td>8/13 (7.3%)</td>
<td>10/26 (8.3%)</td>
<td>20/26 (11.2%)</td>
</tr>
<tr>
<td>5</td>
<td>8/13 (7.3%)</td>
<td>6/26 (5.0%)</td>
<td>15/26 (8.4%)</td>
</tr>
<tr>
<td>6</td>
<td>6/13 (5.5%)</td>
<td>4/26 (3.3%)</td>
<td>12/26 (6.7%)</td>
</tr>
<tr>
<td>7</td>
<td>9/13 (8.3%)</td>
<td>5/26 (4.2%)</td>
<td>10/26 (5.6%)</td>
</tr>
<tr>
<td>9</td>
<td>9/13 (8.3%)</td>
<td>7/26 (5.8%)</td>
<td>8/26 (4.6%)</td>
</tr>
<tr>
<td>10</td>
<td>7/13 (6.4%)</td>
<td>2/26 (1.7%)</td>
<td>12/26 (6.7%)</td>
</tr>
<tr>
<td>11</td>
<td>8/13 (7.3%)</td>
<td>10/26 (8.3%)</td>
<td>11/26 (6.2%)</td>
</tr>
<tr>
<td>12</td>
<td>7/14 (6.4%)</td>
<td>6/28 (5.0%)</td>
<td>9/28 (5.1%)</td>
</tr>
<tr>
<td>13</td>
<td>5/14 (4.6%)</td>
<td>8/28 (6.7%)</td>
<td>15/28 (8.4%)</td>
</tr>
<tr>
<td>14</td>
<td>6/14 (5.5%)</td>
<td>11/28 (9.2%)</td>
<td>5/28 (2.8%)</td>
</tr>
<tr>
<td>15</td>
<td>9/14 (8.3%)</td>
<td>16/28 (13.3%)</td>
<td>9/28 (5.1%)</td>
</tr>
<tr>
<td>16</td>
<td>4/14 (3.7%)</td>
<td>8/28 (6.7%)</td>
<td>12/28 (6.7%)</td>
</tr>
</tbody>
</table>

The number of students served by a multidisciplinary team in the 1999-2000 school year varied based on the total current certified enrollment of the school district as illustrated in Table 4. The highest number of students served (169) by a MDT was in schools with less than 600 students, and the lowest number served (90) was in schools with 600-1,199 students.
Table 4

Students Served by a Multidisciplinary Team in the 1999-2000 School Year

<table>
<thead>
<tr>
<th>Number of Students Served</th>
<th>Certified District Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-299</td>
</tr>
<tr>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>1-5</td>
<td>22</td>
</tr>
<tr>
<td>6-10</td>
<td>12</td>
</tr>
<tr>
<td>11-20</td>
<td>18</td>
</tr>
<tr>
<td>21-40</td>
<td>12</td>
</tr>
<tr>
<td>41-100</td>
<td>1</td>
</tr>
<tr>
<td>101-200</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
</tr>
</tbody>
</table>

Roles Assumed By MDT Members

Roles assumed by MDT members were determined based on responses to Questions 1, 2, and 5 on the Decision-Making Practices Questionnaire (see Appendix C). These questions addressed the first research question: What are the roles assumed by elementary principals, elementary regular education teachers, and elementary special education teachers?

Table 5 depicts the responses according to multidisciplinary team participation levels by role. The respondents who reported involvement in team decision-making totaled 409. Principals (95.6%) indicated they were involved in multidisciplinary decision-making teams responsible for helping solve problems of referred students.
Special education teachers (84%) and regular education teachers (63.2%) also indicated involvement.

Table 5
Multidisciplinary Team Participation by Profession

<table>
<thead>
<tr>
<th>Profession</th>
<th>Does Participate (number/percent)</th>
<th>Does Not Participate (number/percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Principal</td>
<td>109/114 (95.6%)</td>
<td>5/114 (4.4%)</td>
</tr>
<tr>
<td>Elementary Regular Education Teacher</td>
<td>122/193 (63.2%)</td>
<td>71/193 (36.8%)</td>
</tr>
<tr>
<td>Elementary Special Education Teacher</td>
<td>178/212 (84.0%)</td>
<td>34/212 (16.0%)</td>
</tr>
</tbody>
</table>

Principals participate in 95.6% of MDT meetings and assume the role of team facilitator 44% of the time. Regular education teachers participate in 63.2% of MDT meetings and assume the role of team member 87.7% of the time. Special education teachers participate in 84% of MDT meetings and serve as a team member 81.5% of the time. Special education teachers (4.2%) and regular education teachers (16.7%) who did not participate in multidisciplinary team meetings indicated they were not aware a team existed and they were not invited to join. Principals (4.4%) reported lack of time as a barrier to participating as a multidisciplinary team member during the past year.

