Adaptations for Children in their Natural Environments

Janice P. Burke, Ph.D., OTR/L FAOTA
Stephen B. Kern, M.S., OTR/L, FAOTA
Jefferson College of Health Professions
April 8, 2005

Special thank you to Sandee Chalik, MS, OTR/L

“Environment”

• How do you define environment?

• What comprises the environment?

• How does the environment effect your practice?

Model of Human Occupation

• Layers of the Environment: 3 Dimensions
  – Object Dimension (availability, complexity, flexibility, & symbolic meaning)
  – Task Dimension (complexity, temporal boundaries, rules, seriousness, social)
  – Social Group & Organization Dimension (size, function, permeability, structure)

• All viewed within a cultural perspective

Environment

• Human vs Non-human
• MOHO – objects, tasks, social groups
• Physical or Geographic Space
• Cultural
• Temporal
• Chronological or Developmental
• Spiritual
• Political & Economic

“Shop Talk”
**Implications for Practice**

<table>
<thead>
<tr>
<th>Area</th>
<th>Modified or Special Objects</th>
<th>Space Modification</th>
<th>Task Modification</th>
<th>Social Group Modification</th>
<th>Team Members</th>
<th>Intervention Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing</td>
<td>Cooking objects</td>
<td>Create a safe play space in/near kitchen with limited stimulation</td>
<td>Parent incorporates meal prep into child's play activity</td>
<td>Parent and child engage in play activity during meal prep</td>
<td>Parent, Child, OT</td>
<td>While parent is preparing meal, child is playing nearby with cooking objects. Parent is able to simultaneously complete meal prep and incorporate therapist's recommendations into child's play.</td>
</tr>
<tr>
<td>Accessing toys in pre-school classroom during playtime</td>
<td>Utilize lower shelves to store toys</td>
<td>Teacher, child, OT, PT</td>
<td>Teacher stores toys in lower shelves and encourages child to independently retrieve toys.</td>
<td>Child independently retrieves toys from lower shelves and transports them to play area.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Parent-Therapist Interactions and Relationships**

- Think about “The encounter”
  - Is there time for Parents to tell their story?
  - Who is in control? How do you know?
  - How does the therapist use nonverbal signals such as gaze, gesture and postural orientation?

**A Three Pronged Approach to Adaptations includes:**

- **1. The Practitioner's Clinical Reasoning**
- **2. Client Perspectives**
- **3. Available Research and other data**

**Culture/Clinical Reasoning Interaction**

**WHAT IS GOING ON HERE?**

An exercise in alternative explanations

Taking another point of view

• What does an interaction look like when a therapist and parent are collaborating on activities and routines?
Involvement/Interaction/Behavior looks different depending on:

- The setting
- The person’s background (culture, age, gender, socioeconomic status)
- The person’s past experiences in similar and different situations

Behavior is Experientially Based/Learned

- Varies based on the person’s “social construction” of the situation
- How familiar are they with this place?
- How familiar are they with you? And people like you?
- What is their view of your “job”? Are you the professional? The expert? The authority?
- Who has the power in the situation?

What goes into the interaction?

- The therapists view of
  - His/her work (this is what an OT/PT/Speech Therapist does/does not do)
  - Authority
  - Collaboration
  - How much each of the people involved are interested/willing to collaborate?

Evaluating the structure of the interaction

- Who asks the questions?
- How do you know if someone is listening?
- What is ‘off topic’? And what happens when it occurs?
- Who controls the flow and organization of the interaction? (the turn taking, length of speaking, speaker sequence)

Things that interfere with interaction

- The use of jargon
- Cultural differences (rules of social conduct)
- The structure of the interaction itself
- “Restrictions” in the communication freedom and limitations in responses to topics

More interferences

- Different expectations
- Different styles in communication
- Increased possibility of misunderstandings due to intonations and other linguistic cues
- The setting (place, objects, time of day)
- The people that are/are not present
Therapists can look at interactions and:

- Identify breakdowns in function
- Identify areas of need
- Enlist participation of child and family/caregivers
- Assist child/parent/caregiver to develop skills
- Provide adaptive strategies to increase desired function

Elements of the Interaction

- Rhythm, tempo and kinesic movements
- Presentation of self
- Use of Gaze, movement, physical expressions
- Use of Space

Therapists bring their own point of view about:

