The use of a transdisciplinary model with early childhood: exceptional educational needs programs

Lisa Marie Anderle

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THE USE OF A TRANSDISCIPLINARY MODEL
WITH EARLY CHILDHOOD: EXCEPTIONAL EDUCATIONAL NEEDS
PROGRAMS

by
Lisa Marie Anderle

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[Signature]
Adviser

Mar. 1, 1991
Date
ACKNOWLEDGEMENTS

This paper is dedicated to my mom and dad . . . .

You are the wind beneath my wings.
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CHAPTER I

Introduction

When Public Law 99-457, the Education of the Handicapped Amendments became a reality, it challenged early intervention professionals to reexamine models for team intervention. To be effective in serving the diverse and complex needs of young children with handicaps and their families, teams will need to analyze their own structure and function, arriving at a consensus about their team goals and then choose a model of team interaction that allows these goals to best be met. Although there are numerous models teams could adopt, it is the belief of the author that the transdisciplinary approach appears to be the most effective.

Purpose of the Study

There are a myriad of team approaches cited in the literature to date. This paper was written specifically on the approach originally developed by the United Cerebral Palsy Collaborative Infant Program in 1976 which since then, has been expounded upon by numerous professionals.

The purpose of the study was to conduct an in-depth investigation into the efficacy of the transdisciplinary model; its application and effectiveness as well as its drawbacks and inadequacies.

The research provided an overview of the model's structure and function and provided information on its
application. Precautions as well as strategies to overcome concerns have been cited.

Scope and Limitations

Although the transdisciplinary model could be implemented with any age or disability group, the author chose to focus on its effectiveness with early childhood age children with handicaps and their families.

Definitions

For ease of understanding, the following terms have been defined:

- **Public Law 99-457**: This legislation appears as a part of the existing Education of the Handicapped Act (94-142) which guarantees rights and protections to children with handicapping conditions. This additional piece of legislation expands the age of those protected to include children birth through five years of age and their families.

- **Transdisciplinary**: "of, or relating to a transfer of information, knowledge, or skills across disciplinary boundaries" (United Cerebral Palsy, 1976, p. 1)

- **Discipline(s)**: Area of professional background, a specific field of study.

- **Assessment**: "Either a test of an observation that determines a child's
strengths and/or weaknesses in a particular area of development."
(Cook, Tesser, Ambruster, 1987, p. 49)

-Individualized Family Service Plan (IFSP):
Formulated by the program staff and family based upon assessment data on the child's developmental status in the areas of: physical, cognitive, language and speech development, psychosocial development and self-help skills. Goals for the family are also written. Long and short term objectives, criteria, procedures, and timelines are included in the plan. Goals are written with the intention that the child and family will achieve them within one year of the development of the plan.

Summary
Provisions in Public Law 99-457 are requiring educational teams to become more cognizant of the structure and function of team dynamics to best meet the diverse and complex needs of young children with handicaps and their families. The purpose of this paper was to provide the reader with an overview of the transdisciplinary team approach and present it as a viable means with which to implement optimum services for the aforementioned population. The paper was limited to one model of teaming so as to give a more detailed description of its structure.
In order to clarify specific nomenclature, definitions were provided.

The following chapter describes the transdisciplinary team components and their use with young children having handicapping conditions and their families.
Public Law 99-457, the Education of the Handicapped Act Amendments of 1986, gives considerable attention to the necessity of a team approach to organizing services for young children with handicaps and their families. The support was in part a result of the Education of the Handicapped Act and in part a result of the growing recognition that no one discipline can meet the diverse and complex needs of young children and their families (McGorlgei, Garland, 1988). Though Public Law 99-457 has specified services required to meet their specific needs, it has not incorporated guidelines to maximize communication and provide collaborative services among various disciplines and parents. Thus, it has left professionals and parents to adopt a method of teaming that best allows goals to be met.

A review of the three most common models for team interaction and usual procedures for assessment and program planning cited in the literature are: multidisciplinary, interdisciplinary, and transdisciplinary. All three models are based on a team comprised of professions from a variety of disciplines, often including education, social work, medicine, physical therapy, occupational therapy, and speech/language pathology. Families are included on these teams in various ways and degrees.

Although the composition and tasks may be quite similar for multidisciplinary, interdisciplinary and
Transdisciplinary Model 11

transdisciplinary teams, the method of operation is quite different. Each team model provides a structure for team communication and interaction. Woodruff and Hanson (1987) have illustrated the similarities and differences in these team interaction models as they relate to early intervention program components.

