Routines-Based Intervention: A Service Delivery Model for Young Children

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Lake of the Ozarks
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Purpose
This session will focus on young children with IEPs who may be in self-contained, blended or typical preschool classrooms. A common approach to intervention is to plan instruction, practice, feedback and then generalization. Should generalization be the last thing we consider? During the session, participants will become acquainted with a service delivery model that puts generalization first. Routines-based Intervention (RBI) crosses many models of service delivery and emphasizes functional communication and skills. Participants will define, describe and design a RBI for a child on their workload.

Learning Objectives
1. List examples of service delivery models used by the SLP
2. Describe generalization
3. Define routines-based intervention (RBI)
4. Describe elements of RBI
5. Design a RBI plan for a child with an IEP

Objective 1
• List examples of service delivery models used by the SLP

Service Delivery Historical Perspectives
“It is unwise for the special speech correction teacher to carry a load of more than 100 cases. Even this number will necessitate seeing approximately 10 cases each hour since each child should be seen at least twice a week for a speech correction period of approximately 15 minutes. (p. 531)”

“...survey results showed an average caseload size of 53, with some SLPs reporting caseloads as large as 110...”
A Meme -- a cultural unit (an idea or value or pattern of behavior) that is passed from one generation to another by nongenetic means (as by imitation); "memes are the cultural counterpart of genes"

"A highly respected speech-language pathologist in Michigan, Libby Lockwood, once said, "I swear, Moses came down from the mountain carrying tablets that were carved: ‘Speech services will be twice weekly for 30 minutes.’" She recommended that SLPs instead consider a variety of options for service delivery. The challenge for speech-language pathologists is to continually assess the needs of the students and to individualize instruction to meet those goals."

Sexton, S. & Seth, L. 5-Minute Therapy: An Alternative Service Delivery Model for Speech Sound Disorders. Online

Service Delivery Models - Direct & Indirect
  Manage the workload
  • push in
  • collaborative
  • co-teaching
  • consultation
  • RtI
  • 3:1
  • block system
  • 5-Minute Model
  • pull out
  • teleconference

District/Agency Assignment
  • Itinerate (move from place to place on a circuit to perform one’s professional duty)
  • Non-itinerate (perform one’s professional duty in one location)

Continuum of Service Delivery Models
  • 1-on-1 pull-out
  • Small-group pull-out
  • 1-on-1 in classroom
  • Group activity
  • Individualized within routines
  • Pure consultation

Research Findings
  • Individualized within routines most effective, followed by group activity
  • 4 times as much communication occurs in in-class methods vs. out-of-class methods
  • It’s not just a location issue
  • Teachers more satisfied with integrated than pull-out—especially when they like the therapist
  • It can take parents over a year to acknowledge the benefits, if they are predisposed to segregated models
  • ECSE is the most integrated, followed by OT

Gaps in Evidence
  "Gaps in the evidence for service delivery models include research on the effectiveness of classroom-based and collaborative language interventions, (e.g., Farber & Klein, 1999), collaborative consultation (e.g., Ellis, Schlaudecker, & Regimbal, 1995) classroom versus individual treatment of language disorders (e.g., Wilcox et al, 1991) and integrated indirect services for increasing the language abilities of students with severe disabilities (e.g., Giangreco, 2000)." p. 132


Gaps in Evidence
  • As noted in a 2010 review in LSHSS (on.asha.org/ebp-service-delivery), service delivery is an area that needs more research.
  • A systematic review by ASHA’s National Center for Evidence-Based Practice in Communication Disorders concluded that speech-language service delivery to young children is “woefully understudied.” (on.asha.org/ebsr-service-delivery)

The elephant in the room?
Individual values and beliefs about...
- How children learn best
- Viewing disabilities
- Role as a provider e.g., conflicting goals among team members
- Different types of families
- Where “services” should be provided
- How to do assessments/evaluation
- Working with other professionals, e.g., lack of communication between team members and/or parents
- Related service personnel, e.g., they are “experts” and not peers