Table 6 summarizes the roles that principals, regular education teachers, and special education teachers perform within the multidisciplinary team. Respondents indicated principals (44%) to be the team facilitator, while regular education teachers perform this role 6.6% of the time.
Table 6

Role Performed Within the Multidisciplinary Team

<table>
<thead>
<tr>
<th>Professional</th>
<th>Team Facilitator</th>
<th>Team Member</th>
<th>Team Recorder</th>
<th>Team Time Keeper</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>44.0%</td>
<td>61.5%</td>
<td>5.5%</td>
<td>1.8%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>6.6%</td>
<td>87.7%</td>
<td>4.1%</td>
<td>0%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>31.5%</td>
<td>81.5%</td>
<td>16.3%</td>
<td>4.5%</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

Problem Solving Steps Followed During MDT Meetings

Problem solving steps followed during MDT meetings were determined based on responses to Questions 3, 4, 7, 8, and 10 on the Decision-Making Practices Questionnaire (see Appendix C). These questions addressed the second research question: What steps in the problem solving process did elementary principals, elementary regular education teachers, and elementary special education teachers follow during MDT meetings?

One of the first steps in the problem solving process is to contact interested parties. Principals and special education teachers typically contact the regular education teacher (99.1% and 96.0%) and parents (98.2% and 88.1%) when the team makes decisions for referred students. The regular education teacher was contacted 95.3% of the time when the team made decisions for referred students. Other individuals contacted (see Table 7) were the social worker (56%) and speech pathologist (57.1%).
Table 7

Individuals Typically Contacted When the Team Makes Decisions for Referred Students

<table>
<thead>
<tr>
<th></th>
<th>Principal</th>
<th>Regular Education Teacher</th>
<th>Special Education Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance Counselor</td>
<td>88.1%</td>
<td>77.7%</td>
<td>73.1%</td>
</tr>
<tr>
<td>Parent</td>
<td>98.2%</td>
<td>91.7%</td>
<td>88.1%</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>99.1%</td>
<td>90.9%</td>
<td>96.0%</td>
</tr>
<tr>
<td>Principal</td>
<td>90.8%</td>
<td>90.1%</td>
<td>86.4%</td>
</tr>
<tr>
<td>School Psychologist</td>
<td>77.1%</td>
<td>76.9%</td>
<td>77.1%</td>
</tr>
<tr>
<td>Social Worker</td>
<td>63.3%</td>
<td>52.9%</td>
<td>53.7%</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>89.9%</td>
<td>87.6%</td>
<td>86.9%</td>
</tr>
<tr>
<td>Speech Pathologist</td>
<td>49.5%</td>
<td>59.5%</td>
<td>60.2%</td>
</tr>
<tr>
<td>Other</td>
<td>33.9%</td>
<td>17.4%</td>
<td>39.2%</td>
</tr>
</tbody>
</table>
Another important step in MDT decision-making is conducting an evaluation process. The first step of the evaluation process is scheduling a meeting to determine the needs of referred students; 47.4% of the overall respondents reported team members individually schedule student evaluations after consultation with other team members. Fifty-three percent of regular education teachers reported team members individually scheduled without consulting, whereas 51.8% of special education teachers and 23.3% of principals reported scheduling meetings after consulting with other team members.

Team members handled the steps differently. Principals (50.5%) and regular education teachers (53.3%) indicated they make decisions to help children without testing them. Special education teachers (68.9%) indicated they make decisions to help children by testing them. Principals (15%), regular education teachers (19.7%), and special education teachers (16.4%) indicated they spent time in making decisions to help children who had been tested. In addition, regular education teachers indicated participating in special education placement meetings (13.1%) and individualized education program meetings (28.7%).

When respondents were asked how often they typically intervened with referred students, 55% indicated they helped students by trying classroom interventions before team referral. Role members (43%) indicated they helped students by contacting parents to collaborate together. Thirty-nine percent of the respondents indicated they collected data to demonstrate the effectiveness of the intervention plans. Special education teachers (28.6%) indicated involvement in helping students by requesting support staff assistance.
Twelve special education teachers added written comments expressing reluctance to request assistance for students due to the slowness of AEA personnel and the time involved documenting the assistance needed.

Table 8 depicts the frequency with which multidisciplinary team members meet. Forty-six percent of the participants indicated their MDT met on a weekly basis.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>2</td>
<td>.4%</td>
</tr>
<tr>
<td>Regularly Scheduled (Weekly)</td>
<td>242</td>
<td>46.6%</td>
</tr>
<tr>
<td>Irregularly Scheduled</td>
<td>68</td>
<td>13.1%</td>
</tr>
<tr>
<td>Only Before Assessment</td>
<td>8</td>
<td>1.5%</td>
</tr>
<tr>
<td>Only During Assessment</td>
<td>1</td>
<td>.2%</td>
</tr>
<tr>
<td>Only After Assessment</td>
<td>5</td>
<td>1.0%</td>
</tr>
<tr>
<td>Before/During Assessment</td>
<td>19</td>
<td>3.7%</td>
</tr>
<tr>
<td>Before/After Assessment</td>
<td>77</td>
<td>14.8%</td>
</tr>
<tr>
<td>Before/During/After Assessment</td>
<td>123</td>
<td>23.7%</td>
</tr>
<tr>
<td>During/After Assessment</td>
<td>9</td>
<td>1.7%</td>
</tr>
</tbody>
</table>
Table 9 describes the problem solving steps followed during the MDT decision-making process. The most significant finding indicates that team members, regardless of role, appear to suggest the need to use a measuring device to assess the effectiveness of the solutions.