The Disciplinary Models

While similar in many respects, the three models have several distinctive features.

Insert Figure 1 about here.
### Three Models for Early Intervention

<table>
<thead>
<tr>
<th>Model</th>
<th>Multidisciplinary</th>
<th>Interdisciplinary</th>
<th>Transdisciplinary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Separate assessments by team members</td>
<td>Separate assessments by team members</td>
<td>Team members and family conduct a comprehensive developmental assessment together</td>
</tr>
<tr>
<td>Parent Anticipation</td>
<td>Parents meet with individual team members</td>
<td>Parents meet with team or team representative</td>
<td>Parents are full, active, and participating members of the team</td>
</tr>
<tr>
<td>Service Plan</td>
<td>Team members develop separate plans for their discipline</td>
<td>Team members share their separate plans with one another</td>
<td>Team members and the parents develop a service plan based upon family priorities, needs, and resources</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Team members are responsible for implementing their section of the plan</td>
<td>Team members are responsible for sharing information with one another as well as for implementing their section of the plan</td>
<td>Team members are responsible and accountable for how the primary service provider implements the plan</td>
</tr>
<tr>
<td>Service Plan</td>
<td>Team members implement the part of the service plan related to their discipline</td>
<td>Team members implement their section of the plan and incorporate other sections where possible</td>
<td>A primary service provider is assigned to implement the plan with the family</td>
</tr>
<tr>
<td>Implementation</td>
<td>Informal lines</td>
<td>Periodic case-specific team meetings</td>
<td>Regular team meeting where continuous transfer of information, knowledge, and skills are shared among team members</td>
</tr>
<tr>
<td>Lines of Communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding Philosophy</td>
<td>Team members recognize the importance of contributions from other disciplines</td>
<td>Team members are willing and able to develop, share, and be responsible for providing services that are a part of the total service plan</td>
<td>Team members make a commitment to teach, learn, and work together across discipline boundaries to implement unified service plan</td>
</tr>
<tr>
<td>Staff Development</td>
<td>Independent and within their discipline</td>
<td>Independent within as well as outside of their discipline</td>
<td>An integral component of team meetings for learning across disciplines and team building</td>
</tr>
</tbody>
</table>

Multidisciplinary Model. The multidisciplinary team is comprised of professionals with expertise in different disciplines who independently assess, develop plans and implement their section of the whole plan for a child. Peterson (1987) compares the mode of interaction among members of multidisciplinary teams to parallel play in young children, "side by side, but separate." The work of each team member is viewed as important, but the team members are primarily concerned with the clinical issues of their own discipline (McGonigel, Garland, 1988). As a result of this, the structure among team members does not foster services that reflect the view of the child as an integrated and interactive whole (Linder, 1983).

Another concern about this model is the lack of communication among team members that places the burden of coordination and case management on the family. In contrast, both the interdisciplinary and transdisciplinary approaches avoid the pitfalls of multidisciplinary service fragmentation by having the team develop a case management plan that coordinates both their services and the information that is presented to the family (Woodruff, McGonigel, 1988).

Interdisciplinary Model. Interdisciplinary teams are also composed of professional from a variety of disciplines and parents. Interdisciplinary teams are characterized by more formal channels of communication that encourage team members to share their information and discuss results.
Regular meetings are usually scheduled to discuss shared cases.

Though each professional separately assesses children and families, the team does come together to discuss his/her results and cooperatively discuss a program plan. Although the team develops a service plan jointly, each staff member is usually responsible for the part of the plan related to his/her professional discipline (McGonigel, Garland, 1988).

The plan is implemented by a primary facilitator or case manager. The duties delegated to this case manager are decided on by the team, but they usually include tasks such as coordinating individual assessments, explaining the team evaluations to the family, running the staffing and parent conferences, making sure that paperwork is completed, and making arrangements for follow-up. The case manager is also the primary contact person for the family; channelling specific questions to the appropriate disciplines (Holm, McCartin, 1978).

Many families of young children with special needs report that they are uncomfortable dealing with several professionals at a time, some of whom may have differing and contradictory perspectives. Having one provider who represents the team is an aspect that is particularly valued by families.

