Clinical Reasoning in School-Based Practice

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See below for presentation handouts.

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CLINICAL REASONING IN SCHOOL-BASED PRACTICE

Sandra Rogers, Ph.D, OTR/L
Holly Baber, OTD, OTR/L
Background: Decisions in School-Based Practice

- The Black & White
  
  IDEA, Section 504, State laws, Occupational Therapy Practice Framework

- The Grey

  Who is eligible for OT services? What is educationally relevant? How do we determine the most relevant goals, duration, frequency and location for the Individualized Education Plan (IEP)?

  The answers rely on clinical reasoning
“Occupational therapists are often uniformed about and neglect the importance of clinical reasoning” (Carrier, Levasseur, Bedard, & Desrosiers, 2010)

- It is the process of solving problems and making decisions to enhance efficacy.
- It integrates the cognitive process, problem solving and decision making.
- It is a complex, multidimensional process influenced by internal and external factors.
- Clinical reasoning is the thinking that guides practice.
Background: Clinical Reasoning

Clinical Reasoning Dimensions

- **Scientific (Includes Diagnostic & Procedural):** Condition, diagnosis, interventions
- **Narrative:** The “story” of the client
- **Pragmatic:** Practical and logistic aspects (insurance, resources, equipment)
- **Ethical:** The moral aspects
- **Interactive:** Dynamic, face-to-face interactions
- **Conditional:** The unique present and potential future situation of the client
Clinical reasoning is influenced by 4 interactive factors

<table>
<thead>
<tr>
<th>Internal Factors of Influence</th>
<th>External Factors of Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>The occupational therapist’s expertise level</td>
<td>The client</td>
</tr>
<tr>
<td>The occupational therapist’s personal context</td>
<td>The practice context</td>
</tr>
</tbody>
</table>
Background: Clinical Reasoning

Internal Factors

Expertise Level: Develops through professional and personal experiences and reflection. Ranges from novice to expert

Personal Context: Perceived capability and self-efficacy to work with clients, interest and knowledge of OT and their interest in the client

External Factors

The Client: The multifaceted needs of the client, their environment, context and situation

The Practice Context: The physical, organizational, and social environment; includes constraints and conditions of those environments
The Essential Questions...

How are occupational therapists using clinical reasoning in the school setting?

What is available to help occupational therapists align their process of clinical reasoning and decision making?
The Study: Purpose

This was an exploratory study, seeking to understand how occupational therapists make decisions in their practice and determine if a need exists to guide their clinical reasoning in efforts to create consistency amongst occupational therapists.
The Study: Methods

Survey designed with a focus on understanding:

- Where therapists obtain information
- What factors influence their decision making
- View on consistency of methods in practice between practitioners in the same district
The Study: Methods

- Findings from the survey were compared to content in state guidelines.

- Identified information in state guidelines that could be used to guide the clinical reasoning skills in school-based OTs.
Turning to State Guidelines

Why the state guidelines?

- Specific to each state’s governing laws
- National associations and laws are too broad for practical application in each state let alone each district
- These documents blend the educational lens with a therapy lens
- Offer a unique platform to communicate equally to OTs and school personnel
The Study: Methods

- Obtained Pacific University Institutional Review Board approval

- Systematic randomization to select 8 school districts in Washington state, then selected Seattle and Portland public school districts in efforts to obtain a minimum of 20 participants

- Called and emailed staff and occupational therapists via public information

- Provided purpose of contact and survey

- Survey consisted of demographic questions and questions regarding their decision making process
The Results...
Results: Demographics

![Bar chart showing the number of respondents by level of education.](chart)

- **Bachelors**: 10 respondents
- **Masters**: 12 respondents
- **Doctorate**: 1 respondent
- **PhD**: 0 respondents
Results: Demographics

Average years worked as an OT: 19.8
Average years worked as an OT in a schools: 14.2

Setting currently working in:

- Urban: 65.2%
- Suburban: 30.4%
- Rural: 4.4%
Results: Demographics

Average caseload: **54**

**Full Time Equivalent**

- 0% for 0.2
- 4% for 0.4
- 4% for 0.5
- 9% for 0.6
- 13% for 0.8
- 70% for 1
Results: Demographics

Distribution of Services

- Ages 18-21: 5%
- Birth to 3: 0%
- Grades 9-12: 18%
- Grades 6-8: 26%
- Grades K-5: 38%
- Ages 3-5: 13%
Results: Decision Making

AOTA Members

- Yes: 21.74%
- No: 78.26%
Results: Decision Making

State Membership

- Yes: 39.13%
- No: 60.87%
Results: Decision Making

Methods of Obtaining Current Information and Research

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>8</td>
</tr>
<tr>
<td>Continuing Education Courses</td>
<td>14</td>
</tr>
<tr>
<td>Literature</td>
<td>12</td>
</tr>
<tr>
<td>Colleagues Sharing Information</td>
<td>12</td>
</tr>
<tr>
<td>State/National Association</td>
<td>4</td>
</tr>
</tbody>
</table>
Results: Decision Making

Factors Influencing Occupations and Skills Assessed

Number of Respondents

- Eval Tools Available: 18
- Other OTs: 18
- Teacher/Staff Expectations: 16
- Journals/Lit: 10
- Con Ed./Presentations: 18
- Other: 20

Other: Wrote in use of reports and observations
Results: Decision Making

Factors Influencing Intervention Choices

- Materials Available
- Other OTs
- Teacher/Staff Expectations
- Knowledge From Lit
- Knowledge From Con Ed.
- Other: Wrote in use of reports and experiences
Results: Decision Making

Perceived Percentage of OTs Using Same Evaluation Methods

- 75% to 100% (12 respondents)
- 50% to 75% (8 respondents)
- 25% to 50% (2 respondents)
- None to 25% (1 respondent)

Perceived Percentage of OTs Using Same Intervention Methods

- 75% to 100% (14 respondents)
- 50% to 75% (16 respondents)
- 25% to 50% (2 respondents)
- None to 25% (1 respondent)
Results: Decision Making

Are You Addressing All Necessary Occupations?

- Yes: 5%
- No: 95%
Survey: Discussion

Implies use of more clinical reasoning during the evaluation process. Interventions are typically more of the "how to" information.
The Study: Discussion

We can draw a conclusion here that if OTs feel they are not addressing all areas of occupation they would like to be, then this information was never captured in the evaluation or else it would be reflected as a goal in the IEP. Therefore, we must improve our evaluation process.

Are You Addressing All Necessary Occupations?

- Yes: 95%
- No: 5%

Perceived Percentage of OTs Using Same Evaluation Methods

- 75% to 100%
- 50% to 75%
- 25% to 50%
- None to 25%
5 out of 23 states contained content to facilitate clinical reasoning skills and decision making in the evaluation process.