- The purpose of the intervention session
- The role of the parent/caregiver
- The way to interact with parents/caregivers
- Parent trouble: what it is, why it happens, how it should be handled

GAZE

- Used to initiate the interaction
- May or may not be coordinated with vocal or physical movement
- May be used to maintain involvement (along with gesture, body movement including postural shifts and pointing)

Therapists use Eye Gaze

- To signal parents that they are listening
- To strengthen a verbal message they are giving
- To enlist a parent in the interaction

Therapists also use other nonverbal signals:

- Head nodding
- Body positioning/shifting
- Forming & reforming interactional space
Therapists tend to:

- Control the topic
- Use verbal requests to focus attention
  - Direct questions/requests
    - Provide additional cues
  - Indirect questions/requests
    - Subtle, difficult to recognize, no additional cues

Therapists tend to:

- Interrupt when something is said or something is done that is important
- Ignore certain topics
- Talk out loud
  - about what they are seeing or doing to cue someone (parent, student, themselves)
  - to make a child feel comfortable

Strategies for Guiding Decision Making

- Person-Environment-Occupation (PEO)
- Ecology of Human Performance (EHP)

Considerations for Decision Making

1. The Person/The Child
2. The Environment and its Demands
3. The Child’s Occupational Roles

Person-Environment-Occupation Model

- Theoretical Origins
  - Environment – behavior studies
    - Lawton, Environmental Press
  - Occupational Therapy Perspective of Environment
    - Occupational Behavior (Reilly)
    - Model of Human Occupation (Kielhofner & Burke)
    - Ecology of Human Performance (Dunn, Brown, & McGuigan)

PEO

Interactive vs. Transactive

- Interactive Approach
  - Medical Model
  - Characteristics of the person and environment are independent of each other
  - Linear & assumes cause and effect
- Transactional Approach
  - Interdependence of person & environment
  - Behavior is influenced by multiple contexts
  - Contexts are continually shifting
Major Concepts: Person

• A unique being who simultaneously assumes a variety of dynamic roles, which vary over time and context in importance and duration.
  – Holistic view of mind, body & spirit
  – Body systems and functions
  – Innate and learned skills to interact with the environment and engage in occupational performance.

Major Concepts: Environment

• The context in which occupational performance takes place; can be enabling or limiting.
  • Equal importance given to cultural, socioeconomic, institutional, physical and social aspects.
  • Each domain is considered from perspective of person, household, neighborhood or community

Major Concepts: Occupation

• Clusters of activities and tasks in which the person engages in order to meet his/her intrinsic needs for self-maintenance expression and fulfillment throughout the lifespan
  • Are carried out within the context of individual roles and multiple environments.

PEO Fit

• The compatibility of the person, environment, and occupation, which provides for greater or lesser occupational performance.
  • “When there was a good fit between the child, the play setting, and the play opportunities, the children were playful” (Rigby & Huggins, 2003)

Application of PEO

Changes in the Environment

Changes in occupational performance as a consequence of variations in person-environment-occupation (P-E-O) interactions.
Intervention Process

- Identify strengths and problems in occupational performance
  - Assess the person, environment, occupation
  - Assess the transactive relationship of the person, environment, occupation
- Collaborate on the outcome
- Collaborate on developing the intervention plan
- Measure occupational performance

Implications for Practice

- After-school Program
  - A literacy-based program operated by a non-profit organization.
  - Approx. 70 children (Grades 1-3, Grades 4-6)
  - Poverty, exposure to drugs and violence, homelessness
  - Limited range of play occupations
  - Limited availability & complexity of toys & games
  - Large open basement setting, split in half by low bookshelves
  - Teachers preference for quiet and order
  - Women from the community with an interest in the welfare of the children hired as “teachers”
  - Children demonstrate difficulty transitioning from/to activities
  - Impaired social skills, problem solving, coping, self-control

Implications for Practice

- Today, the after-school program is in a new, state of the art, technologically equipped facility.
- How can you build an environment that enables play and playfulness within the context of a literacy-based program?
- Sometimes it’s easier to adapt the environment than it is to adapt the child.
- Use PEO concepts to identify environmental adaptations.