Though the interdisciplinary approach offers more communication among its members, problems in communication and interaction still arise between professionals due to
lack of full understanding of the professional training and expertise of the members from other disciplines on the team (Fewell, 1983, Linder, 1983).

A major contributor to miscommunication and understanding stems from an element used in both the multidisciplinary and interdisciplinary approaches which is called and "isolated therapy model" (Sternat et al., 1977). This term refers to the delivery of therapy services outside of the settings in which students are expected to perform the skills that are being trained. Isolated therapy settings usually consist of special therapy rooms (Orelow, Sobsey, 1987). Therapists are trained to deliver services to persons directly, usually for the purpose of enhancing student performance in one skill area. There is typically little interaction with the classroom teacher or other disciplines as to the specific skill being taught.

There are several problems with an isolated therapy model (Albano et al., 1981, Sternat et al., 1977). First because skills are not assessed in a student's natural environments, the outcomes may not be representative of what the student actually can do in those settings. Second, assessments often test specific, isolated skills instead of clusters of skills used in every day activities. Third, the assessments frequently result in diagnostic labels and descriptions of students' performances, but fail to include suggestions to help teachers and other professionals to remediate skill deficits. Fourth, when team members work in
Transdisciplinary Model. Originally designed to serve high-risk infants, the transdisciplinary approach has been embraced by programs educating children with multiple disabilities. The model is characterized by sharing, or transferring, of information and skills across traditional disciplinary boundaries (Orelove, Sobsey, 1987). It integrates goals and objectives from various disciplines. The integration begins in the assessment process and extends through direct programming efforts. Team members and family conduct a comprehensive developmental assessment together. Parents are full, active and participating members of the team. The team and the parents develop the service plan based upon family priorities, needs and resources (McGonigle, Garland, 1988). Similar to the interdisciplinary model, a case manager is assigned, typically the educator. In the transdisciplinary model, the team members are not only responsible and accountable for the service they provide; they are responsible and accountable for how the case manager implements the plan. This is facilitated through regular team meetings where continuous transfer of information, knowledge, and skills are shared among team members. Team members make a commitment to teach, learn and work together across
discipline boundaries to implement a unified service plan. An integral component of team meetings is learning across disciplines and team building (Woodruff, Hanson, 1987).

A key element in the success of the collaboration is largely due to an approach to therapy referred to as an "indirect approach" as opposed to the aforementioned "isolated therapy" utilized by the multidisciplinary and interdisciplinary approaches. In an indirect approach, the therapist becomes involved to a greater extent in a consultive role to the educator. Therapy is set up in blocks of time, usually four to six hours per week and performed in the classroom as opposed to a separate therapy room. The therapist typically works with more than one student during this time period. The educator/teacher schedules his/her time so that he/she is instructing or around the activities during this time block so he/she is able to observe and learn the techniques the therapist(s) are using so carryover of the skill can occur at other times during the day when appropriate. Ideally, other therapists would try to overlap their time with other therapists for total team input. An example would be if a child needed specific positioning at a table due to balancing difficulties (a physical therapist activity) in order to feel secure enough to be able to write or cut (an occupational therapist activity). If the occupational therapist is aware of a specific position in which a child feels secure, that child may be better able to perform
writing and cutting activities. Without knowing the correct positioning at the table, the occupational therapist may not see what the child is truly capable of during fine motor activities because the child doesn’t have a stable base from which to then utilize his/her fine motor skills.

Working closely with other team members allow instructional goals to be integrated across the day and taught in functional settings. In essence, the child ends up receiving therapy every day, throughout the day. It should be said that this model does not assume that the teacher takeover the therapists’ role. "It is because of the need for the therapists' expertise that this model has become so popular" (Orelue, Sobsey, 1987, p. 12). By working closely together, team members understand and respect each other’s areas of specialty more, make more accurate observations across disciplines, and are able to converse with each other regarding a child’s needs and see him or her as a whole child.

Characteristics of Transdisciplinary Model

Continuum of Interaction. Though, as noted, all three approaches of team interaction utilize professionals from a variety of disciplines, interaction and service implementation vary greatly. Another way of viewing them is to consider them as points along a continuum, moving from less to more interaction among disciplines.
The perspective of a continuum also acknowledges the progression of individual staff members and of teams as they become more experienced and recognize the merits of transdisciplinary exchange. Seen in this light, the transdisciplinary approach can be regarded as evolutionary for early intervention teams who, with experience and training, learn to increase interaction among members and among disciplines.

