Joseph's Coat: People Teaming in Transdisciplinary Ways

by Millie Smith, Educational Specialist, TSBVI VI Outreach

In the last five years I have been working with staff and families to support their efforts to team more effectively using the transdisciplinary model. I have not seen or created any perfect transdisciplinary teams during that time. I have seen staff and parents use bits and pieces of the model very effectively to improve programs for students. I am more convinced than ever that transdisciplinary teaming is the best of the service delivery models available to us at the present time. I am equally convinced that the best chance we have of increasing its use is to assure staff and parents that partial implementation is not only realistic, but probably as effective as a more idealistic whole cloth application. The product may be a patchwork conglomeration of pieces supplied by different people at different times, but a coat nevertheless.

The most powerful aspect of the transdisciplinary model, in my opinion, is its emphasis on plugging the expertise of specialists into the day-to-day instruction of students with severe multiple impairments. In this model specialists work in classrooms. They may provide direct instruction or therapy to the student during a regular activity or they may model, coach, and monitor interventions implemented by others. Often they do a combination of both.

Another powerful aspect of the model is that, whenever possible, specialists, instructors, and family members collaborate by meeting together to design instructional activities. More often, they collaborate by leaving each other notes, sharing video tapes, and calling each other on the phone. By collaborating, an effort is made to provide as much consistency in programming as possible across settings and people.

The best approach for implementing transdisciplinary teaming strategies may be to treat the total model like a menu of options. Teams can choose to concentrate their efforts on assessment, IEP development, or instruction. They can do some transdisciplinary work in each category without doing everything that category offers. In order to make informed decisions about where to concentrate efforts, a global understanding of the model is helpful.

Why is transdisciplinary teaming important?

Students with severe impairments receive instruction and services from a variety of different people. Instructors include teachers, teaching assistants, and family members. Special services may include speech, occupational therapy, physical therapy, vision, hearing, and others. **Teaming allows specialists, teachers, and families to work together to teach skills in natural contexts where there is more opportunity for frequent practice.**
Many specialists have changed the way they serve students with severe impairments in the last ten years. The professional organizations to which most specialists belong have endorsed a service delivery model that emphasizes integration of special services. Integration of special services benefits students with severe impairments in two ways: skills are worked on in natural contexts so that students don't have to try to generalize skills learned in a special setting, and skills are worked on every time the opportunity occurs, whether the specialist is present or not, so that practice is frequent.

In an integrated service delivery model, specialists assess needs, do diagnostic teaching to try out techniques and strategies, model techniques and strategies for other staff and family members, and monitor effectiveness and progress. When the integrated model is transdisciplinary, information is shared among specialists, instructors, and family members. This type of service is intense and dynamic, and highly effective.

**How can specialists provide natural contexts and frequent practice?**

The traditional service delivery choice for specialists has been direct or consult. For students with severe impairments a wider range of choices is necessary.

<table>
<thead>
<tr>
<th></th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integrated Direct</strong></td>
<td>One-to-one or small group. Natural context.</td>
<td>Infrequent practice.</td>
</tr>
<tr>
<td><strong>Traditional Consult</strong></td>
<td>General information shared.</td>
<td>Contact very limited</td>
</tr>
<tr>
<td><strong>Collaborative Consult</strong></td>
<td>Specific information shared with team. Accountability tied to progress in instructional activities.</td>
<td>Requires more time.</td>
</tr>
</tbody>
</table>

Each of these models has a place in transdisciplinary teaming. For instance, direct pull-out may be appropriate for post trauma students or for a student learning a new communication device. Usually, this service is provided for as short a time as possible and a very structured transition period follows pull-out in order to transfer skills to natural contexts. That transition period might be integrated direct service. Integrated direct service is often used by speech/language pathologists teaching communication skills in natural contexts and by OT's and PT's teaching motor skills in natural contexts. Consult is usually provided in conjunction with direct service. Sometimes consult is the only service provided.

**What type of consultation tends to be most effective?**

Most consultation is **general**. Specialists write recommendations in their assessment reports. When specialists consult with teachers, they talk to them about their
recommendations. Information is shared at a general level. For example: "This student has CVI. Most CVI students like the color red. If you want the student to look at something, try using red. Moving the object slightly in the peripheral field might also help."