Problem solving steps used by MDTs include: identifying targeted concerns, describing context and severity of concerns, participating in brainstorming solutions, implementing clearly understood solutions, assessing effectiveness with a measuring device, and setting time to reflect and evaluate.

Extent of Family Involvement in MDT Decision-Making Practices

The extent of family involvement in MDT decision-making practices were determined based on responses to Questions 3, 5, 9, 11, and 12 on the Decision-Making Practices Questionnaire (see Appendix C). These questions addressed the third research question: Were family members included in MDT decision making?

Table 10 indicates that parents are routinely contacted when teams make decisions about referred students. At least 80% of all respondents reported parents were contacted when the team makes decisions for a referred student.
Table 9

Problem Solving Steps Followed During the MDT Decision-Making Process

<table>
<thead>
<tr>
<th>Role Members</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>We clearly identified the target concerns</td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>93 (86.9%)</td>
<td>14 (13.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>111 (93.3%)</td>
<td>7 (5.9%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>160 (91.4%)</td>
<td>15 (8.6%)</td>
</tr>
<tr>
<td></td>
<td>We thoroughly described the context and severity of the concerns</td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>90 (84.1%)</td>
<td>17 (15.9%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>107 (89.9%)</td>
<td>12 (10.1%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>144 (82.2%)</td>
<td>31 (17.7%)</td>
</tr>
<tr>
<td></td>
<td>Team members participated in brainstorming solutions</td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>99 (92.5%)</td>
<td>8 (7.5%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>110 (92.4%)</td>
<td>9 (7.6%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>159 (90.9%)</td>
<td>16 (9.1%)</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Role Members</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of a solution was clearly understood by the implementer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>88 (82.2%)</td>
<td>19 (17.8%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>92 (77.3%)</td>
<td>27 (22.7%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>129 (73.7%)</td>
<td>46 (26.3%)</td>
</tr>
<tr>
<td>A measuring devise was selected to assess the effectiveness of the solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>63 (58.9%)</td>
<td>44 (41.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>72 (60.5%)</td>
<td>47 (39.5%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>104 (59.4%)</td>
<td>71 (40.6%)</td>
</tr>
<tr>
<td>We set a time to reflect and evaluate the effectiveness of solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>79 (73.8%)</td>
<td>28 (26.2%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>85 (71.4%)</td>
<td>34 (28.6%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>137 (78.3%)</td>
<td>38 (21.7%)</td>
</tr>
</tbody>
</table>
Table 10

Parent Contacted When Team Makes Decision for Referred Students

<table>
<thead>
<tr>
<th>Profession</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>98.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>91.7%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>88.1%</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

Table 11 represents the results of a 7-point Likert scale used to measure the extent of team meetings involving parents/families. Findings confirm that parents are involved in the decision-making process.

Table 11

Extent Team Meetings Involved Parents/Families

<table>
<thead>
<tr>
<th>Profession</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>98.1%</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>96.3%</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>93.4%</td>
</tr>
</tbody>
</table>
Further findings, however, illustrate a discrepancy between perceptions of respondents based on their roles within MDTs. When asked what hindered multidisciplinary team decision-making effectiveness, a combined response of all respondents (49.1%) indicated lack of family involvement. Regular education teachers (53.3%) and special education teachers (51.1%) reported lack of family involvement. Principals (41.3%) only reported family involvement as hindering decision-making effectiveness. When special education teachers served as the MDT facilitator, parents were contacted 94.5% of the time as compared to 88.1% of the time when they were not the facilitator.

**Team Building Activities Used When Forming Teams**

Team building activities used when forming teams were determined based on responses to Question 9 on the Decision-Making Practices Questionnaire (see Appendix C). This question addressed the fourth research question: Were team-building activities used to form cohesive teams?

Cohesive teams foster an atmosphere of participation and quality decision-making by distributing information prior to meetings, providing an explicit purpose, structuring information, allowing sufficient time, involving parents and families, and encouraging a common goal. Table 12 summarizes responses to questions about the team process. At least a third of all participants reported team building activities never occurred.
Table 12