(Woodruff, McGonigle, 1988, p. 168)

**Role Release.** In order for a group of professionals to function jointly as a team and to continue developing expertise both individually and as a group, at least some roles and responsibilities must be shared and accepted by more than one team member (Lyon & Lyon, 1980).
Multidisciplinary

Recognizing that other disciplines, also, have important contributions to make to the habilitation of individuals at risk, or with known neuromotor and neurosensory handicaps and/or mental retardation. Enunciating an activating philosophy that comprehensive services based on the habilitation needs of the individual must be made available to all who are handicapped.

Interdisciplinary

Willing and able to work with other disciplines in the development of jointly planned programs for individuals and groups, and to assume responsibility for providing needed disciplinary services and treatment, as a part of the total habilitation program.

Transdisciplinary

Committing yourself to teaching/learning/working together with other providers of services across traditional disciplinary boundaries.

-United Cerebral Palsy, Nationally Organized Collaborative Project to Provide Comprehensive Services for Atypical Infants and their Families, 1976, p. 2.
The United Cerebral Palsy National Collaborative Infant Project (1976) called stages of transdisciplinary development "role release." Role release is, by consensus, "an authorization by the appropriate discipline for a team member or a parent to carry out specific interventions called for in the child's program. The ability to do this is attained by the use of systematic teaching-learning experiences which cross disciplinary boundaries. As a result, team members are enabled to function as program facilitators, and parents are enabled to fulfill their role as primary teachers and home therapists for their child." (p. 16).

Early intervention administrations and program planners interested in establishing transdisciplinary services must become familiar with the entire role release process, for it is central to the functioning of a transdisciplinary team. Successful implementation of this process requires almost constant attention to team building and team maintenance activities. Without the necessary commitment from administrative staff, the transdisciplinary team cannot have adequate time and support for successful role release (Woodruff, McGonigel, 1988).

Role Release. The individual team member is able to carry out the learned intervention, having been authorized by the appropriate discipline that the member's new knowledge and skills are sufficient for professional accountability. This component is probably the most
challenging. The team becomes transdisciplinary when team members begin to give up or "release" intervention strategies from their disciplines to one another. Because the team authorizes the primary service provider (typically the teacher) to carry out the plan that the entire team has developed, the child is handled by one staff person and the parents. The family also benefits by interacting chiefly with a primary service provider rather than with a number of specialists, thereby reducing the confusion that can result from working with a large number of staff to develop and implement the service plan (Woodruff, McGonigel, 1988).

There are six steps or transitions to role release as cited by the United Cerebral Palsy National Organized Collaborative Project to Provide Comprehensive Services for Atypical Infants and Their Families (1976).

**Role Extension.** The first step in role release is two dimensional, vertical and horizontal. In the vertical dimension, professionals engage in self-directed study to gain more information and depth of understanding in their own discipline. In the horizontal dimension, individuals gain more breadth by drawing from the knowledge base of other disciplines within the team.

**Role Enrichment.** Once a professional is well versed in his/her own discipline he/she is ready to begin learning more about other disciplines. This transaction of teaching-learning can take place, for example during team meetings and after conferences or at inservices. It is an
opportunity for members to gain general awareness and understanding of other disciplines. Basic information and terminology is discussed.

"In addition, the team can create a reference library of conference notes and professional journals to share their resources, and can offer instruction to one another." (Woodruff, McGonigel, 1988, p. 170)

**Role Expansion.** Team members continue the teaching-learning process from conscious and deliberate pooling of information, knowledge, and skills among members of the team. It teaches professionals to make observational and programmatic judgements outside their own disciplines.

**Role Exchange.** Role exchange occurs when team members apply their new skills of theory, methods and procedures of other disciplines. "Role exchange is often misconstrued as role replacement by critics of the model. A common criticism is that team members lose their professional identities." (Woodruff, McGonigel, 1988, p. 170) This, however, is not the case. When implemented as intended by the transdisciplinary theory, new skills are demonstrated under direct supervision of another team member from the appropriate discipline and later carried out independently under the supervision of the appropriate discipline. "Role exchange is facilitated when team members work side by side or as buddies, and when they have sufficient indirect service time." (Woodruff, McGonigel, 1988, p. 170).
Role Support. When complex interventions which demand extensive disciplinary expertise, or when interventions are required by law to be provided by a specific discipline, the team member from the identified discipline works directly with the primary service provider and the family to provide this intervention. Team members also receive role support through the continuing informal encouragement of other team members. Role support provides the necessary backup to the processes of role exchange and role release and is a critical component of the transdisciplinary approach (Woodruff, McGonigel, 1988).