California
Kentucky
New York
North Carolina
Wisconsin
State Guidelines: On Clinical Reasoning

Other content included items such as:

- Role of OT in schools
- Laws governing OT (IDEA, Section 504)
- Requirements to be an OT
- Examples of OT interventions
- Recommendations for practice (team collaboration, use of inclusion models, evidence-based practice)
2 Tables:

Appendix 7.9 Educational Assessment Methods, Procedures, and Tools

Appendix 7.11 OT and PT Clinical Reasoning and Intervention Approaches

- Provide considerations for the environment, curriculum and child as factors in assessment and IEP planning
- These tables have used critical questions to facilitate clinical reasoning for each of these factors
# Appendix 7.9

## Educational Assessment Methods, Procedures, and Tools

<table>
<thead>
<tr>
<th>Method of Analysis</th>
<th>Record Review/Checklist</th>
<th>Parent and Teacher Interview</th>
<th>Observation of the Child</th>
<th>Non-standardized and Standardized Assessment</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Factors Participation</td>
<td>What is the program placement and classroom setting?</td>
<td>In which setting(s) is the child having the greatest difficulty? (Assess in all settings, but pay close attention to those settings that challenge the child.)</td>
<td>Does the physical environment (child’s desk, educational technology, lighting, acoustics, instructional materials, classroom design, etc.) support or limit child performance and/or access to the curriculum?</td>
<td>Physical, social, and functional participation in multiple contexts: classroom, playground, cafeteria/lunch area, bathroom, etc.</td>
<td>Would modifications or classroom adaptations alone suffice as an intervention?</td>
</tr>
<tr>
<td>Environmental Factors Participation</td>
<td>Who are the educational personnel addressing educational areas of concern or IEP goals?</td>
<td>How does the child interact and work with peers in the classroom?</td>
<td>Do the organization, structure, and routine meet the child’s needs?</td>
<td>Pattern of engagement and participation</td>
<td>What environmental accommodations would assist the child in functioning?</td>
</tr>
<tr>
<td>Environmental Factors Participation</td>
<td>To what extent is the child included in or restricted from participating in the educational environment?</td>
<td>Which other staff members might contribute information about this child’s performance in the areas of concern?</td>
<td>Is the child able to follow the social rules and interact with classroom personnel and peers?</td>
<td></td>
<td>Would changes in structure, routine, or the social environment assist the child in participating in the educational program?</td>
</tr>
<tr>
<td>Environmental Factors Participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Are there other educational personnel who can address the child’s areas of need?</td>
</tr>
</tbody>
</table>
# California: On Clinical Reasoning

## Chapter 7. Services for School-Age Children

<table>
<thead>
<tr>
<th>Method of Analysis</th>
<th>Record Review/Checklist</th>
<th>Parent and Teacher Interview</th>
<th>Observation of the Child</th>
<th>Non-standardized and Standardized Assessment</th>
<th>Summary</th>
</tr>
</thead>
</table>

### Curriculum

To what extent is the child currently meeting expectations for the performance of important tasks expected of his/her same age peers to gain access to the curriculum?

- Which IEP goals are related to OTs’ and PTs’ areas of expertise?
- What strategies, accommodations, modifications, adaptations, and interventions have been tried or are currently in place?
- What type of curriculum is being used?
- In which areas of the instructional program is the child having the greatest difficulty? (Assess in these instructional areas.)
- What are the teacher’s expectations for the child in the classroom?
- What are the methods of behavior management?
- Do the curriculum demands match or accommodate the child’s abilities?
- Is the child sufficiently challenged within his/her educational environment?
- Important tasks typically expected in each of the above contexts or settings in which the child performs the classroom tasks, playground tasks, etc.
- Measure of the supports (i.e., adaptations, assistance) needed by the child to perform each major task.

### Child Factors

What are the child’s current strengths and limitations in performance of specific activities required to accomplish the major education- and school-related tasks expected or desired by him or her?

- What makes the child eligible for special education?
- What is the medical diagnosis (if any)?
- What previous assessments have been conducted?
- Does the child have the ability to participate in the ongoing structure/routine of the class?
- What does the teacher/parent see as the child’s strengths and weaknesses?
- What are the parent/teacher’s priorities and concerns regarding this child’s functioning in his/her educational program?

### Establish a profile of child strengths and needs based on available information and identified areas of concern and assess in these areas.

- Focus observation on OT and PT areas of expertise relevant to the educational program.
- Do the OT’s and PT’s classroom observations match the expressed concerns and reason for referral?

### Essential activities in the task area during the school day; activity demands:

- Extent of child’s contribution to performance of the activity (versus extent of limitation), and performance patterns.
- Targeting areas of concern, focus assessment on OT’s and PT’s areas of expertise to discern additional relevant factors and underlying skills that impact child performance (e.g., performance skills, client factors).

- What does the assessment reveal about the child’s abilities? What is his/her profile of strengths and needs compared with the areas of concern?
- What is the child’s potential for improvement, maintenance, or regression?
- Would therapeutic interventions likely result in improved functional performance in the classroom?
## Appendix 7.11

### OT and PT Clinical Reasoning and Intervention Approaches

<table>
<thead>
<tr>
<th>Factors</th>
<th>Prevention/Enrichment</th>
<th>Collaborative Consultation</th>
<th>Monitoring</th>
<th>Individual or Group Treatment</th>
<th>Accommodations/Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what extent is the child included in or modified from participating in the educational environment?</td>
<td>Sensory-enriched playgrounds and classrooms</td>
<td>Collaborate with school personnel to ensure the child can safely gain access to the environment.</td>
<td>Collect data to monitor the effectiveness of recommended strategies, equipment, and adaptive devices.</td>
<td>Work with individual to problem-solve ways to gain physical access to the school environment.</td>
<td>Analyze and make changes to the environment tools, and task to ensure access and child safety.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Curriculum</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what extent is the child currently meeting expectations for the performance of important tasks expected of his or her same-age peers to gain access to the curriculum?</td>
<td>In-service training sessions regarding foundations and skills needed to meet curriculum demands</td>
<td>Troubleshooting and revising strategies to support access to general education curriculum</td>
<td>Progress monitoring and adaptation to support child's learning</td>
<td>Activity analysis of curriculum standards</td>
<td>Therapists assist the team in determining what accommodations and modifications to the curriculum would allow the child to gain access to the max progress in the curriculum. Staff training regarding activity analysis and modifications</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Child</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the child's current strengths and limitations in performance of specific activities required to accomplish the major educational and school-related tasks expected or desired by him or her?</td>
<td>Work with child and educational staff to increase knowledge of disability.</td>
<td>Collaboration and interdisciplinary work with team members to support child's specific needs.</td>
<td>Monitor child's response to intervention.</td>
<td>Child benefits from direct intervention to address the functional components in order to support functional outcomes.</td>
<td>Therapists monitor child to ensure ongoing access to the curriculum and that the proper supports are in place.</td>
</tr>
<tr>
<td>What is the status of the basic performance and foundational skills and processes necessary for the performance of daily education- and school-related activities?</td>
<td>Work proactively or self-determination strategies.</td>
<td>Collaboration with agencies such as Dept. of Mental Health, Dept. of Health to facilitate optimal services for the child.</td>
<td></td>
<td>Child-specific program planning such as sensory diet and individual positioning in the educational environment.</td>
<td></td>
</tr>
</tbody>
</table>

OTs and PTs in the school setting consider activities that are appropriate for the child in the general education curriculum regardless of the child's special education eligibility and educational setting.
Kentucky: On Clinical Reasoning

1 Worksheet

*Educational Relevance Worksheet*

- Assists in determining the **type** of service, **frequency** and amount of **time** a student may need
- Designed to be used during an IEP team meeting
- Writes that this worksheet can be utilized to discuss the appropriateness and extent of OT services that relevant to the child’s educational needs
Kentucky: On Clinical Reasoning (page 84)

KY OT/PT Resource Manual

The OT and PT utilized the information in the IEP to determine the amount of services necessary for Mark. The ERW was used to assist in this process as reflected on the IEP for types of services, frequency, and amount of time.

