“What therapists think is needed in response to the dilemma of how to improve outcomes is new techniques for intervention. I tend to believe, however, that the use of more explicit decision making paradigms with **Objective Assessment of Functional Outcomes** is likely to be more productive.”

(CAMPBELL, 1999)
OBJECTIVES FOR THIS SESSION

- Learn the “why”, “how” and “what” of ecological assessment
- Understand the link to ICF
- Understand “how” an ecological assessment supports the IEP process and the PT PoC
- Apply the concepts of ecological assessment to your practice and clinical decision making process

FEDERAL REGULATIONS REGARDING EXAMINATION AND EVALUATION

- Part B does not distinguish between evaluation and assessment (Section 300.15)
  - Evaluation means procedures used in accordance with Sec. 300.304-311 to determine whether a child has a disability and the nature and extent of the special education and related services that the child needs.
  - It does require the evaluator to use a variety of tools and strategies that are (Section 300.304):
    - Technically sound
    - Not discriminatory
    - Provided in the native language
    - Valid and reliable
    - Not standardized

BE AWARE OF LEGAL CONSIDERATIONS!

- “The importance of the assessment in the special education process cannot be overstated”
- “The evaluation must address all areas of need”
- “Assessment must relate meaningfully to the student’s educational needs” (now and in the future)
- “A relevant assessment is the first step of program development”

(Yell, et al., 2011; Avoiding Substantive Errors in IEP Development. Teaching Exceptional Children. 31(4))
YOUR ASSESSMENT PRIORITIES

• To identify a student’s strengths and needs relative to concerns participating and progressing in the learning environment
  • Understand the purpose of your assessment
• To address the impact of the student’s disability(ies) and needs in order to facilitate participation and progress in the learning environment
  • To determine educational necessity

• To assist the team designing an IEP that is “reasonably calculated” (ENDREW VS. DOUGLASS COUNTY, 2017)
• Contribute to supplementary aids/service and or goals, objectives that address needs
• Provide a “dose” of services to and on behalf of the student to support participation and progress

A Quick Review
International Classification of Function (ICF)

<table>
<thead>
<tr>
<th>Special Scope</th>
<th>Health Condition</th>
<th>Body Functions &amp; Structures</th>
<th>Activity</th>
<th>Participation</th>
<th>Environment</th>
<th>Personal Factors</th>
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[Holahan, 2011]
MAKE NO ASSUMPTIONS
(PPJ, 2008)

- THE ICF REQUIRES THE CLINICIAN TO SYSTEMATICALLY EVALUATE THE RELATIONSHIPS AMONG ALL HEALTH FACTORS IN ORDER TO DEVELOP THE PT PLAN OF CARE (GOALS, OUTCOMES AND EVIDENCED-BASED INTERVENTIONS) FOR THE IEP.

ICF
Part 1: Functioning & Disability
- Body functions and structures
- Activities
- Participation

Part 2: Contextual Factors
- Environmental factors
- Personal factors

A CENTRAL FOCUS OF THE EXAMINATION SHOULD BE THE FUNCTIONAL NEEDS OF THE CHILD IN NATURAL CONTEXTS...” (CHARELLO, ET AL.2005)

WHEN SERVICE PROVIDERS ARE FOCUSING ON THE CLIENT’S IMPAIRMENTS AS THE PROBLEM RATHER THAN TREATING ENVIRONMENTAL BARRIERS AS TRUE THE PROBLEM...” (ROUSH & SHARBY, DECEMBER 2011)

Top-Down Assessment

[Diagram: Participation, Activity, Body Function & Structure]
CAPACITY VS. PERFORMANCE

IF A CHILD’S ACTUAL PERFORMANCE IS HIGHER THAN THEIR EVALUATED CAPACITY – THEN THE ENVIRONMENT IS FACILITATING FUNCTION.

IF A CHILD’S CAPACITY IS BETTER AS COMPARED TO THEIR PERFORMANCE IN REAL LIFE – THEN SOMETHING IN THE ENVIRONMENT IS A BARRIER.