United Cerebral Palsy Infant Project distinguished three levels on which the conflict of Role Release may occur: the professional level, the intrateam level and the parental level.

On the professional level, the idea of "giving away" aspects of one's disciplinary role might be perceived by some as threatening, diminishing, unethical or illegal.

On the intrateam level, the "giver" is not usually prepared as a teacher and he/she must instruct other team members in aspects of his/her role. While the "giver" remains alert to questions of ethics and legality, one is also expected to learn content and acquire skills in areas beyond his/her customary domain. This is coordinated with sharing knowledge of one's own discipline.

And finally, on the parent level, conflict may arise because parents are unready or unable to function in such
foreign territory, or perceive themselves as unable to learn. Time and consistent support must be given to them as they grow into the role of primary program designer.

Team Dynamics. "Calling a small group of people a team does not make them so; team relationships are forged over time" (Hutchison, 1978, p. 70). Transdisciplinary teaming is not an approach expected to evolve immediately. Lowe and Herranen (1982) developed a six-stage process of team development.

As with any developmental model, each team will not necessarily experience every stage, nor will teams go through each stage in a fixed sequence. It does seem clear, however, that virtually every team undergoes growing pains as a normal part of the process of evolving into a smoothly operating unit." (Lowe, Herranen, 1982, p. 16).

Concerns of Transdisciplinary Implementation

The transdisciplinary team is by no means an easy model to implement. Cited risks or concerns for students involved in a transdisciplinary process include:

- During role release, there is the fear of incorrectly applying therapeutic techniques.
<table>
<thead>
<tr>
<th>Stage</th>
<th>Features</th>
</tr>
</thead>
</table>
| I          | Becoming acquainted - Hierarchical group structures  
             Autocratic leadership  
             Polite and impersonal interactions  
             Low overall team productivity |
| II         | Trial and error - Begins to work together toward common goal  
             Team members align themselves with one or two other team members  
             Factions sometimes occur  
             Role conflict and ambiguity arise |
| III        | Collective Indecision - Attempts to avoid direct conflict and achieve equilibrium  
             No group norm for accountability |
| IV         | Crisis - Members realize importance of mission  
             Emotion expressed |
| V          | Resolution - Effort to work together as team  
             Open communication  
             Shared leadership, decision-making, and responsibility |
| VI         | Team maintenance - Client’s needs major driving force  
             Conflict management, client-team relationships important |

Lowe and Herranen (1982, p. 17)
- Responsibility for the student risks may become diffuse, and professional accountability may be decreased.
- There is a relatively decreased amount of direct, "hands-on" intervention by each specific discipline.
- Consulting disciplines express concern regarding their liability for techniques performed by others.
- There may be more concern with the team process than the students' needs.

Staff related factors commonly cited for team members involved in a transdisciplinary team include:

- Professionals are not trained in teaming:
  a) knowledge and respect for other disciplines, b) group process and problem solving, c) whole child vs. problem areas, d) how to "teach" other team members, and e) dissimilar training experiences.
- Use of professional jargon may create communication problems.
- The approach may be a dramatic change in a member's philosophy and belief system.
- Teacher and therapist roles are disrupted.
- Vague definitions of each member's role and responsibility to the team and student.
- A lot of time is required for effective communication.
- Parents have concerns over "direct therapy." (York, Weimann, 1989)

**Strategies for Successful Transdisciplinary Teamwork**

The following strategies are suggested toward developing an effective transdisciplinary team. The information provided is intended to eliminate or minimize the aforementioned concerns.

- You are an advocate for the student first. Recognize that students need the services of several disciplines.
- When recruiting prospective team members look for competency in their own field, willingness to try new approaches, and an interest in continually learning and broadening perspectives.
- Commit yourself to working together, you are in it for the long run.
- Realize that effective group process takes time.
- Schedule regular meeting times, and have a meeting agenda.
- Understand the team process, including knowledge and respect of each discipline and an appreciation of the interdependence of all disciplines in educational program...
development and implementation (McCartin, 1978).

- Clearly define roles.
- Share responsibility for a quality educational program across disciplines and functional skill areas for each student.
- Be committed to a joint decision-making process (Albano, 1983).
- Be flexible.
- Seek administrative support.