**OT EDUCATIONAL RELEVANCE WORKSHEET**

<table>
<thead>
<tr>
<th>Student: Mark</th>
<th>Date of Birth:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Delivery</th>
<th>CR</th>
<th>RR</th>
<th>DN</th>
<th>EST. IEP TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory modulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory discrimination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychomotor integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine motor facilitation</td>
<td>X</td>
<td>X</td>
<td></td>
<td>30 min/month</td>
</tr>
<tr>
<td>Visual perceptual motor strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitation of pastural control</td>
<td>X</td>
<td>X</td>
<td></td>
<td>30 min/2x/year</td>
</tr>
<tr>
<td>Chaining/shaping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACCOMMODATIONS** (Time for accommodations is listed as IEP time if it requires input with the student present, assessment, or fabrication by the OT)

<table>
<thead>
<tr>
<th>Access to assistive technology</th>
<th>X</th>
<th>1.5 min/month for all three items throughout the IEP year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapted materials/equipment (pre-made)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fabricate individualized equipment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Observation/Informal Evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper positioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory modification equipment/supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental adaptations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUPPORT FOR SCHOOL PERSONNEL (Non IEP Time)**

<table>
<thead>
<tr>
<th>Team meetings</th>
<th>Medical precautions (e.g., allergies, diet restrictions)</th>
<th>Training on facilitation of motor planning/promoting</th>
<th>Training on modified activities of daily living</th>
<th>Training on sensorimotor approaches/activities</th>
<th>Training on neuro-based behavioral/learning approaches</th>
<th>Training on psychomotor integration</th>
<th>Other:</th>
</tr>
</thead>
</table>

**RECOMMENDED FREQUENCY AND DURATION:** 60 min 1st-2 months of the IEP (Aug/Sept), then 30 min/mo.

Completed By: 

Date: 

**PLAN FOR DISCHARGE:**

- Goals and objectives requiring therapy have been met and there are no additional goals requiring therapy services
- Problem ceases to be educationally relevant.
- The student’s needs can be met by another educational provider and therapy services are no longer required.
Guide to Determining Need for Therapy Services
- Considerations when determining student eligibility

Designing an Intervention Plan
- Overarching process of developing an IEP, states clinical reasoning is needed to determine the focus on intervention and service delivery method

Comparison of Intervention Focus Areas
- Considerations of student, task and environment in determining the most appropriate focus areas for intervention

Service Delivery Methods
- Considerations for use of direct, integrated, and consultative service
Determining Need for Therapy Services

The IEP team must determine which professionals will help the student achieve the established IEP goals. For example, a goal for improving participation and performance in reading and writing may require the services of a special education teacher support services (SETSS), a speech teacher and/or an occupational therapist. The team may utilize Table 3 as a guide when considering the inclusion of occupational and physical therapy services in a student’s IEP.

Table 3. Guide to Determining Need for Therapy Services

<table>
<thead>
<tr>
<th>Student requires therapy service when ALL of the following exist:</th>
<th>Student does NOT require therapy service if ONE OR MORE of the following exist:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student’s performance adversely affects and/or interferes with the student’s ability to perform his/her roles and responsibilities in instructional and non-academic school activities.</td>
<td>Student’s performance does not adversely affect or interfere with the student’s ability to perform his/her roles and responsibilities in instructional and non-academic school activities.</td>
</tr>
<tr>
<td>Student’s participation and performance in school can be enhanced by specifically designed occupational and physical therapy interventions that focus on changing the student, task and/or environment.</td>
<td>Student’s participation and performance in school is unlikely to be enhanced by occupational and physical therapy intervention that focus on remediating the student’s skills or modifying the task and/or environment.</td>
</tr>
<tr>
<td>Enhancing the student’s participation and performance in school lies within the licensing criteria of the therapist.</td>
<td>Enhancing the student’s participation and performance in school lies outside the licensing criteria of the therapist.</td>
</tr>
<tr>
<td>Other special education supports, related services or other school staff (e.g. teacher, paraprofessional, nurse) are unable to adequately address the area of concern. The area of concern can only be addressed adequately by an occupational or physical therapist.</td>
<td>Other special education supports, related services or other school staff (e.g. teacher, paraprofessional, nurse) are able to adequately address the area of concern. No further services by an occupational or physical therapist are required.</td>
</tr>
<tr>
<td>Occupational or physical therapy service is necessary in order for the student to benefit from education.</td>
<td>Occupational or physical therapy service is not necessary in order for the student to benefit from education.</td>
</tr>
</tbody>
</table>


When it has been determined that a student requires school-based occupational or physical therapy, a physician’s referral will be required to recommend these services on the student’s IEP. (It must be noted that a physician’s referral alone is not sufficient to recommend the provision of IEP-driven OT or PT services.)
CHAPTER IV. DESIGNING A THERAPY INTERVENTION PLAN

Once it has been determined that the student requires OT and/or PT services, the therapist should develop an intervention plan utilizing the chart below. Contents of STEP 1 have already been discussed in the previous chapter. STEPS 2 and 3 are clinical decision-making processes that assist the therapist in arriving at an IEP mandate (STEP 4). It must be noted that STEPS 2 and 3 are not to be written on the student’s IEP.

The New York City Department of Education does not prescribe specific therapeutic techniques for therapists to utilize. Therapists are to apply a variety of therapeutic strategies and interventions that would help the student achieve his/her IEP goals. These strategies and interventions must be:

1. evidence-based, where peer-reviewed literature is available, AND
2. evaluated periodically by the therapist. The therapist must utilize tests and measures to assess whether the intervention implemented is helping the student achieve his/her IEP goals. These tests and measures must include standardized assessments and/or the use of basic measures such as time (e.g. how long it took the student to complete task), distance (e.g. how many pages does the student lag behind his peers) or productivity (how many sentences is the student able to complete). Please see Chapter V for further discussion regarding monitoring progress.