TOP DOWN ASSESSMENT

Desired Outcome/Goal
Participation
What are the team/student/family priorities

Identification of Barriers
Identification of Strengths

Strategies to overcome barriers
Passive/active strategies

Intervention Plan/POC
Re-assessment/revision
Data driven decision making

EXAMPLE

What are the team/student/family priorities?
Play with peers on the playground

The performance of those critical tasks/activities

Identification of Barriers
Initiation of peer interactions

Identification of Strengths
Asks for help

Strategies to overcome barriers
Passive/active strategies

Intervention Plan/POC
Re-assessment/revision
Data driven decision making

From Effgen, (2005) pg. 20
Video Case Study 1
Teacher and para interview
Classroom observation

THE "WHY" OF ECOLOGICAL ASSESSMENT

ECOLOGICAL THEORY & DEVELOPMENT

• "THE DEVELOPMENTAL INDICATOR IMPORTANT FOR ASSESSING CHILDREN'S GROWTH IS HOW THEIR BEHAVIOR UNFOLDS TO MATCH OR MORE CLOSELY APPROXIMATE THAT OF OTHERS WITHIN THE SOCIAL AND CULTURAL CONTEXTS IN WHICH THEY NATURALLY WOULD BE PARTICIPANTS"…
  (JACKSON ET AL.; PG. 180)
ECOLOGICAL ASSESSMENTS HAVE BOTH A SETTING FOCUS AND A STUDENT FOCUS. ECOLOGICAL ASSESSMENTS STUDY THE NATURE OF ALL BEHAVIORS REQUIRED TO BE REINFORCED IN A PARTICULAR SETTING AND THE SPECIFIC CIRCUMSTANCES UNDER WHICH THOSE BEHAVIORS MUST OCCUR. IT THEN COMPARES THESE REQUIREMENTS TO THE ABILITIES AND EXPERIENCES OF THE STUDENT.

(HTTP://BLOG.DIFFLEARN.COM/2016/11/03/ECOLOGICAL-ASSESSMENT-SUCCESSFUL-SCHOOL-INCLUSION SETTINGS [RETRIEVED MAY 4, 2018])

ECOLOGICAL ASSESSMENT SUPPORTS IDEA 2004

EDUCATIONAL RELEVANCE:

- RECOGNITION OF TEAM CONCERNS, STRENGTHS AND NEEDS RELATED TO SCHOOL PARTICIPATION
  
  "IF A SKILL OR ACTIVITY CANNOT BE OBSERVED OR MEASURED DURING A CHILD’S NORMAL SCHOOL DAY THEN IT MIGHT NOT BE RELEVANT TO THE CHILD’S EDUCATIONAL NEEDS."

  (DOLE, ARVISON, BRYNE, ROBBINS & SCHASBERGER, 2003)

- LEAST RESTRICTIVE ENVIRONMENT
  - ASSESSES THE IMPACT OF THE INSTRUCTIONAL ENVIRONMENT ON PERFORMANCE

- COLLABORATIVE INTERPROFESSIONAL PRACTICE
  - REQUIRES COLLABORATION AMONG PROFESSIONALS TO SUPPORT INCLUSION

EDUCATIONAL RELEVANCE

“Exists when a proposed service can be cross-referenced with an identified component of the student’s educational program”

(Giangreco, CSM 2019)
HISTORIC VIEW OF ASSESSMENT METHODOLOGY

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Traditional</th>
<th>Contemporary</th>
</tr>
</thead>
<tbody>
<tr>
<td>To determine what is needed to remediate the disability</td>
<td>To determine what is needed to help the student attain educational goals/objectives</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Method</th>
<th>Traditional</th>
<th>Contemporary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test scores</td>
<td>Diagnosis driven</td>
<td>Ecological-Authentic (ICF oriented)</td>
</tr>
<tr>
<td>Discrepancy model</td>
<td></td>
<td>Identification of supports and interferences to specific tasks, expectations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments</th>
<th>Traditional</th>
<th>Contemporary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test scores may not be relevant</td>
<td>Consideration of student-task-environment relationship to performance expectations</td>
<td></td>
</tr>
<tr>
<td>Test scores and diagnosis may not relate to classroom performance</td>
<td>Diagnose and Prognose</td>
<td></td>
</tr>
<tr>
<td>Test scores do not contribute to the development of functional goals</td>
<td></td>
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</table>