Extent Activities Occurred in Multidisciplinary Team Decision-Making

<table>
<thead>
<tr>
<th>Role Members</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In %)</td>
<td>(In %)</td>
<td>(In %)</td>
</tr>
<tr>
<td>Team building activities were used to build a cohesive team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>38 (35.5%)</td>
<td>45 (42.1%)</td>
<td>24 (22.4%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>41 (35.7%)</td>
<td>48 (41.7%)</td>
<td>26 (22.6%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>70 (40.9%)</td>
<td>64 (37.4%)</td>
<td>37 (21.6%)</td>
</tr>
<tr>
<td>Information relating to referred students was distributed before the meetings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>15 (14.0%)</td>
<td>57 (53.3%)</td>
<td>35 (32.7%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>27 (22.5%)</td>
<td>58 (48.3%)</td>
<td>35 (29.2%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>44 (25.1%)</td>
<td>90 (51.4%)</td>
<td>41 (23.4%)</td>
</tr>
<tr>
<td>The purpose of meetings was made explicit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>0</td>
<td>29 (26.9%)</td>
<td>79 (73.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>4 (3.3%)</td>
<td>29 (24.0%)</td>
<td>88 (72.7%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>6 (3.4%)</td>
<td>45 (25.6%)</td>
<td>125 (71.0%)</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Role Members</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information was obtained, organized, and presented in a structured manner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>0</td>
<td>29 (27.1%)</td>
<td>78 (72.9%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>2 (1.7%)</td>
<td>30 (24.8%)</td>
<td>89 (73.6%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>9 (5.1%)</td>
<td>63 (35.8%)</td>
<td>104 (59.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sufficient time was allowed to make effective decisions for each referral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>0</td>
<td>29 (26.9%)</td>
<td>79 (73.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>5 (4.2%)</td>
<td>43 (35.8%)</td>
<td>72 (60.0%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>9 (5.2%)</td>
<td>75 (43.6%)</td>
<td>88 (51.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team meetings involved parents/families</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal</td>
<td>8 (7.4%)</td>
<td>48 (44.4%)</td>
<td>52 (48.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>14 (11.8%)</td>
<td>53 (44.5%)</td>
<td>52 (43.7%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>32 (18.5%)</td>
<td>70 (40.5%)</td>
<td>71 (41.0%)</td>
</tr>
</tbody>
</table>

(table continues)
All team members had the opportunity to contribute

<table>
<thead>
<tr>
<th>Role Members</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>0</td>
<td>4 (3.7%)</td>
<td>104 (96.3%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>1 (.8%)</td>
<td>8 (6.6%)</td>
<td>112 (92.6%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>3 (1.7%)</td>
<td>23 (13.1%)</td>
<td>150 (85.2%)</td>
</tr>
</tbody>
</table>

The team facilitator strongly encouraged a common team purpose

<table>
<thead>
<tr>
<th>Role Members</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>0</td>
<td>15 (13.9%)</td>
<td>93 (86.1%)</td>
</tr>
<tr>
<td>Regular Education Teacher</td>
<td>5 (4.2%)</td>
<td>26 (21.8%)</td>
<td>88 (73.9%)</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>9 (5.2%)</td>
<td>37 (21.3%)</td>
<td>128 (73.6%)</td>
</tr>
</tbody>
</table>
Perception of Effectiveness: A Post Hoc Analysis

An analysis of Questions 11 and 12 from the Decision-Making Practices Questionnaire (see Appendix C) revealed a number of findings concerning the participants perceptions of the effectiveness of MDTs that were not addressed by the research questions. These findings will be discussed below.

Ratings of the effectiveness of multidisciplinary team decision-making practices varied among role members. Principals (47.7%) indicated 76-100% of practices were effective in helping students make desired changes. Regular education teachers (50.8%) and special education teachers (45.1%) indicated 51-75% of practices were effective in helping students make desired changes. In addition, when special education teachers were team facilitators they (41.8%) indicated 75-100% of practices were effective in helping students make desired changes as compared to indicating 51-75% of practices were effective when serving as a team member.

Respondents also indicated certain barriers hindered MDT effectiveness. Principals reported (36.7%) a lack of training in a variety of research interventions as hindering multidisciplinary team effectiveness, as compared to regular education teacher (19.7%) and special education teacher (27.5%) responses. Lack of time to complete decisions (32%) was also perceived, among respondents, to hinder multidisciplinary team decision-making effectiveness.

Further, it is noteworthy that 77 (15%) out of 519 respondents added unsolicited written comments addressing their concerns. Twenty-seven regular education teachers (14%) and 36 special education teachers (17%) across various AEAs addressed concerns
regarding inconsistent MDT evaluations, lack of clarity and role responsibilities, and lack of time to adequately determine and address the needs of referred students. Further, an additional 14 special education teachers (6.6%) appeared frustrated with the slowness of AEA support and politics of the principals’ agenda.
CHAPTER V
DISCUSSION

Multidisciplinary problem solving teams have become a pervasive practice in the United States (Carter & Sugai, 1989) and particularly Iowa (Reschly et al., 1998), with proponents contending that MDTs offer a more collaborative way of addressing children’s problems than previous approaches (Maher & Yoshida, 1985; Rosenfield, 1992). Despite proponents’ support for an ecological perspective and collaborative problem solving, as well as growing evidence of the importance of systematic problem solving processes, limited research of the effectiveness of MDT problem solving practices is reported in the literature (Chalfanto & Pysh, 1989).