Chart 1: Designing an Intervention Plan

STEP 1: REVIEW INITIAL EVALUATION AND IEP GOALS TO DEVELOP AN INTERVENTION PLAN

STEP 2: DETERMINE THERAPY INTERVENTION FOCUS AREA(S)
- STUDENT
- TASK
- ENVIRONMENT

STEP 3: DETERMINE SERVICE DELIVERY METHOD(S)
- CONSULTATIVE
- INTEGRATED
- DIRECT

STEP 4: DETERMINE IEP RECOMMENDATION
- GROUP SIZE:
  - Group (up to 6)
  - Individual
- FREQUENCY:
  - Monthly
  - Weekly
- DURATION:
  - e.g., 15 min.
  - 30 min.
  - 45 min.
- LOCATION:
  - General
  - Special Education
  - Separate
Determining the Therapy Intervention Focus Area

In order to achieve the student’s IEP goals, the therapist must determine whether the student recommended for OT/PT services requires intervention focused on any or all of the following: (1) the student, (2) the task, and (3) the environment. The three areas are inter-related and complementary. When designing an intervention plan, the therapist frequently considers all three areas, though often, one or two areas may be emphasized over another.

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Emphasis</th>
<th>Examples of When This Focus is Desired</th>
<th>Example Therapy Interventions</th>
</tr>
</thead>
</table>
| Student    | * Remediation or restoration of skills, and promotion of behaviors that would improve participation  
* Resources intrinsic to the student such as body structures and functions, behavior, motivation, skills  | * For younger children who demonstrate potential for change  
* When few previous attempts were made to develop skills  
* Student demonstrates developmental readiness for skill acquisition                                                                 | * PT - Acquire new skills required for participation in recess and physical education  
* OT - Increase fine motor manipulation skills to enhance mealtime tool usage |
| Task       | * Compensating student’s skills by modification of the physical and cognitive demands of an activity so that student’s performance will improve  
* Resources extrinsic to the student such as materials used or procedures followed to complete task | * When immediate independence and performance is desired  
* When varied interventions have been unsuccessful in changing student’s intrinsic resources  
* When students have greater academic demands and limited time for student-focused skill development | * OT or PT - Change seating configuration so student is facing the teacher and the chalkboard  
* OT - Simplify directions; break down instructions into easy-to-follow steps  
* OT - Utilize word processor for note-taking  
* PT - Focus on training student to use wheelchair to transition between classroom and science class because use of walker is too slow and strenuous |
| Environment| * Compensating student’s skills by modification and adaptation of the environment  
* Resources extrinsic to the student such as physical barriers | * When there is a significant mismatch between student’s performance and environmental demand  
* When immediate performance and independence is desired  
* When developing life outcomes are a priority | * OT or PT - Recommend installation of grab bars in the bathroom  
* OT or PT - Re-arrange classroom furniture to accommodate a student utilizing a wheelchair or walker |

Determining the Service Delivery Method

In this step, the therapist determines which service delivery method(s) will be employed to address the identified intervention focus area(s). The three methods in delivering mandated therapy services are listed below. It is typical for a therapist to utilize a combination of methods, and to move among the continuum of methods as progress is made towards the achievement of the student’s IEP goals.

Table 5. Service Delivery Methods

<table>
<thead>
<tr>
<th>Service Delivery Method</th>
<th>Description</th>
<th>Examples:</th>
</tr>
</thead>
</table>
| Direct                  | *The therapist develops and provides "hands-on" intervention that does not occur during actual school activities.*  
*This method is utilized when emphasis is on acquiring new and specific skills in a controlled environment, or when intervention strategies cannot be safely or easily carried out in the student's class setting.*  
*Intervention focus is heavy on the student, task and environment may also be a focus if modifications are being implemented.* | *Occupational therapist works with the student in the therapy room for upper extremity strengthening and visual perceptual activities.*  
*Physical therapist works with student in empty stairwell to practice ascending and descending stairs when not used by others.* |
| Integrated              | *The therapist develops and provides "hands-on" intervention that occurs during actual school activities.*  
*This intervention is provided alongside classroom peers within the natural environment, and emphasizes integration of skills into actual school activities.*  
*Intervention focus area is often the student and the task, and occasionally the environment.* | *During journal writing, occupational therapist works with the student as student utilizes raised line paper, pencil grip, and slant board.*  
*Physical therapist facilitates the student while negotiating stairs with peers in a crowded stairwell.* |
| Consultative            | *The therapist collaborates with classroom/school staff and parent/guardian to develop and monitor intervention that will be carried out by these individuals in the school and at home.*  
*Therapist must identify the appropriate individuals who will implement strategies.*  
*This intervention may take the form of specific classroom strategies, home exercise/activity programs, task modifications or environmental adaptations. It may also include staff training and provision of additional resources.*  
*This intervention ensures carry-over of skills learned under the integrated and direct methods.* | *Occupational therapist suggests using a slant board for all writing tasks.*  
*Physical therapist trains classroom staff in safe stair negotiation.* |

The example on Table 5 illustrates how more than one service delivery method may be utilized to address a student's needs. It must also be noted that the consultative service delivery method must not be confused with consultation that occurs between therapist and teacher or other school staff regarding non-mandated students. The consultative service delivery method for mandated students (described in Table 5) allows the therapist to quickly move into integrated or direct service delivery method should the need arise, while consultation with non-mandated students does not.
Wrote critical questions as a means to facilitate decision making regarding the **extent**, **type**, and **duration** of occupational therapy services (Not entry/exit criteria).

**Selected Questions:**

- What evidence exists to support the focus and frequency of the occupational therapy intervention program?
- What impact will the intervention have on social participation with peers?
- Does the student's health and safety depend on the occupational therapy provider’s presence in the educational environment?
- Considering the student's strengths and weaknesses, what is the potential for this student to improve functional skills and ultimately decrease or eliminate the need for special services of any kind, especially those of the occupational therapy provider?
- How well has the student responded to previous or other types of intervention?
Wisconsin: On Clinical Reasoning

1 Worksheet:

**Goal Functionality Scale**

- Determines the functionality of a written goal
- Users rate the usefulness and relevance of each benchmark

Wisconsin wrote critical questions to help the team *make decisions* regarding a student’s *need* for service.
### Figure 8 Goal Functionality Scale II

<table>
<thead>
<tr>
<th>Functional Domains</th>
<th>Child Name or ID</th>
<th>Goal/Outcome #</th>
<th>Rater’s Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>E = engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I = independence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR = social</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Is this skill GENERALLY USEFUL (i.e., can you answer why and who cares? broad enough yet specific enough)? If YES, 5
2. ... IF NOT REALLY USEFUL, 4
3. ... IF NOT AT ALL USEFUL, 3
4. During duration of interaction with people or objects sustains attention (E) +1 12. Cannot tell in what normalized contexts it would be useful -1
5. Persistence (E) +1 13. Purpose is not evident or useful -1
6. Developmentally and contextually appropriate construction (E) +1 14. Some element makes little sense -1
7. Pragmatic communication (SR) +1 15. Unnecessary skill -1
8. Naturalistic social interaction (SR) +1 16. Jargon -1
9. Friendship (SR) +1 17. Increase/decrease -1
10. Developmentally appropriate independence in routines (not just a reflection of prompt level) (I) +1 18. Vague -1
11. Developmentally appropriate activities (E) +1 19. Insufficient criterion -1
12. Participation in developmentally appropriate activities (E) +1 20. Criterion present but does not reflect a useful level of behavior -1

**SCORE**

This scale is designed to rate one IEP objective at a time. Because IEP goals are often statements about the domain addressed (e.g., Johnny will improve in communication), they barely serve as behavioral goals. The appropriate behavioral goal therefore is the more specific short-term objective, sometimes known as benchmark.