Student Examination and Evaluation
Think Ecologically

ASSESSMENT NON-NEGOTIABLES

- DEFINE THE TEAM’S CONCERNS AND PRIORITY OUTCOME FIRST!
- Interview appropriate stakeholders
- DEVELOP YOUR ASSESSMENT STRATEGY IN ORDER TO ASSESS THE CONCERN AND DEFINE THE EDUCATIONAL IMPACT
  - USE THE ICF
- DEVELOP A PROFILE OF THE STUDENT TO ESTABLISH THE STUDENT’S PT DIAGNOSIS AND PROGNOSIS
  - GUIDE TO PT PRACTICE 3.0
- USE ALL DOMAINS OF THE ICF AND INTERPRET THEIR INTER-RELATIONSHIPS TO SUPPORT PROGRAMMING
  - CONSIDER THE REQUIREMENTS OF YOUR STATE PRACTICE ACT TOO!
INTERVIEWING STAKEHOLDERS

KNOW THE PURPOSE: WHAT ARE THE TEAM’S CONCERNS? & WHAT DO YOU WANT TO LEARN?

ASK THE RIGHT QUESTIONS IN THE RIGHT WAY
- USE OPEN ENDED QUESTIONS
- ASK FOR USE INSTEAD OF MEANING
- AVOID LEADING QUESTIONS
- AVOID WHY QUESTIONS
- AVOID MULTIPLE QUESTIONS

STRUCTURAL QUESTIONING
- STRICT INCLUSION: WHY TYPES OF ACTIVITIES?
- MEANS ENDS: WHAT HAPPENS WHEN?
- RATIONALE: WHAT DO YOU THINK...?

The Importance of Stakeholder Involvement

Interprofessional Practice

It is a way to explain roles and responsibilities, answer questions relative to student needs; builds a foundation of trust

Helps the team to understand the impact of PT findings on participation
- Jointly discuss educationally relevant expectations
- Explain to the team the "why" of your strategies to mitigate barriers to participation
- Jointly discuss the "what" of the modifications/accommodations and the how they will be implemented
- Be available to mentor/coach

- TEACHER -PARA-INTERVIEW DATA COLLECTION FORM.DOC
- PARENT QUESTIONNAIRE.DOC
- PE CONSULTATION CHECKLIST.DOC
CASE #1 SHARING

TEAM CONCERNS?
IMPAIRMENTS?
ENVIRONMENTAL BARRIERS?
PERSONAL FACTORS?
ACTIVITIES?
LIMITATIONS
PARTICIPATION?
RESTRICTIONS

THE “WHAT” OF ECOLOGICAL ASSESSMENT

WHAT IS ECOLOGICAL ASSESSMENT?
A comprehensive process of assessment where data on student performance is collected across different environments and or settings.

What does the student need to do to succeed’’?
THE “HOW” OF ECOLOGICAL ASSESSMENT

ECOLOGICAL ASSESSMENT FRAMEWORK
Objectivity in Observation IS ESSENTIAL

• PARTICIPATION
• COMPLEX TASK PERFORMANCE
• ACTIVITY PERFORMANCE
• COMPONENT PROCESSES

IDENTIFY THE PROBLEM (RESTRICTION)
IDENTIFY THE ENVIRONMENT WHERE THE PROBLEM EXISTS
IDENTIFY WHERE THE ACTIVITY LIMITATIONS SURFACE
Factor in what is developmentally appropriate for any particular age
ELEMENTS OF PARTICIPATION

PHYSICAL ENGAGEMENT
• CHILD’S INVOLVEMENT IN THE ACTIVITY

SOCIAL ENGAGEMENT
• CHILD’S INTERPERSONAL INTERACTIONS IN THE ACTIVITY

SELF ENGAGEMENT
• CHILD’S ENJOYMENT IN THE MOMENT AND SELF UNDERSTANDING

(SNAVA AND BODISON, CSM 2016)

COMPLEX ROUTINE/TASK PERFORMANCE

IDENTIFY CONTEXTUAL VARIABLES
IDENTIFY THE COMPONENT STEPS OF THE PROBLEM ACTIVITIES
(TASK ANALYZE)
LOOKS AT EXISTING SUPPORTS
• WHAT WORKS?
• WHAT DOESN’T?