The purpose of this study was to investigate the functioning of MDTs in Iowa. Roles assumed by elementary principals, elementary regular education teachers, and elementary special education teachers were studied to understand MDT decision-making. Respondents reported on their own team’s: (a) roles assumed by MDT members, (b) steps of systematic problem solving, (c) extent of family involvement, and (d) team building activities used when forming teams. In the remainder of this chapter, major findings are summarized, the practical implications of these findings are explored, and suggestions for further research are offered.

Summary of Major Findings

Roles Assumed By MDT Members

Findings from Chapter IV indicate that MDT members assume various roles in the decision-making process. Principals participate in MDT decision-making 95.6% of
the time, serve as team facilitator 44% of the time, and are responsible for contacting parents (99.1%) and regular education teachers (96.0%). They do not perceive time as a barrier to effectiveness (4.4%). Principals rate 35.8% of MDT decision-making as 51-75% effective and 47.7% as 76-100% effective. These findings may suggest that principals perceptions may be influenced by their leadership role and their need to communicate a socially accepted message.

Regular education teachers participate in MDT decision-making 63.2% of the time, are team members 87.7% of the time, and reported 53% of the time they were not consulted about referred students. Regular education teachers rate 50.8% of MDT decision-making as 51-75% effective and 26.7% as 76-100% effective. These findings suggest that regular education teachers are less involved, less powerful participants, and less satisfied in the MDT decision-making process.

Special education teachers participate in the MDT decision-making process 84% of the time, are team members 81.5% of the time, and are responsible for contacting parents (88.1%) and regular education teachers (96.0%). Special education teachers rate 45.1% of MDT decision-making processes as 51-75% effective and 29.7% as 76-100% effective. These findings suggest special education teachers are more involved than regular education teachers but are less powerful and less satisfied than principals.

Problem Solving Steps Followed During MDT Meetings

Overall, principals, regular education teachers, and special education teachers were most frequently involved in the first step of the problem solving process, defining the problem, and the third step, brainstorming solutions. It appeared that principals,
regular education teachers, and special education teachers all seemed to participate in problem solving with the same proportion or have the same proportions across steps of problem solving. Team members reported less frequent involvement in describing the context and severity of the concerns, implementing a solution, using a measuring device to assess the effectiveness of the solutions, and setting a time to reflect and evaluate the effectiveness of solutions. This finding is encouraging insofar as problem identification is generally considered the most critical stage in collaborative problem solving (Schon, 1983). How a problem is defined reflects the underlying attributions for the problem and these attributions will strongly influence the exploration and development of interventions.

Other findings suggest that most of the students referred for MDT meetings have not been tested and 50.5% of principals and 53.3% of regular education teachers are making decisions without using test data. This would seem to indicate that decision-making processes at MDT meetings are not driven by data.

Extent of Family Involvement in MDT Decision Making Practices

Results of the current study found generally high parent involvement with MDTs. Parents were viewed as moderately involved in initial contact for a referred student. However, parents were viewed as significantly less involved when the total years of service by teachers and administrators was less than 20 years.

An interesting finding was the discrepant perceptions of family involvement. Principals, regular education teachers, and special education teachers who overwhelmingly reported parent/family involvement in decision-making for referred
students also most frequently reported lack of family involvement hindered MDT decision-making effectiveness. Principals (2%), regular education teachers (19%), and special education teachers (31%) added written comments most frequently focusing on lack of family involvement as a barrier to effective decision-making. This finding was particularly interesting since principals (98.2%), regular education teachers (91.7%), and special education teachers (88.1%) reported parent involvement occurred in team decision-making. These findings suggest parents may be contacted but not involved in the decision-making process, which may suggest a need to draw parents into the process to ensure a quality outcome.

Consistent with the research findings of Christenson and Buerkle, (1999), Henderson and Berla (1994), and Galloway and Sheridan (1994), families are essential to the optimal success of students in schools. The effects of parent participation in education on both teachers and children has been well documented; Christenson (1995) reports as parents become more involved in education, teachers become more easily recognized by parents for better teaching, better interpersonal skills, and teachers themselves indicate greater satisfaction with their jobs.

**Team Building Activities Used When Forming Teams**

When team building activities do occur, they typically include building a cohesive team, distributing information before the meeting, purpose was made explicit, information was organized, obtained, and presented in a structured manner, sufficient time to make effective decisions, meetings involved parents, all team members had an opportunity to contribute, and a common team purpose was encouraged. Over a third of
all participants report that team building activities never occur as part of the MDT process.

The analysis of data is consistent with reports in the professional literature that MDTs often go into operation without adequate team building and training (Curtis et al., 1988). Consistent with these findings, team building activities on the Decision-Making Practices in Iowa Schools Questionnaire was rated significantly below all other areas of team development.

As indicated in the literature (Huebner & Hahn, 1990), without training in team process skills, some teams are no more effective than individuals (p. 237). Moreover, when teams are simply assimilated, key structural components and processes of effective teams are limited from the start (Fleming & Fleming, 1983; Rosenfield & Gravois, 1996). Without team building activities and developmental processes, the inherent effectiveness of the team is undermined. Therefore, it is imperative to understand the developmental processes MDTs experience and develop team training processes essential for effective team decision-making.