1. Complete the three top-left boxes. Assign a number to each outcome/objective.
2. Items 1-3: Read the outcome/objective and circle the appropriate usefulness score (i.e., 5, 4, or 3).
3. Items 4-11: Circle the scores matching the content of the outcome/objective. Note that the codes for these pertain to the three functional domains listed in the top right box.
4. Items 12-20: Circle the scores matching the flaws in the outcome/objective.
5. Score: Beginning with the general usefulness score, add 1 for each +1 circled and subtract 1 for each -1 circled. Enter the resulting score in the score box. This score could be a negative integer (e.g., -2). A high score in the positive range indicates greater goal functionality.

What you can do next week...

- Use or modify these templates and forms for your district
- Use these critical questions to guide your clinical reasoning
- Use assessments that reflect your clinical reasoning process and SHOW an occupation-based approach to assessment AND measure progress in therapy.
- Use interventions that reflect your clinical reasoning process and are evidence-based.
Need To Gather More Information?

*Look to the literature...*
## Appendix 3.6
### Strategies for Becoming an Evidence-Based Practitioner

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Potential Solutions</th>
</tr>
</thead>
</table>
| Finding time                       | • Request administration for additional workload time and explain federal education’s mandate for implementing evidence-based practice and progress monitoring.  
• Join/create a monthly departmental meeting or journal club to share the task of searching and critiquing evidence.  
• Accumulate found research into a departmental evidence-based practice library. |
| Increasing access to research literature | • Become an AOTA or APTA member to gain access to journals, professional magazines/periodicals, listservs, and special interest sections.  
• Use electronic databases, journals, and Web sites that are free of charge.  
• Encourage administration to purchase subscriptions to electronic databases and journals.  
• Attend professional conferences and continuing education classes that are research based.  
• Join a regional group.  
• Join a listserv and ask members questions about the latest research/references relating to clinical questions.  
• Assign fieldwork students to find relevant evidence relating to practice questions (therapy fieldwork students have access to university libraries and databases of evidence).  
• Often university alumni associations provide access to university libraries and databases of evidence |
| Critically appraising articles     | • Enroll in a statistics or research methods course or use an online tutorial to learn how to critically appraise an article.  
• Request a district in-service on the topic of critical appraisal.  
• Join/create a departmental meeting or journal club to critically appraise research with colleagues.  
• Assign fieldwork students to critically appraise evidence relating to a relevant practice question (most therapy fieldwork students have taken a research methods class).  
• Practice finding and appraising research regularly. |
Appendix B
Tests and Measures

Therapists using the assessments are encouraged to determine the reliability and validity of the instrument as well as the population on which the assessment is normed.

**Developmental Tests and Measures:**
- Battelle Developmental Inventory (2nd ed.) (BDI-2)
- Bruininks-Oseretsky Test of Motor Proficiency (BOTMP)
- Carolina Curriculum for Preschoolers with Special Needs (2nd ed.) (CPSN-2)
- Denver Developmental Screening Test – II
- Gross Motor Skills for Children with Down’s Syndrome
- Inside the Hawaii Early Learning Profile (HELP)
- Miller Assessment of Preschoolers (MAP)
- Peabody Developmental Motor Scales (2nd ed.) (PDMS-2)
- Test of Gross Motor Development (2nd ed.) (TGMD-2)

**Functional Tests and Measures:**
- Canadian Occupational Performance Measure (COPEM)
- Feeding Assessment from Pre-feeding skills (Morris and Dunn)
- Gross Motor Function Measure (GMFM)
- L-R Left-Right Reversal Test
- Pediatric Evaluation of Disability Inventory (PEDI)
- School Function Assessment (SFA)
- Evaluation Tool of Children’s Handwriting (ETCH)
- Minnesota Handwriting Assessment
- Movement Opportunities via Education (MOVE)
- Pediatric Balance Scale (PBS)
- Pediatric Reach Test
- Scales of Independent Behavior–Revised (SIB-R)
- Transdisciplinary Play-Based Assessment (TPBA)
- Test of Handwriting Skill (THS)
- WEBFIM: Functional Independence Measure for Children

**Sensory Processing Tests and Measures:**
- Clinical Observations of Motor and Postural Skills (2nd ed.) (COMPS-2)
- Degangi-Berk Test of Sensory Integration (TSI)
- Sensory Integration and Praxis Tests (S IPT)
- Sensory Profile
- Infant/Toddler Sensory Profile
- Adolescent Sensory Profile
- Touch Inventory for Elementary School-Aged Children (TIE)

**Perceptual-Motor Tests and Measures:**
- Child Health and Illness Profile-Adolescent Edition (CHIP-AE)
- Developmental Test of Visual-Motor Integration (5th ed.) (VMI-5)
- Developmental Test of Visual Perception (2nd ed.) (DTVP-2)
- Developmental Test of Visual Perception-Adolescent and Adult
- Test of Visual-Motor Skills-Revised (TVMS-R)
<table>
<thead>
<tr>
<th>Topic</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Motor</td>
<td>Movement in Learning</td>
</tr>
<tr>
<td>Natural Environment/Inclusion</td>
<td>Writing Process</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Seating/Positioning</td>
</tr>
<tr>
<td>Non-standardized Assessments</td>
<td>Play</td>
</tr>
<tr>
<td>Sensory Processing</td>
<td>School-based OT</td>
</tr>
<tr>
<td>Social Participation</td>
<td>Social Stories</td>
</tr>
<tr>
<td>Visual Supports</td>
<td>Visual Motor</td>
</tr>
</tbody>
</table>
Assessments that reflect clinical reasoning & OT process

- Popular evaluation tools (THE BIG 5), merits and limitations
- Establish new standards for evaluations
- Examine assessments that meet or partially meet the new standard.
  - Children’s KTA
  - Preschool Activity Card Sort (PACS)
  - Children’s Assessment of Participation and Enjoyment (CAPE) & Preferences of Activities for Children’s (PAC)
  - Sensory Processing Measure (SPM)
  - Pediatric Evaluation of Disability Inventory (PEDI)
  - School Function Assessment (SFA)
  - Weekly Calendar Planning Activity (WCPA)
  - Goal-Oriented Assessment of Lifeskills (GOAL)
Challenge of Evaluations

- Using quantitative measures to document the need for services and the value of those services is a requirement.
- Measuring actual ability with achievement on a task often yields a discrepancy.
- Simplify complex situation through numbers.
- Much attention is paid to psychometric properties of assessments (reliability, validity, and presence of normative data).
- Little attention is paid to appropriateness of measures for the child's occupational needs in a school.
A decade ago prominent OT’s began discussing their alarm at the reductionist-impairment focus to the assessment process.

A more holistic occupational focus was recommended to assess children with disabilities by using assessments which:

- Reflect therapeutic intentions to facilitate outcomes that target client-centered participation.
- Develop assessment tools that measure participation and engagement.
- Evaluate a child within a context of participation and acknowledge that environmental barriers are influential to participation.
Is the assessment tool measure appropriate for the problem/question/child?