TOOLS TO CONSIDER OR CREATE YOUR OWN!
• PGCP PRESCHOOL PERFORMANCE OBSERVATION, ICF VERSION DOC DOCX
• EXAMPLE OF ECOLOGICAL INVENTORY TOOL DOCX
• SATIRE PDF
Example of an Ecological Assessment

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Performance Scores</th>
<th>What Student was Doing</th>
<th>Student Reportative Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:40</td>
<td>Task force from off desks</td>
<td>Quality and quantity of desks and all at desk</td>
<td>Holding hands and working at desks</td>
<td>Matthew had some trouble, but got to desk and went back.</td>
</tr>
<tr>
<td>3:00</td>
<td>Performing science</td>
<td>Successfully complete today</td>
<td>Teacher standing at desk, holding hands</td>
<td>Matthew's 1's were helpful. He was helping students hold their pens and focus.</td>
</tr>
<tr>
<td>3:00</td>
<td>Task force to carpet</td>
<td>Pick up books and get to report spot on time</td>
<td>Students working, standing, and talking while waiting for carpet.</td>
<td>Matthew helped a lot.</td>
</tr>
<tr>
<td>3:20</td>
<td>Student science problems with teacher</td>
<td>Sit with proper posture focus on teacher</td>
<td>Some kids focused, some talking, standing, and talking out</td>
<td>Matthew helped a lot.</td>
</tr>
</tbody>
</table>

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Add video link

TP in PE

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LETS GIVE IT A TRY!

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Class expectation</th>
<th>Peer standard</th>
<th>Student performance</th>
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Patient Client Management and School Practice

EXAMINATION AND EVALUATION

EXAMINATION
- ECOLOGICAL ASSESSMENT
- INTERVIEWS
- SYSTEMS REVIEWS
- TESTS AND MEASURES
- OTHER PERTINENT DATA
  - INCLUDE RECORD REVIEW

EVALUATION
- INTERPRET THE INDIVIDUAL'S RESPONSE TO TESTS AND MEASURES
- INTEGRATE THE TEST AND MEASURE DATA WITH OTHER INFORMATION COLLECTED DURING THE HISTORY

(from THE GUIDE TO PT PRACTICE 3.0)
**Selecting tests and measures**

- Clarify the information that is needed, for what purpose and from whom
- Consider the psychometrics of the assessment
- Consider factors related to the student, environment and or caregiver
- Collect and score data with consistent and standardized procedures
- Consider how the information will be collected and from whom
- Consider the standardized procedures and calculations
- Measurement to the statistical analysis of the results
- Consider the assessment findings in the context of all relevant information

**Administering tests and measures**

- Consider the standardized procedures and calculations
- Measurement to the statistical analysis of the results
- Consider the relevant aspects of the ICF

**Interpreting tests and measures**

- Consider the psychometrics of the assessment
- Consider factors related to the student, environment and or caregiver
- Collect and score data with consistent and standardized procedures
- Consider the assessment findings in the context of all relevant information

---

**PARTICIPATION FOCUSED ASSESSMENTS**

- PEDI (ALSO ASSESSES ACTIVITY)
- PEDIATRIC ASSESSMENT OF PARTICIPATION AND ENVIRONMENT (PAPE)
- PREFERENCES FOR ACTIVITIES FOR CHILDREN (PAC)
- ASSESSMENT OF LIFE HABITS (LIFE-H)
- CANADIAN OCCUPATIONAL PERFORMANCE MEASURE (COPM)
- MILLER FUNCTION AND PARTICIPATION SCALES (M-FPS)
- ASSESSMENT OF LIFE HABITS (LIFE-H)
- SFA (ALSO ASSESSES ACTIVITY)