Brandel & Loeb 2011
“In our survey, SLPs reported that the primary consideration for determining program intensity for their students was the nature and severity of the students’ disorders. Given this, we expected to see much more variety in the types of interventions recommended by SLPs. Instead, the primary program intensity was 1 or 2 times a week for 20-30 min. The primary difference between disability severity and program intensity was that the students with the least severe disability were seen 1 time a week and the students with moderate and severe disabilities were seen 2 times a week.” p. 473
N=1,897

However, in most instances, regardless of severity, grade, or type of disorder, students were seen in a group outside of the classroom. This was clearly the preferred service delivery model. The question is, Why?” p. 474

Unfortunately, to our knowledge, there are no efficacy studies that have evaluated the claim that 2-3 times a week for 20-30 min in group settings outside of the classroom is an effective service delivery model.” p. 475

Can we move outside the meme?
- Early 90s produced a number of papers on service delivery
- Some ideas about service delivery are coming from outside our field
- Do we need to reorganize our thinking about how we deliver services?
  - Consider outcomes first?
  - Consider generalization first?

Objective 2
- Describe generalization

Generalization
- Also known as
  - Habituation
  - Carryover
  - Transfer
- Generalization, itself, requires explicit planning and intervention
- It’s what we want to happen as a result of our treatment; It is nothing less than the goal of behavior change (e.g., education, therapy, etc.)
- It’s a “spreading” or “expansion” of teaching, beyond what was directly or intentionally done
  - Example: explicitly teach turn-taking to a child at school and then the child starts taking turns at home with siblings or friends, even though no one ever tried to teach turn-taking at home

3 Types of Generalization

1. Across people: Teach a child to say hi to a Sally and he/she then says hi to other people as well (stimulus generalization)

2. Across settings: Teach a child to wash her hands before a meal at school and then she washes her hands before meals at home, even though no one has taught her to wash her hands before meals at home (stimulus generalization)

3. Across behaviors: Teach a child to add plural /z/ on to the end of the words “tree,” “car,” and “dog,” when referring to more than one, and then he/she does so with other nouns, without having to be taught each noun individually (response generalization)

Tarbox, J. Promoting Generalization of Positive Behavior Change: Practical Tips for Parents and Professionals. Online

Functional Communication Outcomes

- Teach behaviors which are likely to be useful to the child in his/her everyday life
- Put another way, all behavior change should result in the child being able to independently get reinforcement out of his/her environment

Methods for generalization:

1. Teaching many examples
2. Teaching across many people
3. Teach with multiple instructions
4. Choose “functional” behaviors
5. Learning occurs 24-hours per day

Tarbox

Objective 3

• Define routines-based intervention (RBI)

RBI & Other Terms

Other names: embedded intervention, activity-based intervention, play-based intervention

- Embedded intervention includes the use of intentional teaching strategies to address a specific learning goal within the context of everyday activities, routines, and transitions at home, at school, or in the community.
- Intervention that is deliberately inserted into the regular activities or routines of a child’s day

- The Division for Early Childhood of the Council for Exceptional Children www.dec-sped.org

Advantages to Embedded Instruction

www.hdc.lsuhsc.edu

- Represents typical instructional format
- Includes environmental cues to elicit desired behaviors
- Provides opportunities for appropriate peer interactions
- Enhances student motivation
- Maximizes the efficiency of instructions
- Allows for multiple opportunities to practice objectives
- Promotes likelihood that skills will be remembered
- Increases likelihood that learning will be active
- Provides a reality check as to whether an objective is really important to teach

Under the “Natural” Umbrella

Routine based intervention Embedded intervention Play based intervention (can be pullout) Activity based intervention
When developmental interventions are embedded in children’s regular routines and activities, skills learned are functional and meaningful for children and their caregivers (Kashinath, Woods & Goldstein, 2006).

Activity-based intervention (ABI) refers to instruction that is embedded within children’s and families’ daily activities and routines. The instructional strategies vary according to child goals and needs, but the approach emphasizes child-directed contexts for instruction and the use of naturally occurring antecedents and consequences to develop functional skills.