Many teachers will remember the student might like red and they will probably make an attempt to select red materials when they can. When the VI teacher checks back with the teacher after this kind of consult, she may hear something like, "Well, I don't notice that red really makes that much difference."

**Specific** consultation tends to be more effective. In this type of consultation the specialist assesses, recommends, demonstrates in a natural context, and evaluates results. For example: "This student has CVI. CVI students tend to like red. Let's use a red scoop dish at mealtime instead of the cream colored cafeteria tray. If he can see the bowl, it may be easier to get him to scoop. We may need to position the bowl slightly to the left and move it a little at first. When he looks at the bowl, we'll give him a touch prompt to move his hand to the bowl. I'd like to come in at lunch time and try this a few times. Let's keep data on this for two weeks and see if there are more independent attempts to scoop. We may need to do something with the spoon as well."

Traditional consult by itself puts a very heavy burden on classroom teachers and family members to come up with activities and specific modifications for students with extremely intense needs. Transdisciplinary teams use a more dynamic kind of consultation. When consultation is specific and collaborative, it is a highly effective type of service. It also requires more time than traditional consultation. Students with severe multiple impairments tend to be chronically underserved. The average amount of service in Texas for traditional consult appears to me to be about thirty minutes a month. In many places it is less. A more reasonable average for collaborative consultation would be between two and four hours a month. Time demands are more intense when a team is starting a new program. Once the program is established, less time is needed for monitoring and maintenance.

**What are the components of transdisciplinary teaming?**

**Collaborative Assessment**

Collaborative assessment occurs when team members identify strengths and needs through shared observations and discussion. One type of collaborative assessment is an arena assessment. Team members meet together to observe a child as one team member (frequently the parent) interacts with the child. Collaborative assessment can also occur during team meetings designed to share and interpret information gathered by individual team members in one-on-one assessments with the child.

**Integrated IEP**

A team IEP is a document containing goals and objectives developed collaboratively by all team members. Based on family priorities, the group establishes an integrated set of goals (four to six) and two to three objectives per goal (eight to twelve objectives total for the IEP). If an objective relates to a particular related service, that related service provider is
identified as responsible for insuring that instruction addressing the objective is implemented and that documentation is collected.

**Natural and Frequent Instruction**

IEP goals and objectives are taught in activities which occur naturally and frequently at home, in school, and in the community. A team member, usually a classroom teacher, parent, or teaching assistant, is identified as the direct implementor of instruction for a specified activity which may have several IEP objectives imbedded in it. The related service team member responsible for developing a given IEP objective either integrates direct service or consults with the direct implementor of instruction.

**Role Release**

Team members share knowledge and skills in their particular areas of expertise by role releasing. This is a systematic process whereby one team member trains another to use specific procedures and techniques. The team member who has received this training may then implement a procedure or technique in a given activity when the trainer is not present. The person with specific knowledge is responsible for ensuring that these procedures and techniques are used effectively and appropriately with a given child.

**Documentation**

Information is gathered for the purpose of evaluating and refining instruction, reporting student progress on objectives, and sharing information with families and team members.

**What assessments are important and how does the team use them?**

Students with severe impairments are sensory-motor learners. Assessments of sensory and motor skills are extremely important. Cognition and communication are also important areas. Information about skills in each of these areas may be obtained by specialists in their individual assessments done as part of the Comprehensive Individualized Assessment. Assessment of biobehavioral states of arousal may be very helpful for students with the most profound impairments.

In transdisciplinary teams, specialists collaborate to plan their assessments, to carry out their assessments, and to interpret their assessments. Sometimes arena assessments are done. In this type assessment, one person interacts with the student while other team members observe and ask questions guided by the use of protocols specific to their disciplines. The advantage to this assessment approach is that the student interacts with the persons most familiar with him or her. Performance is likely to be more typical under these conditions. The disadvantage to this approach is that, although total assessment time tends to be less overall, assembling all team members in the same place at the same time can be difficult.