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**ACTIVITY FOCUSED ASSESSMENTS**

- MOBILITY OPPORTUNITIES VIA EDUCATION
- ECOLOGICAL ASSESSMENT
- PDMS-III
- GMFM
  - 2 VERSIONS: GMFM-86 AND 66
- TGD
- GMFCS
- MOVEMENT ABC
- BRUNINGK-OSTERETSKY (BOT-2)
- MOVEMENT ASSESSMENT BATTERY FOR CHILDREN (MOVEMENT ABC-2)
TOOLS THAT ADDRESS BODY, FUNCTION AND STRUCTURE

- PEDIATRIC FUNCTIONAL REACH
- SATOS
- REACH FOR OBJECTS
- TIMED UP & DOWN (UP AND DOWN THE STAIRS (TUDS))
- ENERGY EFFICIENCY EXPOSURE INDEX
- SENSORY PROFILE
- SWMS
- PAIN, POSTURE, ROM, AND TONE
  - MODIFIED ASHWORTH SCALE
  - TARDIEU SCALE

THE RECOMMENDATION FOR OUTCOME MEASUREMENT? MULTIPLE MEASURES, MULTIPLE PERSPECTIVE, MULTIPLE ENVIRONMENTS (PALISANO, 2014)

MEANINGFUL FUNCTIONAL CHANGES CAN OCCUR EVEN WITHOUT SIGNIFICANT CHANGES IN IMPAIRMENT MEASURES (DUDGEON ET AL., 1994; NORDMARK, JÅKLO, & HAGGLUND, 2000)
PHYSICAL THERAPIST DIAGNOSIS

• WHAT IS THE PRIMARY DYSFUNCTION YOU ARE DIRECTING YOUR INTERVENTIONS TO?
  • THINK MOVEMENT SYSTEM DIAGNOSES
  • MOVEMENT SYSTEM

PHYSICAL THERAPIST PROGNOSIS

• WHAT IS THE LEVEL OF FUNCTION THE STUDENT IS EXPECTED TO ACHIEVE?
• WHAT IS THE AMOUNT OF TIME IT WILL TAKE TO GET THERE?

REFLECTION ON PRACTICE ASSESSMENT

DID I REVIEW ALL THE RIGHT STAKEHOLDERS (USE YOUR ECOLOGICAL LENS)?
HAVE YOU ADDRESSED ALL TEAM CONCERNS?
DID YOU OBSERVE WITHOUT BIAS? (given the medical diagnosis?)
DID YOU ADDRESS ALL ICF DOMAINS?
WILL YOU BE ABLE TO CONTRIBUTE TO A REASONABLY CALCULATED IEP?
HAVE YOUR TESTS AND MEASURES ASSISTED WITH OUTCOME DETERMINATION AND MEASUREMENT?
WILL YOUR PT POC REFLECT SERVICES THAT ARE NECESSARY & EDUCATIONALLY RELEVANT?
A REVIEW: KEYS TO EFFECTIVE EXAMINATION, EVALUATION AND ECOLOGICAL ASSESSMENT

1. USE THE ICF

Body Functions and Structure
- Low tone
- Cognitively limited
- Poor endurance for sustained activity
- Has sleep apnea

Activity
- Difficult to maintain balance for short periods of time
- Easily fatigued
- Difficult to get up from a low surface
- Delayed gross motor skills
- Has movement

Participation
- Restricted participation in all life situations due to the need for adult assistance to stay on task, engaged in class and to keep pace with peers
- Likes to please
- Enjoy movement
- Does not like to talk, prefers using signs
- Likes peers

Supportive family
- Nurturing school and classroom environment

Environmental Factors

Personal Factors

Environmental Scope
2. USE ECOLOGICAL (AUTHENTIC) ASSESSMENT

THOROUGH OBSERVATION IN MULTIPLE SETTINGS:
IDENTIFY PARTICIPATION RESTRICTIONS.
IDENTIFY THE ENVIRONMENT(S) WHERE THE RESTRICTION(S) EXISTS.
IDENTIFY WHERE THE ACTIVITY LIMITATIONS SURFACE.
USE THE ICF TO ASSESS, ANALYZE AND DEVELOP YOUR INTERVENTION PLAN!