Is the assessment tool responsive to change? Does the measure help to identify whether OT services have helped the client meet goals?

Is requiring a student to score minus 1.5 SD on a specific standardized, norm referenced test to obtain OT services consistent with the legal definition of students to whom these services should be provided?

If there was a non-significant finding in a study were they using a measure that was evaluating what they were doing in therapy?
Potential Solutions

- Significant functional change can occur without significant changes in impairment measures.
- Functional outcome measures means measuring what we do in therapy.
- Capture skills in new ways, capture client’s story in a new way.
- Provide a richer portrait of client’s life and concerns that emerge.
- Change dialogue with families, teachers, administrators.
- Challenge assessment practices that are unnecessarily narrow.
Children’s Kitchen Task Assessment

- Performance-based measure of executive functioning for children
- Cost is 60.00
- Available from Christine Berg
  - bergch@wusm.wustl.edu
  - Campus Box 8505, 4444 Forest Park Ave, Program In OT, Washington University, St. Louis Mo 63108
- Developed by Kristy Roche, Paige Hays, Dorothy Edwards, Christine Berg

Measure 1 cup of flour
Sequence of Children KTA

Part A
• 5 orientation questions

Part B
• Directions, Task performance, & Scoring

Part C
• After task questions & observations
Cueing guideline Example

- **Initiation**
  - Beginning the task
  - Wait 30 seconds after completion of directions to begin cueing
  - If participant has not begun, begin with a verbal cue, give cues from each level of cueing twice before progressing to the next level. Score the highest level of cueing given.
    - 0 = no cue
    - 1 = What should you do now? (Verbal Cue)
    - 2 = Point to the first step of the directions (Gestural guide)
    - 3 = “You can begin now.” (Direct Verbal)
    - 4 = Help the participant retrieve the items (Physical assistance)
    - 5 = Take the items out of the box for child (Do for Participant)
Scores Meaning

## Total Scores

<table>
<thead>
<tr>
<th>MEAN</th>
<th>SD</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.84</td>
<td>8.80</td>
<td>0-39</td>
</tr>
<tr>
<td>9.02</td>
<td>5.89</td>
<td>0-27</td>
</tr>
</tbody>
</table>

Under 10 = good performance
Over 11 = poor performance

## Component Scores

<table>
<thead>
<tr>
<th>Component</th>
<th>MEAN</th>
<th>SD</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INITIATION</td>
<td>.27</td>
<td>.53</td>
<td>0-2</td>
</tr>
<tr>
<td>ORGANIZE</td>
<td>.12</td>
<td>.48</td>
<td>0-4</td>
</tr>
<tr>
<td>PLANNING/SEQUENCING</td>
<td>.70</td>
<td>.46</td>
<td>0-2</td>
</tr>
<tr>
<td>JUDGEMENT</td>
<td>.12</td>
<td>.60</td>
<td>0-4</td>
</tr>
<tr>
<td>COMPLETION</td>
<td>.10</td>
<td>.31</td>
<td>0-1</td>
</tr>
</tbody>
</table>

Scores by Age

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL &amp; COMPONENT SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>18 &amp; 12</td>
</tr>
<tr>
<td>9 &amp; 10</td>
<td>11 &amp; 9</td>
</tr>
<tr>
<td>11</td>
<td>10 &amp; 8</td>
</tr>
<tr>
<td>12</td>
<td>7.5 &amp; 5</td>
</tr>
</tbody>
</table>

Preschool Activity Card Sort

- A semi-structured interview conducted with a preschool-age child’s parent.
- Children 3-6 years of age
- Using 85 photographs of children engaged in typical preschooler activities, parents are asked whether or not his/her child participates in each activity, and if not, why.
- Options for non-participation include for “child reasons,” “parent reasons,” or “environmental reasons.”

- The Preschool Activity Card Sort (PACS), designed by Christine Berg, PhD, OTR/L & Patti LaVesser, PhD, OTR/L
- Cost is 50.00
- Available from Christine Berg
  - bergch@wusm.wustl.edu
  - Campus Box 8505, 4444 Forest Park Ave, Program In OT, Washington University, St. Louis Mo 63108
PACS Administration

- Parents respond to each photograph by answering the question, “Does your child participate in this activity?”
- Parents are told that yes/no does not mean independence but rather the opportunities to engage in the activity offered.
- If yes, then parent indicates:
  - Yes my child participates
  - Yes with adult assistance (beyond what is expected for a preschooler)
  - Yes with environmental accommodation
- If No then therapist will explore the response, to determine whether the reason is related to child, parent or environment.
- At the end of the PACS interview parents are asked to identify up to 5 goals for treatment based on the prior discussion of child’s participation.
- Therapist can re-organize PACS information into domains
- See Scoring Sheet
Domains & Examples

Six Domains

- Yes
- Yes, with adult assistance
- Yes, with environmental assistance,
- No, child
- No, adult
- No environment

Does not go to Library

- No community library available (No environment)
- Parent does not choose to go (no parent)
- My child enters library and starts screaming (no, child)
Other Questions

- PACS is NOT interested in the proficiency of performance, but in whether the child is given opportunities to do activity and if they are not, why

- Answers of “my child does it inconsistently,” example might be hugging.
  - You are developing an occupational profile
  - Child does hug in some situations, so yes, child hugs but how do they manage?
    Answers of “used to” would be yes, child is able to participate, PACS helps to determine OT goals through occupational profile.
# Examples

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>Yes with adult assist</th>
<th>Yes with environ. assist</th>
<th>No, Child</th>
<th>No, Adult</th>
<th>No, environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough Housing</td>
<td>Child enjoys</td>
<td></td>
<td></td>
<td>Child refuses, doesn’t like</td>
<td>Adult does not offer opportunity to participate</td>
<td></td>
</tr>
<tr>
<td>Getting Hair Cut</td>
<td>Has to go into the community</td>
<td>Sits on adults lap</td>
<td>Requires special chair/seat, done in w/c</td>
<td>Child can’t stand it, refuses, screams</td>
<td>Adult hasn’t taken child to get hair cut yet</td>
<td>Adult cuts child’s hair</td>
</tr>
<tr>
<td>Eating at a restaurant</td>
<td></td>
<td>Found places that are w/c accessible</td>
<td></td>
<td>Child’s food choices are too limited</td>
<td>Too Expensive</td>
<td>Too many obstacles</td>
</tr>
</tbody>
</table>
The Children's Assessment of Participation and Enjoyment (CAPE) and the Preferences for Activities of Children (PAC) are two companion measures of children's participation. Both are self-report measures of children's participation in recreation and leisure activities outside of mandated school activities.
CAPE & PAC

**CAPE**

- Designed to document how children with or without disabilities participate in everyday activities outside of their mandated school activities.
- Measures the child’s diversity and intensity of participation in activities, in their usual context and the child’s enjoyment of these activities.