After teams assess, they must share information and come up with program priorities.
Instruction is sometimes ineffective for students with severe impairments because too many needs are addressed. Instruction is much more effective if instruction is very focused on four or five priorities. These priorities become goals. Specific needs in each goal area are then identified. These become objectives.

What should a good transdisciplinary IEP contain?

Goal

The team uses assessments to select four to six priorities for the school year. Each of these becomes an annual goal. Some teams write very broad goals; some write more specific goals. Each annual goal should be a statement of what the team believes the child can accomplish within a school year. A broad goal would be: "Student will improve his expressive and receptive communication skills." A more specific annual goal would be: "Student will use ten expressive signs in appropriate contexts." Specific goals work best for students with severe impairments.

Objectives

Objectives are the steps between the child's current level of performance and the annual goal. They state one specific task the child will do, at what level, by when, and what criteria will be used to measure progress. For a broad goal, the team might write: "Student will use five expressive signs during meal time and snacks, independently, eighty percent of the time, measured by teacher observation." For a more specific goal, the team might write: "Student will use name sign to greet nurse when he gets meds, independently, eighty percent of the time, measured by teacher observation." Specific objectives work best for students with severe impairments.

Skill

A skill is the behavior to be learned. The phrase following the word "will" in the objective is usually the skill. In a transdisciplinary IEP, specific discipline skills are imbedded in objectives. An objective might be that a student will assist during meals by opening his mouth for bites. The VI teacher might add that the student will open his mouth for bites when a brightly colored spoon is moved slightly in the right peripheral field of the right eye from a distance of six inches.

Activity

An activity is the context in which the skill will be used. The phrase following the word "during" in the objective is usually an activity. Teams include information about context in objectives to make measurement more meaningful.

Modifications
These are the techniques, technology, and strategies which are necessary to ensure the highest level of participation for the student in the activities of his school day. Federal law requires that these be specified in the IEP. Most school districts include a generic modification page in the ARD papers. Some of these may be useful, but teams have to come up with more specific modifications in order for progress on objectives to occur. A general modification for a special education student might be "shorten assignments." A specific modification for a student with severe impairments might be "use adapted spoon."

Some teams continue to write traditional IEP's in which each team member comes up with his or her own set of goals and objectives. Students with severe impairments can't usually learn as many things as team members can come up with to try to teach them. Also, when team members are trying to teach too many things, they tend to scatter their energy and not teach any one thing very intensely. Teams tend to be more accountable when they focus their attention by writing one collaborative IEP. In this approach special skills are integrated into short-term objectives.

Student: Catherine
Date Accepted by ARD Committee: 5/1/95
Annual Goal: Will improve functional use of objects*

<table>
<thead>
<tr>
<th>Short-Term Objectives</th>
<th>Eval. Method</th>
<th>Criteria (Accuracy Level)</th>
<th>Targeted</th>
<th>Present Competencies</th>
<th>Met Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Will visually locate a desired object in an adapted environment during rec/leisure time.</td>
<td>Observation</td>
<td>Independent</td>
<td></td>
<td>Frequent physical manipulation</td>
<td></td>
</tr>
<tr>
<td>Direct Implementor(s): Classroom Teacher/TA Support Staff Responsible: VI Teacher Begin Date: 8/95 End Date: 5/96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Will look at an object presented by a caregiver to request continuation of an activity during grooming activities.</td>
<td>Observation</td>
<td>90%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Implementor(s): Teaching Asst./Mother Support Staff Responsible: VI Teacher Begin Date: 8/95 End Date:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Sensory skills are integrated in short-term objects.

Sometimes a column for modifications is added. The example given in objective number one might include: Modifications: Den/Little Room

**How is instruction provided in natural contexts by the whole team?**

A **routine** is a teaching strategy that focuses the team's efforts on specific activities that occur with high frequency in the student's schedule. Routines are designed to teach specific special skills to students who require consistency and repetition in order to learn. As skills are learned, the student's level of participation in activities increases. Any activity can be developed into a routine when team members plan what they will teach and adapt for a given student. An activity is not a routine unless it meets the following criteria:

- There is a clear signal to the student that the activity is starting.
- The steps of the activity occur in the same sequence every time.
- Each step is done in the same way each time (same materials, same person, same place).
- Modifications and techniques provided by specialists are implemented exactly as directed.
- The minimum amount of assistance is provided in order to allow students to do as much as they possibly can.
- The pacing of instruction is precisely maintained until the activity is finished (no side conversations, going off to get something you forgot, or adding new or different steps that won't happen the next time the activity is done).
- There is a clear signal to the student that the activity is finished.