Implications for Practice

- Describe environmental adaptations to influence and support students’ performance
  - Political Adaptations
  - Institutional Adaptations
  - Building/Classroom (Physical) Adaptations
  - Cultural Adaptations
  - Temporal Adaptations
  - Social Adaptations

Context

- A lens for which persons view their world
- The interrelationship of person and context determines which tasks fall within the person’s performance range
- External to the person
  - Physical environment
  - Social, cultural and temporal factors
- Context influences behavior and performance

Ecology

- The interrelationships of organisms and their environments
- Compliments OT view of the importance of the interrelationship of humans and their context and the effect of these relationships on performance.
Knowledge Base: Social Sciences

- Environmental psychology: context and person are interactional
- Bruner – the person constructs the self in the context of the environment
- Lawton – environmental press – the dynamics of ecological change, competence and environmental press in which a person’s environment affects perceptions of competence.
- Behavior - a function of competence of individual and environmental press of situation

Knowledge Base: Social Sciences

- Phenomenological perspective – consideration of relationship between person and environment
- Developmental psychology – social relationships that environment offers
- Bronfenbrenner – ecological validity: research invalid unless grounded in context
- Vygotsky – zone of proximal development

Knowledge Base: Occupational Therapy

- Llorens – environment to assist in development
- Fidler & Fidler – develop skills and mastery through interaction with human and nonhuman environment
- King – use environment to evoke adaptive response

Knowledge Base: Occupational Therapy

- Reilly – GST, person & environment are interdependent
- Kielhofner & Burke – Environment as objects, persons, events
- Howe & Briggs – environment as concentric circles with person at center

Ecology of Human Performance Framework

- Non-linear, dynamic
- Theoretical Postulate: Ecology, or the interaction between person and environment, affects human behavior and performance; performance cannot be understood outside context (p. 598)
- “For investigating the relationship between important constructs in practice: person, context, tasks, performance, therapeutic interaction”

Concepts and Constructs

- Person
  - Experiences
  - Sensorimotor skills and abilities
  - Cognitive skills and abilities
  - Psychosocial skills and abilities
<table>
<thead>
<tr>
<th>Concepts and Constructs</th>
<th>Concepts and Constructs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td><strong>Performance</strong></td>
</tr>
<tr>
<td>– See the person through contextual lens</td>
<td>– Contextual lens interacts with persons’ skills and abilities to enable the performance of certain tasks</td>
</tr>
<tr>
<td><strong>Tasks</strong></td>
<td>– Performance Range: Scope of performance</td>
</tr>
<tr>
<td>– Objective sets of behaviors necessary to accomplish a goal</td>
<td>• What does this look like when a person with a disability is embedded in a typical environment?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Establish &amp; Restore</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evaluation</strong></td>
<td><strong>Evaluate skills and barriers in environment and work to improve skills and abilities of the person</strong></td>
</tr>
<tr>
<td>– Evaluating performance is dependent upon considering the context of performance</td>
<td>– Evaluate skills and barriers in environment and work to improve skills and abilities of the person</td>
</tr>
<tr>
<td>– Five alternatives for intervention</td>
<td>– Grade activities to increase strength after bed rest</td>
</tr>
<tr>
<td>– Establish &amp; Restore</td>
<td>– Establish &amp; Restore</td>
</tr>
<tr>
<td>– Alter</td>
<td>– Alter</td>
</tr>
<tr>
<td>– Adapt</td>
<td>– Adapt</td>
</tr>
<tr>
<td>– Prevent</td>
<td>– Prevent</td>
</tr>
<tr>
<td>– Create</td>
<td>– Create</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alter</th>
<th>Adapt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OT does not try to correct the person or environment; looks for best match between person and current contextual features available</strong></td>
<td><strong>Design a more supportive context for person’s performance</strong></td>
</tr>
<tr>
<td>– Suggest flexible work schedule while person builds endurance for working an 8 hour day</td>
<td>– Raising desk height for secretary in a wheelchair</td>
</tr>
</tbody>
</table>
**Prevent**

• Prevent occurrence or evolution of maladaptive performance within the context
  
  – Providing wrist rests for people who work with computers

**Create**

• Create circumstances that promote more adaptable or complex performance in context; design the best possible use of environment to enhance living and development
  
  – Summer enrichment program
### Measuring Effectiveness of Adaptations

- Systematically collecting your own information about increasing a child’s participation within the home, community, school.
- Looking at what is already known about the effectiveness of a certain approach.

### References