(York, 1984)

"The most important component for developing an effective team is for team members to have a positive attitude toward teaming. Once a positive attitude and commitment are established, problems which arise can be more easily addressed and resolved." (York, 1984, p. 21).

Application of the Transdisciplinary Approach

Intake. Intake procedures in a transdisciplinary model are aimed at accomplishing three goals: to establish a basis for rapport with the family and child, to gather information about the child and family, and to provide the family with information about participation in a transdisciplinary program (Woodruff, McGonigel, 1988).

It is typically the case manager who meets with the family prior to the assessment. Intake represents a family's first exposure to the early intervention program and their first opportunity to be treated as decision-making
members of a team. It is desirable to meet with the family at a location of their choosing. When meeting with the family during intake, the staff member's goal is to create a warm, understanding atmosphere that reduces parental anxiety by acknowledging the family's needs and their reasons for seeking services (Woodruff, McGonigel, 1988).

Information to be gathered on the child during intake includes the presenting diagnosis, if any; a medical history; the family's perception of the child's level of functioning in each area of development, as well as the child's learning style, temperament, motivators, and reinforcers; a record of the child's involvement with other agencies or programs; and release forms for evaluation (Woodruff, McGonigel, 1988).

Information to be gathered on the family includes a description of the family history, family support systems, family stresses and coping behaviors, the degree of family awareness of the child's condition and needs, and the family's expectations for the child's program and services (Woodruff, McGonigel, 1988).

As provisions of Public Law 99-457 become widely implemented in early intervention programs, such a family focus may become routine in all early intervention programs, regardless of their service delivery model.

During these initial contacts the transdisciplinary philosophy is explained to the family as well as a description of how the philosophy affects all components of
Assessment. With the transdisciplinary team approach, the child’s assessment is done by an “arena” method. As the name implies, the arena assessment approach involves participants and active spectators. A temporary facilitator, generally the team member with the most expertise in the child’s area of need, is assigned prior to the actual assessment activities. The facilitator serves as the primary assessor while other team members and parents sit away from the child and record observations and score portions of assessment tools relevant to their discipline. As the assessment progresses, team members may ask the facilitator to administer certain items relevant to the observer’s discipline. Occasionally, an observer may assist the assessor or administer the items directly. Parents are present during the assessment to provide information, administer items if necessary, and validate the child’s performance (Wolery, Dyk, 1984).

If the child cannot tolerate people observing, all except the primary evaluator and parents observe from an observation room. When the child has been totally unable to interact with even one evaluator, the parent has been given a list of activities and all evaluators have stayed in the observation room. On rare occasions, when the child has
still been unable to tolerate being observed in an unfamiliar setting, the assessment team has gone to the child's home to complete the assessment (Groupp, 1989).

As soon as the arena assessment is completed, the family and other team members meet to discuss the evaluation and impressions about the child's performance. This post-assessment discussion provides the family and the other team members with an opportunity to exchange their views and concerns. It also provides the family with a chance to discuss their child's strengths and needs and their priorities for services and to take home ideas for helping their child (Woodruff, McGonigel, 1988).

The transdisciplinary team also meets without the family after each assessment. At this meeting the team assesses the process, the performance of the facilitator, and each other's participation. This evaluation of team functioning is a critical component of transdisciplinary staff and team development, but it can be accomplished only in an atmosphere of mutual trust and support (Woodruff, McGonigel, 1988).

The final step in the assessment is the written report. One member of the team, usually the case manager, organizes the information gathered from the team assessment discussions and notes into a report that clearly summarizes the results and provides the family with a written record of the team's findings and recommendations (Woodruff, McGonigel, 1988).
At the parent conference, the case manager reviews the report with the family. Other team members are available to attend this meeting if desired, but in most cases, parents feel most comfortable with only their case manager present. The report is written with as little professional jargon as possible and explanations are given for any complex terminology used. The case manager should be given ample time and opportunity to gather information from evaluators, and review the report with them addressing any questions or concerns prior to sharing the report with the parents (Group, 1989).

The advantages of the arena method for the parents are:
- Their initial contact with the professionals is as team members whose opinions and insights are expected, considered and sought. This is particularly important if the parents are going to be actually participating in helping the child.
- It prevents many different service providers from asking the parents the same questions.
- It communicates to parents that the team is not going to provide the family with all of the answers, but will support them by establishing a joint problem-solving relationship.
- The parents' understanding of the child serves as a basis for the work that the team needs to do.