**Why are routines worth the trouble?**

The power of a routine is the precise planning of what the student will do and how he will do it on each step of the routine. Many students are able to learn new skills and participate at higher levels when this strategy is used because they need the following things that routines provide:

- **Predictability:** "I know what is going to happen from start to finish."
- **Consistency:** "I know what I am supposed to do."
- **Anticipation:** "When you do that, I know what to get ready for."
- **Practice:** "I remember what I did last time and I can try to do more this time."
Students with severe impairments rarely do every step of a routine independently, but they are afforded the dignity of doing everything that they are cognitively and physically capable of doing.

**What do routines look like?**

Mealtime is a good activity to develop into a routine because it usually happens three times a day. Practice opportunities are frequent. The team's plan might look something like this:

1. **Get spoon from calendar box to begin activity.**
   - **Target skill:** Tactual exploration of objects in calendar to recognize spoon.
   - **Person responsible:** VI teacher.
   - **Strategy:** VI teacher demonstrates shadowing technique to TA to decrease student's aversion to hand over hand manipulation.

2. **Take spoon to eating area.**
   - **Target skill:** Maintain grasp, intentional release.
   - **Person responsible:** OT
   - **Strategy:** OT demonstrates use of "buncher" for grasp and pressure point technique for release to T.A. who will implement instruction.

3. **Give spoon to adult to request meal.**
   - **Target skill:** Use object to request.
   - **Person responsible:** Speech/Language Pathologist (SLP)
   - **Strategy:** SLP demonstrates touch cueing technique to TA who will implement instruction.

4. **Eat.**
   - **Target skill:** Manipulate spoon for scooping.
   - **Person responsible:** OT
   - **Strategy:** OT provides adaptive equipment and demonstrates technique to TA who will implement instruction.

5. **Put spoon in washtub at dish window to end activity.**
   - **Target skill:** Maintain grasp, intentional placement.
   - **Person responsible:** OT and VI teacher.
   - **Strategy:** OT demonstrates arm support technique to TA who will implement instruction. VI teacher provides visual enhancement of target.

**How do specialists help other team members address needs in their areas?**

Transdisciplinary teams use a procedure called role release. Any team member having special skills may train any other team member needing those skills. The need for a team member to have certain skills is usually dictated by scheduling. Specialists cannot always be present when a skill needs to be taught in a natural context. Specialists have certain responsibilities. They cannot release their role to another until that person demonstrates that she can perform without prompts. The specialist must then monitor the activity to
ensure that the released procedure is performed as taught.

The role release process usually consists of the following steps:

- The specialist and other team members share information related to the need.
- The specialist teaches the designated person(s) a specific procedure to address the need.
- The specialist supervises the implementation of the procedure and makes adjustments as needed.

Communication among team members is essential in the role release process. Members must be able to ask questions, seek help, and respond quickly. Here are some tips for increasing and maintaining contact:

- Schedule time to observe activities.
- Review videotapes of activities between observations.
- Attend team meetings.
- Post notes to team members on a special bulletin board.
- Keep documentation in an area where all team members can access it.
- Keep a school/home notebook.

**How do teams document student progress?**

There are two things to remember about documentation:

- **It is important because team members have to know what's working and what isn't working.**
  Students with severe impairments don't fail to make progress, but teams may fail to provide the necessary level of support in order for progress to occur.

- **It must be easy to gather so that it does not take time away from teaching and attention away from the student.**

Different kinds of documentation are appropriate in different situations. Here are some common types:

- Frequency Tally Method: A mark is entered each time the designated behavior occurs. The event may be a student behavior (signed "more") or the event may be a teacher behavior (touch prompt given).
- Annotation: The teacher may write a comment describing the student's performance on a given trial.
- Plus/Minus: The target skill occurred or did not occur.
- Level of Prompt: A letter is entered to indicate the highest level of prompting given during the trial (hand-over-hand, touch prompt, verbal prompt, independent).