Perception of Effectiveness: A Post Hoc Analysis

Perceptions of effectiveness differed among principals, regular education teachers, and special education teachers according to their roles. For example, written comments by 36 (17%) special education teachers reported unfavorable opinions regarding the effectiveness of the MDT decision-making process. Further, participants reported a lack of time to make effective decisions for each referral and a lack of parental involvement as barriers likely to impede the effectiveness of the process. As a whole,
regular education teachers and special education teachers (49.1%) perceived 51-75% of their MDT decision-making practices to be effective in helping students make desired changes. It appeared that regular and special education teachers, those who are most involved in working with the students, are consistently the most concerned with MDT activities and the outcomes. Sarason (1982, 1990) cited a litany of unsuccessful educational reforms that failed to consider the relationship of major stakeholders, most often teachers, to the planning and development of innovations.

It is notable that the individuals most responsible for implementation of team decisions, regular education teachers and special education teachers, were the individuals who were least satisfied with the process. These findings are consistent with previous findings of Yoshida et al. (1978); participation in the decision-making process is related to satisfaction with the process.

According to Yoshida et al. (1978), regular education teachers, who are pivotal persons in implementing the decisions, are low in participation and are generally less satisfied with the team process. This study concurs that the minimal involvement of classroom teachers in the development of teams and their absence as standing team members combine to create the impression of MDTs as a procedural hurdle rather than a team problem solving effort. Efforts need to address regular education teachers' and special education teachers' concerns regarding participation and effective team decision-making to ensure implementation of the final MDT decision. Ultimately, these regular education teachers and special education teachers play direct and influential roles in the implementation of interventions and supporting referred students.
Implications for Multidisciplinary Team Decision-Making

The results of this investigation raise several implications for multidisciplinary teams. First, effective MDT decision-making is not occurring to the extent desired by all team members. Principals, despite their consistent involvement in all stages of decision-making and their frequent role as team facilitators, may be unaware of the implications of team decisions. Principals rank highest in team participation (95.6%) and as team facilitators (44%). Regular education teachers' participation appears to vary across interventions. Special education teachers may not become substantially involved until the final stages of decision-making (placement and development of the IEP). This finding is interesting because regular and special education teachers are most responsible for the implementation of team recommendations. Principals must develop ways to involve regular education teachers and special education teachers more consistently in order to facilitate effective, nonspecialized participation in MDT decision-making.

Second, team facilitators are unaware of or are not utilizing those skills that would encourage participation and facilitate team member input and discussion. Training of team facilitators in those skills is needed. Team facilitators must consider the power of their influence on other role members, especially regular education teachers, in order to increase effective MDT decision-making.

The third implication has the most impact of all. It appears that regular education and special education teachers report MDT decision-making to be between 51-75% effective. Effective decision-making ensuring appropriate decisions with which all members are satisfied appears essential for the effective implementation of
recommendations. To achieve this, a more collaborative decision-making process in which all members are equally involved is needed, as suggested by the findings of Armer and Thomas (1978). It seems regular education teachers and special education teachers who are most responsible for the implementation of team decisions are the least satisfied. Regular education teachers and special education teachers may need to be involved in the earlier stages of MDT decision-making to ensure the effective implementation of team recommendations. Without this involvement the effective provision of appropriate services to children may be compromised.

In examining MDT decision-making practices in Iowa elementary schools, Stack (1997) found that although time and resources were allocated to decision-making practices, systematic problem solving was not being practiced and parents were not visibly included in the process. These findings further suggest that although research on effective teams has provided a basis for improving decision-making practices, the generalizations are far more prescriptive. A number of hurdles challenge successful implementation of MDT decision-making. Thus, narrowing the gap between research and practice is essential to effective MDT decision-making.

Implications for Future Studies

A review of the literature revealed a need for naturalistic observations of multidisciplinary team decision-making. Empirical evidence from systematic observations of MDT decision-making is needed. Research correlating these observations with perceived levels of participation would be helpful for training implications. Systematic observation of interactions within MDTs would help in further
understanding the power differential that may be occurring between role members. This may provide information that could be used in training designed to enhance role member satisfaction. Finally, identifying those activities to include in team training programs may enhance decision-making outcomes.

Beyond systematic observation, research is needed to verify the effectiveness of MDT training programs. Research examining role member training and team process skills is needed in order to identify effective content and methods. This would greatly assist in designing professional skill development programs, which would increase both the participation and effectiveness of multidisciplinary team members. In addition, future research activities may also continue to identify and refine leadership skills necessary for facilitating MDTs. Determining differences between principals, regular education teachers, and special education teachers perceived MDT participation and effectiveness may clarify specific domains of leadership. Finally, the findings from this study indicate that sustained continuing education training in team problem solving is needed to advance quality student outcomes.