The advantages of the arena method for the child are:

- The child goes through one assessment with all of the professionals present, rather than six different assessments. Multiple assessments can be inappropriate for a young handicapped child who generally cannot tolerate excessive handling.

- The arena is a more natural and, therefore, more conducive setting for the child to demonstrate his or her abilities. In a traditional assessment, the specialist may only look at a specific part and reaction of the child to indicate his or her ability. The problem of evaluating in this way is that the professional may have expertise in only one particular discipline. For example, a classroom teacher testing for pre-readiness skills requesting a verbal response from a child with unintelligible speech who used some sign language, may not give credit to appropriate answers due lack of knowledge in speech and language difficulties and sign language.
The advantages of the arena method for the team are:

- Better assessment because the observation is done with more than one observer, the child is seen from all angles. This can provide a more complete view of the child's functioning.

- The team shares their knowledge of the child's capabilities and establishes what the child's developmental strengths and concerns are. This dialogue contributes to a more precise and meaningful assessment because this process then forces the team to consider all observations to reach consensus.

- The arena method requires staff from varying disciplines to share observations and knowledge. These continual discussions broaden the understanding and technique of team members. A transdisciplinary team's observation of a child could be compared to the ways in which a mountain would be viewed by a mountain climber, a painter and a forest ranger. Each sees the same mountain, but brings to the experience a different and unique perspective. It is
only after much discussion, review and
clarification that the team's perception
of the child becomes multi-faceted."

(Woodruff, 1980, p. 14)

Program Planning and Implementation. The development
of an individualized family service plan (IFSP) as mandated
by Public Law 99-457 is the initial program planning step
for the team. The transdisciplinary team develops the IFSP
by designing goals, objectives, and activities for the child
and family in all areas of concern. These are based on the
child's strengths and needs and the family's priorities and
resources (Woodruff, McGonigel, 1988).

As members of the transdisciplinary team, families
determine their own level of involvement in the development
of the IFSP. Some families feel most comfortable with a
passive role, primarily answering the questions of other
team members about their own goals for their child. Other
families take a major role in the IFSP development, seeking
information from other team members, presenting the family's
concerns and priorities, and insisting that these concerns
be met. The goal of any transdisciplinary program is to
enable the family to choose its level of involvement.
Programs can accomplish this goal by providing families with
the information and support they need to make informed
decisions about their participation (Woodruff, McGonigel,
1988).
Ongoing team and parent accountability is a vital element in a transdisciplinary program. Each team member is responsible for: 1) planning the program which the primary professional will implement (indirect therapy), 2) evaluating the child and family’s progress; and 3) evaluating the quality of service delivered by the primary professional (Woodruff, 1980).

Weekly meetings to discuss how a child is responding to activities, how the family is responding and possible revisions necessary needs to be built into an early intervention program. Although the team authorizes one person to carry out the IFSP along with the family, the primary service provider relies on regular consultation with and support from other team members to carry out the program successfully. At all times, the primary service provider is accountable to the team for family interventions (Woodruff, McGonigel, 1988). Primary service providers cannot use information from other disciplines well unless they receive regular advice, support and authorization from team members in these disciplines.

Evaluation and Reassessment. Approximately every three to six months a re-evaluation should be administered on each child by the total team and parents. Attainment of the previous goals is discussed and new or revised goals and activities are established (Woodruff, 1980). This is also a time for staff team members to assess whether or not the services they provided meet the needs of the child and
family as well as their own performance standards. The team then sets goals for Improving interaction, consultation, and supervision." (Woodruff, McGonigel, 1988, p. 179).

It appears obvious that application of the transdisciplinary model requires a commitment to the team process, trust, flexibility and time, but provides parents, professionals and children with the most complete, comprehensive assessment and program plan. By working closely together on transdisciplinary teams, professionals and parents have come to understand and respect each other's areas of specialty more, to make more accurate observations across disciplines, and are better able to converse with each other in a more holistic manner (Groupp, 1989).
CHAPTER III

Summary

The purpose of the study was to provide the reader with an overview and understanding of the transdisciplinary team model and present it as a viable means with which to implement optimum services for young children with handicapping conditions and their families.