3. FOCUS ON ACCESS AND PARTICIPATION

PHYSICAL ENGAGEMENT
• CHILD’S ACTIVE INVOLVEMENT IN THE ACTIVITY
SOCIAL ENGAGEMENT
• CHILD’S INTERPERSONAL INTERACTIONS IN THE ACTIVITY
SELF ENGAGEMENT
• CHILD’S ENJOYMENT IN THE MOMENT AND SELF UNDERSTANDING

4. ENSURE EDUCATIONAL RELEVANCE

HOW DOES THE STUDENT’S DISABILITY IMPACT THE HIS/HER INVOLVEMENT IN THE GENERAL EDUCATION CURRICULUM?
• WHAT ACADEMIC AND/OR FUNCTIONAL PERFORMANCE AREAS ARE IMPACTED?
• IS THE OUTCOME NECESSARY FOR THE STUDENT TO ACCESS THE CURRICULUM AND OR PARTICIPATE IN SCHOOL ACTIVITIES AND ROUTINES LIKE SAME AGED PEERS?
   NOW AND IN THE FUTURE?
• IS THE OUTCOME A TEAM PRIORITY AND PART OF THE IEP?
5. Ensure Educational Necessity

"WILL THE ABSENCE OF PT INTERFERE WITH THE STUDENT’S ACCESS AND PARTICIPATION IN HIS/HER EDUCATIONAL PROGRAM?"

6. CONSIDER LRE

"TO CREATE A LRE, POTENTIAL BARRIERS TO INCLUSION MUST BE IDENTIFIED. THE LITERATURE IDENTIFIES CHILD FACTORS AND ENVIRONMENTAL FACTORS THAT MAY PRESENT CHALLENGES TO THE SUCCESS OF INCLUSION". (GAL, ET. AL., 2010)

"INCLUSIVE SETTINGS INFLUENCE HOW ASSESSMENT AND INSTRUCTION ARE PLANNED AND IMPLEMENTED. ASSESSMENT SHOULD BE CONDUCTED THROUGH ONGOING ASSESSMENT OF THE CHILD ENGAGED IN TYPICAL ACTIVITIES AND ROUTINES" (BAGNATO, ET AL., 2011)

Assessment Checklist

☐ The student's parents were involved in the assessment process.
☐ The assessment identified the student's IDEA-related disability.
☐ The assessment led to the determination of the student's need for special education and related services.
☐ The assessment documented the adverse effect of the students' disability on educational performance.
☐ The assessment addressed all of the student's unique educational needs.
☐ The assessment led directly to instructional programming.
☐ The assessment provided objective information that served as a baseline for progress monitoring.
☐ A person knowledgeable about the instructional implications of the assessment and evaluation results was included on the student's IEP team.
☐ All of the student's needs were included in the present level of academic and functional performance statements in the student's IEP.

(Yell, et. al., 2016 Avoiding Substantive Errors in IEP Development. Teaching Exceptional Children. 31-40.)
6. DEFINE SUCCESS

Assessment, baseline data to match the priority outcome and reassessment strategy

6. ANSWER THE "WHY"

QUESTIONS,
REFERENCES

- AMERICAN PHYSICAL THERAPY ASSOCIATION THE GUIDE TO PHYSICAL THERAPY PRACTICE 3.0


• LONG T. (2009). EXAMINATION STRATEGIES FOR SCHOOL-BASED PHYSICAL THERAPISTS. POWER POINT PRESENTATION FROM THE SCHOOL-BASED CONCENTRATED EDUCATIONAL SERIES. APTA ANNUAL CONVENTION BALTIMORE MARYLAND.


• PROGRESS IN REHABILITATION, SCHOOLS BASED PHYSICAL THERAPY EVALUATION AND ASSESSMENT IDEA CONFERENCE. CHICAGO, JULY 2012.