**PAC**

- Determines activity preferences
- Addresses the child’s preferences for activities
- Together these assessments can investigate a child’s participation in 6 dimensions of activity.
- Can be use independently
CAPE & PAC Information

- Can be used with children 6-21 years of age
- Both CAPE & PAC can be administered with the same record form
- It can be completed by the child with assistance from a caregiver or parent (self-administered) or Interviewer administered by having the child respond to each item using the Activity Cards and Visual Response pages.

- CAPE requires 30-45 minutes to complete and the PAC requires 15-20 minutes to complete.

- Complete Kit $116.00
- Pearson
  Attn: Customer Service
  P.O. Box 599700
  San Antonio, TX 78259
  Phone: 800.627.7271
  Fax: 800.232.1223
  Email: clinicalcustomersupport@pearson.com
CAPE Interviewer Administered

- Complete Questionnaire
  - Six preliminary questions
- Arrange Visual Response cards and Activity Cards
  - Record Responses
- Complete Scoring
  - Overall scores & Activity Type scores
CAPE Administration Questionnaire

Six Questions

Have there been any major changes in past 4 months

Has an event occurred in the past 4 months that can be used as a reference point.

Describe living community (urban or rural)

Will child need assistance

Who spends time with child

Other issues that may impact administration

Copyrighted material redacted for online distribution
Visual Response Card

- Copyrighted material redacted for online distribution
Copyrighted material redacted for online distribution
## Dimensions of the CAPE

<table>
<thead>
<tr>
<th>Raw Data</th>
<th>Diversity</th>
<th>Intensity</th>
<th>With Whom</th>
<th>Where</th>
<th>Enjoyment</th>
<th>PAC Prefer</th>
</tr>
</thead>
</table>
| Yes/No response | 1 = 1 X/ 4 mo  
2 = 2 X/4 mo  
3 = 1/mo  
4 = 2-3 X/mo  
5 = Once/wk  
6 = 2-3 X/wk  
7 = 1X/day | 1 = Alone  
2= Close family  
3 = Other relatives  
4 = Friends  
5 = Others | 1 = At Home  
2 = Relatives Home  
3 = Neighborhood  
4 = School (not class)  
5 = In community  
6 = Beyond community | 1 = Not at all  
2 = Somewhat  
3 = Pretty Much  
4 = Very Much  
5 = Love it | 1 = Not at all  
2 = Sort of like  
3 = Really Like |

| Score Range | Overall 0-55  
Formal 0-15  
Informal 0-40  
Recreational 0-12  
Physical 0-13  
Social 0-10  
Skill-based 0-10  
Self-Improvement 0-10 | 0.0 –.7.0 | 1.0–5.0 | 1.0–6.0 | 1.0–5.0 | 1.0–3.0 |
The Sensory Processing Measure (SPM) is a norm-referenced assessment of sensory integration/sensory processing that gathers information about a child’s behavior, coordination, and participation at home and in the community, and/or at school.

Separate scores are provided for social participation, five sensory systems, and motor planning in the home and in the child’s main classroom at school.

Additional scores may be obtained for six different school settings, including art class, music class, physical education class, the playground, the cafeteria, and the school bus.
Observer-rated behavior checklist

15–20 minutes per form

Elementary school-age children
  - Grades K–6, 5 to 12 years

The norms are based on a demographically representative sample of more than 1,000 typically developing children.

The SPM addresses behaviors related to six sensory systems: visual, auditory, tactile, olfactory–gustatory, proprioceptive, and vestibular.

The child’s primary caregiver completes the Home Form (75 items).

The child’s primary classroom teacher completes the Main Classroom Form (62 items).

Other school personnel familiar with the child complete the School.

Environments Form regarding six school environments outside the main classroom (10–15 items per environment):
  - Art Class,
  - Music Class,
  - Physical Education Class,
  - Recess/Playground,
  - Cafeteria and
  - School Bus.
Items are rated on a 4-point Likert-type scale reflecting frequency of behavior:
- “never,”
- “occasionally,”
- “frequently,”
- “always”

Raters must have observed the child in the environment for at least 1 month

Child need not be present

Western Psych Services
12031 Wilshire Blvd.
Los Angeles, CA 90025
Tel.: 800-648-8857

http://portal.wpspublish.com/portal/page?_pageid=53,238088&_dad=portal&_schema=PORTAL

For information on SPM workshops, please visit www.ateachabout.com

The full kit includes: 25 Home AutoScore Forms; 25 Main Classroom AutoScore Forms; School Environments Form CD; Manual $149
Yield norm-referenced scale scores for:

The School Environments Form yields scores for the six school environments outside the main classroom.

Scores at or above cutoff points indicate that the child is experiencing an unusually high number of sensory processing problems in a particular environment.

<table>
<thead>
<tr>
<th>8 Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Participation</td>
</tr>
<tr>
<td>Vision</td>
</tr>
<tr>
<td>Hearing</td>
</tr>
<tr>
<td>Touch</td>
</tr>
<tr>
<td>Body Awareness (proprioception)</td>
</tr>
<tr>
<td>Balance and Motion (vestibular function)</td>
</tr>
<tr>
<td>Planning and Ideas (praxis)</td>
</tr>
<tr>
<td>Total Sensory System</td>
</tr>
</tbody>
</table>
Scoring Procedure

- Main Classroom and Home Forms
- Rater completes front and back with a pen
- Open and find the scoring worksheet
  - Sum each domain raw score
  - Sum domains for the total score
- Transfer scores onto the Profile Sheet
- The higher the raw score, the greater the dysfunction
Scores for each scale fall into one of three interpretive ranges:
- Typical
- Some Problems or
- Definite Dysfunction

While the scales on the Home and Main Classroom Forms are identical, the items themselves are specific to each environment.

Individual item responses reveal how sensory difficulties manifest in these two different settings.

<table>
<thead>
<tr>
<th>T-score</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical</td>
<td>40-59</td>
</tr>
<tr>
<td>Some Problems</td>
<td>60-69</td>
</tr>
<tr>
<td>Definite Dysfunction</td>
<td>70-80</td>
</tr>
</tbody>
</table>
Sensory Processing Measure (SpM)
The Pediatric Evaluation of Disability Inventory (PEDI) was developed to provide a comprehensive clinical assessment of key functional capabilities and performance in children between the ages of six months and seven years.
The assessment was designed to serve as a descriptive measure of the child's current functional performance, as well as a method for tracking change across time.

The PEDI incorporates parent observation and is sensitive to small increments of change.

The PEDI may be used for the clinical evaluation of functional capabilities, performance and changes in functional skills in children with disabilities 6 months to 7 years of age.

The PEDI measures both capability and performance of functional activities in three content domains: 1) self-care, 2) mobility, and 3) social function.

The PEDI was designed primarily for the functional evaluation of young children, however, it can also be used for the evaluation of older children if their functional abilities fall below that expected of seven-year-old children without disabilities.
Normative sample consisted of 203 male and 209 female children, ages 0.5 to > 7.0 years, from northeastern United States and representing diverse ethnic populations).