Though research describes the transdisciplinary model as an approach to be used with any age or disability group, the scope of this paper was to specifically focus on its effectiveness with early childhood age children with exceptional educational needs and their families.

A review of three most common models for team interaction were provided: multidisciplinary, interdisciplinary and transdisciplinary. Although the composition and tasks may be quite similar across the models, the method of operation is quite different. This paper attempted to discuss each models' structure of team communication and interaction, citing problems with each. After review of the models, it is the opinion of this researcher that the transdisciplinary team approach addresses many of the problems associated with the multi- and interdisciplinary approaches and sets high standards for team communication and collaboration.

A continuum of interaction was provided for the reader as another way of looking at each team's interaction level. From this perspective, the transdisciplinary approach can be
regarded as the evolution of the multi- and interdisciplinary models.

Detailed characteristics of the stages of transdisciplinary development were discussed. In order to facilitate success of this model, the group of professionals must function jointly as a team and continue developing expertise both individually and as a group through each stage.

Concerns and strategies for successful transdisciplinary teamwork were noted. Although implementation of the model is not without struggles, with emphasis on open and on-going communication and collaboration among professionals and parents, it holds promise for early intervention. Not only do professionals, families and children benefit from a more unified, holistic approach, but the transdisciplinary approach is also consistent with the newest federal early intervention legislation and best practices in the field.

Finally, the paper provided information for implementing the transdisciplinary model. It discussed the processes of: intake, assessment, program planning, program implementation, and reassessment. It is the hope of this author that by taking the reader through the aforementioned processes that functional application will become apparent.

Conclusions

The transdisciplinary team approach is an exciting way of thinking. It allows professionals and families to pool
knowledge and skills for the benefit of the "whole child." In order for the transdisciplinary model to be successful, administration and team members must be thoroughly aware of how the model affects program operation and must consistently implement transdisciplinary procedures throughout each phase of service delivery.

If rationale for the transdisciplinary model seems educationally sound, then why does it appear that it remains the exception to the rule?

One consideration is that teams are literally thrown together; forced to become transdisciplinary over night and when difficulties arise, they are generally blamed for the approach as a whole rather than for the process taken to begin such an approach. The transdisciplinary approach does not evolve quickly. Its foundation is built on team commitment, trust and flexibility. It should be stated that the strength of any model is dependent on the skills and attitudes of the individual members comprising the educational team. Staff members will be able to function in a transdisciplinary manner only after they have a clear understanding of the process and have accepted their individual roles and responsibilities. Moving too quickly will only create confusion, frustration and ultimately dysfunction.

Once commitment is achieved by all team members, the work begins. Another consideration for being an exception rather than the rule is that a transdisciplinary approach is
not easy to implement. It requires a great deal of planning, effort and time, and initially, expense. Program administrators must provide necessary time for inservices and training for the development of a transdisciplinary team and the necessary indirect service time for the team to implement transdisciplinary procedures. In turn, the team must provide the families with the opportunity to make conscious and informed choices from an array of options and ensure that early intervention truly meets the collaborative needs of the family and program, rather than meeting just the needs of the program.

Though obstacles are apparent with the transdisciplinary team model, they are surmountable. This researcher truly believes to be effective in serving the diverse and complex needs of young children with handicapping conditions and their families, a transdisciplinary model seems most appropriate and well worth the effort. Collectively it allows the child to be viewed in a holistic manner, it encourages family input, it meets the needs for continued learning for professionals in the field and enhances respect and understanding among disciplines. In light of this, in the future the transdisciplinary approach should be known as the rule rather than the exception.

In 1951, Fredrick A. Whitehouse, a director of vocational rehabilitation, wrote an article which appeared in *Exceptional Child* entitled "Teamwork - A Democracy of
facilitator of the transdisciplinary model, it is the opinion of this researcher that views like his provided the groundwork for the evolution of the transdisciplinary model. This author would like to leave the reader with a quote from Fredrick A. Whitehouse’s article in the hope that the reader take with him or her an awareness of the importance in the educational system to view the children and families serviced in a unified and holistic manner and that the transdisciplinary model best meets that view.

"The creation of real teamwork is an accomplishment important enough to overcome all the obstacles we have mentioned. As sciences grow, integration of knowledge becomes increasingly important, a single knowledge is of questionable value without its sister knowledges. No profession is so broad, or so important, that it can afford to stand apart from others when it deals with different phases of a single humanity."

(Whitehouse, 1951, p. 46)
References


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