Limitations

Some limitations must be considered when interpreting the results of this investigation. A critical barrier with the Decision-Making Practices Questionnaire is its attempts to measure principal, regular education teacher, and special education teacher perceptions regarding certain activities involved in the MDT decision-making process. One challenge with this type of research is data based on perceptions may or may not correlate with actual behaviors. Thus, inconsistencies in reporting and rating scales, as
well as capricious role member comments, made it challenging to compare responses. Further, respondents may have perceived pressure to answer questions in a socially acceptable manner. Fears of appearing deficient in mandated practices might also have influenced inaccurate responses.

Conclusions

Multidisciplinary team decision-making has great promise. Proponents claim numerous advantages when multiple professionals work together cooperatively to determine the needs of referred students. However, as of yet we do not have a substantial body of empirical data supporting the many purported benefits of MDT decision-making. It appears evident members recognize the importance of a systematic MDT process and the value of implementing team decisions. However, this is not always the perspective of principals, regular education teachers, and special education teachers who participate on MDTs. For example, findings in this study illustrate that regular education teachers and special education teachers rate MDT decision-making as 51-75% effective.

Before the promise of MDT decision-making can be realized future questions need to be addressed. First, training procedures must be developed and implemented before teams are formed. Second, the role of facilitator must be accurately defined. Furthermore, strategies for procuring teacher integration into MDT meetings are going to require the support of administrators to secure release time and schedule adjustments for attendance at team meetings. In conclusion, multidisciplinary teams may benefit from training designed to increase successful decision-making. The legislation mandating
multidisciplinary team decision-making can be validated if teams successfully carry out effective decisions and appropriately serve referred children.
REFERENCES


APPENDIX A

HEARTLAND AEA 11 PROBLEM SOLVING MODEL
APPENDIX A

Heartland Area Education Agency 11 Problem Solving Model

APPENDIX B

GRANT WOOD AEA 10 SOLUTION FOCUS PROCESS
APPENDIX B

Grant Wood's Solutions Focus Process

APPENDIX C

DECISION-MAKING PRACTICES QUESTIONNAIRE
Decision-Making Practices in Iowa Schools

All questions should be answered based on your experiences during the 1999-2000 school year.

** The word multidisciplinary team used throughout the questionnaire refers to an individual or a group of people who make decisions regarding children who are referred for special concerns. Some schools may refer to multidisciplinary teams as pre-referral teams, child study teams, teacher assistance teams, and many other designations.

Please respond to each of the following by checking the appropriate blank.

1. Are you involved in any multidisciplinary decision-making team responsible for helping solve problems of referred students?
   
   ___ Yes  ___ No

   If you answered NO, answer question 2 (omit questions 3-14) and complete questions 15-18.

   If you answered YES, omit question 2 and complete questions 3-18.

2. If YOU answered NO to participating in multidisciplinary team meetings, what hinders your participation in such team activity?

   No team established in school  ___ Yes  ___ No
   Lack of interest  ___ Yes  ___ No
   Lack of time  ___ Yes  ___ No
   Lack of personal training  ___ Yes  ___ No
   Uninformed that team existed  ___ Yes  ___ No
   Not invited to join the team  ___ Yes  ___ No
   Other _____________________________

3. When the team makes decisions for referred students, with which of the following individuals do you typically have contact? (Check all titles that apply)

   ___ Guidance Counselor  ___ Social Worker
   ___ Parent  ___ Special Education Teacher
   ___ Regular Class Teacher  ___ Speech Pathologist
   ___ School Principal  ___ Other (Please specify)
   ___ School Psychologist  ___
** The word multidisciplinary team used throughout the questionnaire refers to an individual or a group of people who make decisions regarding children who are referred for special concerns. Some schools may refer to multidisciplinary teams as prereferral teams, child study teams, teacher assistance teams, and many other designations.

4. Check the one method most frequently used to conduct multidisciplinary team evaluations to determine the needs of a referred student in your school.

   _____ Team members individually schedule evaluations without consulting with other team members.
   _____ Team members individually schedule evaluations after consultation with other team members.
   _____ Team members schedule joint evaluations.
   _____ One team member schedules evaluation for all other team members.
   _____ Other (Please specify) ____________________________

5. Which role(s) do YOU perform within the multidisciplinary team?

   _____ Team Facilitator    _____ Team Recorder
   _____ Team Member          _____ Team Time Keeper
   _____ Other (Please specify) ____________________________

6. Please check the activity in which you spent most of your time as a participating multidisciplinary team member during the past year.

   _____ (a) Making decisions to help children without testing them.
   _____ (b) Making decisions to help children who have been tested.
   _____ (c) Participating in special education placement meetings.
   _____ (d) Participating in Individualized Education Program meetings.
   _____ (e) Other (Please specify) ____________________________

7. Listed below are times interventions occur with students. Place a 1, 2, 3, 4, or 5 in each blank to indicate how often you typically intervened with referred students during the 1999-2000 school year.