20–60 minutes by a familiar therapist or teacher, or 45–60 minutes by parent interview and checklist

Harcourt Assessment, Inc.
19500 Bulverde Road
San Antonio, TX 78259
800-211-8378 (ph)
800-232-1223 (fax)

The Harcourt website is: http://harcourtassessment.com/pedi

Cost
120.00 for manual,
42.00 for 25 forms
Software is available
The PEDI uses observation, interview, and judgment of professionals familiar with the child to assess three domains:

- Self-Care
- Mobility
- Social Function

The domains are further broken down into functional subunits that make up each task.

The score form contains three sections:

- Functional Skills (197 items) are marked 0 (unable) or 1 (capable)
- Caregiver Assistance (20 items) is rated from 0 (total assistance) to 5 (independent)
- Modifications (20 items) is rated from E (extensive) to N (no modifications).
PEDI

- Two types of summary scores:
  - normative standard scores, which indicate the child’s relative standing in relation to age expectations, and
  - scaled scores, which indicate the child’s performance in relation to ease or difficulty of the item (by Rasch analysis).

- Totals for frequency of modification levels can be calculated.

- PEDI identifies children who show patterns of delay in achieving age-appropriate functional abilities.

- Normative standard scores help examine clinical change in relation to expected maturational change.

- Modifications used for the child’s participation in self-care, mobility, and social activities are identified.
## Scoring Criteria PEDI

### Hair brushing Example:
**Measure the child’s ability to manage/groom his/her hair.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20. Holds Head in position while hair is combed</strong></td>
<td>Child cooperates in some manner such as turning the head, not squirming or fussing</td>
</tr>
<tr>
<td><strong>21. Brings Brush or comb to hair</strong></td>
<td>Brushing may be imitated during play or during grooming.</td>
</tr>
<tr>
<td><strong>22. Brushes or combs hair</strong></td>
<td>The caregiver typically chooses not to redo brushing, except when hair needs to be re-parted or untangled.</td>
</tr>
<tr>
<td><strong>23. Manages Tangles and parts hair</strong></td>
<td>Child may receive help with styling hair for special occasions, but otherwise has the capability to manage hair brushing or combing.</td>
</tr>
</tbody>
</table>
Scoring

1. Complete Forms
2. Total Raw Scores
3. Use Charts in manual to obtain Standard Scores
4. On Score summary sheet indicate performance
5. Plot Score Profile
School Function Assessment (SFA)

The School Function Assessment (SFA) is used to measure a student’s performance of functional tasks that support his or her participation in the academic and social aspects of an elementary school program (grades K–6). It was designed to facilitate collaborative program planning for students with a variety of disabling conditions.
School Function Assessment

- Help elementary school students with disabilities succeed by identifying their strengths and needs in important nonacademic functional tasks.
- School personnel familiar with the student's typical performance complete the SFA.
- Three scales are included for evaluating students—Participation, Task Supports, and Activity Performance.
- Criterion cut-off scores help establish eligibility for special services.
- Use SFA to facilitate collaborative program planning for students with a variety of disabling conditions.
- Administration: Individual scales can be completed in as little as 5 to 10 minutes.
- Scores: Criterion-Referenced Scores
- Ages / Grades: Kindergarten through grade 6, 5-12 years of age
- Norms: Criterion-Referenced ratings
SFA

- **SFA Complete Kit**
  - Includes User's Manual,
  - 25 Record Forms, and
  - (3) 8-page Rating Scale Guides. $207.00

- **User's Manual** $130.00

- **Record Forms** package of 25 with 3 Rating Scale Guides $83.00
**School Function Assessment**

### Part I: Participation
- **School Activity Settings**

### Part II: Task Supports
- **Assistance & Adaptations**

### Part III: Activity Performance
- **Physical Tasks**

**Read the description of each functional activity provided below. For reference, use the rating scale for Part I provided in the following table. For each activity in the following table, identify the task needs and total help with each need.**

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<td>2.</td>
</tr>
<tr>
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<td>3.</td>
</tr>
<tr>
<td>3.</td>
<td>4.</td>
</tr>
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**School Function Assessment**

### Part I: Participation
- **School Activity Settings**

### Part II: Task Supports
- **Assistance & Adaptations**

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**School Function Assessment**

### Part I: Participation
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### Part II: Task Supports
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</tr>
<tr>
<td>3.</td>
<td>4.</td>
</tr>
</tbody>
</table>
Part 1: Participation

- Evaluates child’s participation in 6 school environments
  - Regular or Special Education
  - Transportation to and from school
  - Transitions
  - Meal time/snack time
  - Bathroom
  - Playground/recess

<table>
<thead>
<tr>
<th>Rating Scale for Participation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Participation extremely limited</td>
<td></td>
</tr>
<tr>
<td>2 = Participation in a few activities</td>
<td></td>
</tr>
<tr>
<td>3 = Participation with constant supervision</td>
<td></td>
</tr>
<tr>
<td>4 = Participation with occasional assistance</td>
<td></td>
</tr>
<tr>
<td>5 = Modified Full participation</td>
<td></td>
</tr>
<tr>
<td>6 = Full participation</td>
<td></td>
</tr>
</tbody>
</table>
Part II Task Supports

- Examines the assistance and adaptations provided to enable the student to perform school tasks.
  - Physical
  - Cognitive
Part II Task Supports

Rating Scale Task Supports

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extensive</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Minimal</td>
</tr>
<tr>
<td>4</td>
<td>No assistance</td>
</tr>
</tbody>
</table>

*One rates what IS happening not what could be happening.*

*What is provided for assistance.*

*No help means nothing over what is routinely provided to peers.*
Part III Activity Performance

- Examines the students' performance of specific functional activities within each task area.
  - Physical activities
  - Cognitive/Behavioral activities

<table>
<thead>
<tr>
<th>Physical Activity Items</th>
<th>Cognitive/Behavioral Activity Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel Scale</td>
<td>Safety Scale</td>
</tr>
<tr>
<td>Moves in a line with classmates</td>
<td>Keeps unsafe objects out of mouth</td>
</tr>
<tr>
<td>Moves to adjacent classroom</td>
<td>Demonstrates appropriate caution in situations where falling is possible</td>
</tr>
<tr>
<td>Moves in aisles</td>
<td>Responds to emergency signal by initiating established routine</td>
</tr>
</tbody>
</table>

Rating Scale Activity Performance

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does not perform</td>
</tr>
<tr>
<td>2</td>
<td>Partial performance</td>
</tr>
<tr>
<td>3</td>
<td>Inconsistent performance</td>
</tr>
<tr>
<td>4</td>
<td>Consistent performance</td>
</tr>
</tbody>
</table>
Scoring SFA

1. Add the raw item scores and enter total for each section.
2. Copy the raw total scores onto the Summary Score Form.
3. Obtain the SE for each score for the same table where you obtained the Criterion Scores.
4. Enter Criterion Scores into the second column on the Summary Score Form.
5. Transform each raw score to the corresponding Criterion Score using the appropriate table in manual.
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Discussion Questions

*How are you currently capturing the needs of students?*
Think about the students you work with currently.

Did the last evaluation capture the students’ needs?

Are there other areas of school function that you would like to be addressing?
Discussion Questions

What is currently available in your setting to improve the evaluation process for students?

What resources do you need to further improve the evaluation process for students?
Questions?