Be consistent. Decide which method fits best for a given situation and stick with that method. The whole team must use the same methods in the same situations.

**Routine and data sheet sample.**

An example of a routine with annotative documentation is included on page thirteen (Routine and Data Sheet). Notice that documentation is kept only if the step is one in which an IEP objective is addressed. If there is no number in the IEP column, no documentation is kept.

**How do specialists document service time?**

Parents typically do not demonstrate a high degree of confidence in consultative services. Some demand direct service because they fear that their children's needs will not be addressed adequately in a consultative model. This can be counterproductive for students with severe impairments who need frequent intervention in natural contexts. One way to assure parents and other team members that real help is being provided is to share documentation.

Most specialists are used to keeping records of some sort for their supervisors. These may consist of student contact logs or observation summary forms. An example of a contact sheet which emphasizes the team approach is shown on page fourteen (Sample of a Collaborative Service Delivery Contact Sheet).

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**Routine and Data Sheet**

**Student:** Catherine  
**Routine:** Hair Care Time  
**Implementor:** Classroom Teacher, TA  
**Time:** 9:00 a.m.  
**Location:** Classroom

<table>
<thead>
<tr>
<th>Routine Steps</th>
<th>Adaptation/Modification</th>
<th>IEP</th>
<th>Comments/Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Travel to hair drying area.</td>
<td>Chair pushed to hair drying area. Looks at caregiver to signal readiness.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Visually locate hair dryer.</td>
<td>Caregiver wears dark-colored smock against which bright yellow hair dryer is held. Use object lighting, if necessary.</td>
<td>#1</td>
<td>Looked at hair dryer on third of three presentations after light enhancement provided.</td>
</tr>
</tbody>
</table>
3. Turn desired part of head/face to airflow as caregiver holds dryer.

4. Visually locate hair dryer each time care-giver turns it off to request continuation of activity.

5. Visually locate hair-brush held by teacher.

6. Cooperate while hair is brushed by caregiver.

7. Travel to area of next activity.

Documentation Date: 10/7/95 Documentor's Signature: (VI Teacher)

Sample of a Collaborative Service Delivery Contact Sheet

**Student:** Catherine  
**Service Provider:** M. Smith, VI Teacher

<table>
<thead>
<tr>
<th>Date</th>
<th>Time In</th>
<th>Time Out</th>
<th>Staff Present</th>
<th>Service Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/7</td>
<td>9:30</td>
<td>10:00</td>
<td>T. Johnson, Linda</td>
<td>Evaluated visual responses (JVE)</td>
</tr>
<tr>
<td>2/11</td>
<td>2:00</td>
<td>2:30</td>
<td>Linda</td>
<td>Evaluated visual responses (JVE)</td>
</tr>
<tr>
<td>2/18</td>
<td>3:00</td>
<td>3:30</td>
<td>T. Johnson, Linda &amp; Parent</td>
<td>Wrote activity routine</td>
</tr>
<tr>
<td>2/22</td>
<td>9:30</td>
<td>10:00</td>
<td>Linda</td>
<td>Role release hair dryer procedure</td>
</tr>
</tbody>
</table>
Conclusion

Remember Joseph's coat. It was made a piece at a time. It might be a good idea to remember that Joseph probably wore some other garments as well. If your team ends up with a vest or a really good pair of socks, success is just as sweet. Good luck!

If you have questions or comments about this article you may contact Millie by phone at (512) 206-9270 or by mail at TSBVI Outreach, 1100 West 45th St., Austin, TX 78756 or by email at <smith_m@tsbvi.edu>.

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Meaning of transdisciplinary team medical term. What does transdisciplinary team mean? A term which, as defined in the NHS, refers to a group of people bound by a common purpose—e.g., multi-disciplinary team for cancer management—who meet regularly to communicate, collaborate and consolidate knowledge from which plans are made, actions determined and future decisions influenced. Each team member has a particular expertise and should be capable of making autonomous decisions.