   1 2 3 4 5
   Most of the time Half of the time None of the time

   _____ Helped students by trying classroom interventions before team referral.
   _____ Collected data to demonstrate effectiveness of the intervention plans.
   _____ Helped students by contacting parent to collaborate together.
   _____ Helped students by asking building colleagues for assistance.
   _____ Helped students by requesting support staff assistance.
8. How often does the multidisciplinary team in which you participate meet? (Place a check only in the blanks that best describe what happened during the 1999-2000 school year.)

Never □ Regularly Scheduled Time □ Only after assessment □
Irregularly Scheduled Time □ Before and during assessment □
Only before assessment □ Before and after assessment □
Only during assessment □ Before, during and after assessment □

9. Using the 7-point scale below, please indicate the extent to which the following activities occurred in your multidisciplinary team decision-making process by writing the appropriate number in the space corresponding to each item.

1 2 3 4 5 6 7
Never Sometimes Always

Team building activities were used to form a cohesive team. □
Information relating to referred students was distributed before the meetings. □
The purpose of meetings was made explicit. □
Information was obtained, organized, and presented in a structured manner. □
Sufficient time was allowed to make effective decisions for each referral. □
Team meetings involved parents/families. □
All team members had the opportunity to contribute. □
The team facilitator strongly encouraged a common team purpose. □

10. Place a check next to each item that best describes the steps you followed during team meetings?

(a) We clearly identified the target concerns. □
(b) We thoroughly described the context and severity of the concerns. □
(c) Team members participated in brainstorming solutions. □
(d) Implementation of a solution was clearly understood by the implementer. □
(e) A measuring device was selected to assess the effectiveness of the solutions. □
(f) We set a time to reflect and evaluate the effectiveness of solutions. □

11. How would you rate the effectiveness of your multidisciplinary team decision-making practices during the 1999-2000 school year?

<25% of our practices were effective in helping students make desired changes. □
25-50% of our practices were effective in helping students make desired changes. □
51-75% of our practices were effective in helping students make desired changes. □
76-100% of our practices were effective in helping students make desired changes. □
12. What hindered your multidisciplinary team decision-making effectiveness? (Check all that apply)

_____ Lack of training in a variety of research based interventions.
_____ Lack of family involvement.
_____ Lack of interdisciplinary collaboration.
_____ Team facilitator lacked skills in team leadership.
_____ Lack of time to complete decisions.
_____ Lack of training in the decision-making process.
_____ Lack of understanding and clarity of role responsibilities.
_____ Other (Please specify) ________________________________

13. How many students were served by the multidisciplinary team in which you participated in the 1999-2000 school year?

_____ 0  _____ 1-5  _____ 6-10
_____ 11-20  _____ 21-40  _____ 41-100
_____ 101-200  _____ 200+

14. What is the total current certified enrollment of your school district?

_____ 0-299  _____ 300-599  _____ 600-899  _____ 900-1,199  _____ 1,200+

15. What is your AEA number or name? ________________________________

16. How many total years (including the current year) have you served as a teacher or administrator?

_____ 0-5  _____ 6-10  _____ 11-15  _____ 16-20  _____ 20+

17. What is your highest academic degree?

_____ BA  _____ Masters  _____ Specialist  _____ Doctorate

18. What is your gender?  _____ Female  _____ Male

PLEASE RETURN THIS COMPLETED QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.
APPENDIX D

DECISION-MAKING PRACTICES COVER LETTER
September 15, 2000

Dear Professional Educator:

As a graduate student in the School Psychology Specialist Program at the University of Northern Iowa, I am currently creating a plan to help schools incorporate state-mandated problem-solving strategies. In order to get a comprehensive look at problem-solving in Iowa schools, I am gathering data through randomly-distributed surveys. Teachers from your school have been randomly selected to complete a short questionnaire on decision-making practices. The typical time to complete this questionnaire is around 10 minutes. Your timely response will contribute to findings that will help ensure quality services to all students. In appreciation for your time, I have enclosed some tea for you to enjoy while completing the questionnaire.

I am asking for your help in completing the questionnaire and returning it in the enclosed envelope by September 30th. Your individual identity and that of your school will not be used in the study; however your area education affiliation will be identified in the analysis and reporting of data. Because this study utilizes random sampling, it is possible that other teachers in your school will not receive the survey.

I hope you will find the instructions quite clear and understandable. However, if you have any specific questions, please feel free to call me at (319) 266-1798 or write me via e-mail (Meyerd6471@uni.edu). Finally, I wish to sincerely thank you for your assistance in helping me help Iowa schools.

Sincerely,

Deb Meyer, M.A. 
UNI Graduate Student

Annette Carmer, Ph.D.
UNI Research Supervisor

PLEASE RETURN THESE QUESTIONNAIRES IN THE ENCLOSED, SELF-ADDRESSED, STAMPED ENVELOPE.

If you do not use the enclosed envelope, please return the questionnaire to:

Department of Educational Psychology and Foundations
617 Schindler Education Center
Attention: Debra Meyer
University of Northern Iowa
Cedar Falls, Iowa 50614-0607