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**Play-Based Intervention**

- Play-based interventions are practices designed to improve socio-emotional, physical, language, and cognitive development through guided interactive play. During play sessions, an interventionist uses strategies including modeling, verbal redirection, reinforcement, and indirect instruction to sustain and encourage child play activities. Through the use of appropriate play materials and the direction of the interventionist, the goal is for young children with disabilities to be better able to explore, experiment, interact, and express themselves.
- Play-based interventions can be conducted across a variety of settings, including at school or at home, as one-on-one activities between an interventionist and a child, or in small group settings.


**Routines-Based Intervention**

- Routine based intervention is a process for using the routines of the day to teach skills a child needs to be successful. Teaching within routines allows generalization toward goals that are “functional” or goals that the child needs to use in their daily life.
- Routines-based intervention is often linked to similar concepts in early childhood education such as activity-based instruction, embedded instruction, and naturalistic teaching. It is unique in its use of specific intervention strategies targeting individualized developmental outcomes for a specific child by embedding the strategies in daily routines.

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**Design an RBI Plan**

Step 1: examine the IEP goals and benchmarks/objectives
Step 2: obtain the classroom schedule
Step 3: become familiar with the curriculum in the classroom
Step 4: determine the classroom routines within the schedule & curriculum
Step 5: determine the routine within the routines
Step 6: assess opportunities within the routines to target child’s goal(s)
Step 7: match the child’s goal(s) to routine(s)
Step 8: determine the dosage including extended opportunities
Step 9: deliver embedded intervention
Step 10: plan to monitor progress
Routines vs. Schedules

- Routines and schedules need to be taught directly
- Routines and schedules may vary
  - Based on level of children's interest
  - Should be inherently flexible (to allow for fire drills, field trips, etc.)

Daily Schedule

- Blocks of time for classroom activities
- Sequence of classroom activities
- Preschool schedules typically include
  - Group or circle time
  - Activity or center time
  - Snack time
  - Outdoor time
  - Story time

Example of half-day schedule

- 8:40 Arrival Time
- 9:00 Group Time
- 9:20 Activity Time
- 10:10 Story Time
- 10:25 Outdoor Time
- 10:50 Snack Time
- 11:10 Dismissal

Routines

- Activities and procedures that occur regularly
- Often involve a series of responses
- Preschool routines typically include
  - Arrival time
  - Bathroom time
  - Clean-up time
  - Departure
  - Nap time
  - Snack time
  - Outside time
  - Recall time
  - Planning time

Adapted from:

- Learning centers
- Storybook reading
- Circle time
- Small group
- Work time
- Recall time
- Planning time

Story time routine

- A series of responses to a story time routine might involve:
  - Gathering in a circle on a floor mat
  - Sitting like a pretzel
  - Interacting while the teacher reads
  - Looking at pictures in a storybook
  - Answering questions, making comments, asking questions

Routines & Schedules are important because:

- They influence a child’s emotional, cognitive, and social development.
- They help children feel secure.
- They help children understand expectations.
- They help reduce behavior problems.
- They can result in higher rates of child engagement
Where Does the SLP Fit in RBI?

- If we want children to generalize skills, if we want functional outcomes, if we want a greater likelihood of progress and maintenance, then, we...
  - May need to adjust the delivery model
  - May need to adjust the way we write our goals/benchmarks
  - May need to become a coach
  - May need to develop more cohesion and flexibility in our teams

Examples of intensity in RBI
- Modify and adapt routines
- Provide specific goals for the teacher in routines
- SLP intervenes directly within a routine

Examples of the role of the SLP in RBI
- Collaborator
  - Co-Teaching
  - Teams
- Consultant
  - Professional dev.
  - Coaching
  - Program design
- Direct service provider
  - In routine

Objective 4
- Describe elements of RBI

Elements of RBI
- Goals of RBI
- Structure of intervention
  - Quality program and curriculum (schedule and key components)
  - Modifications and adaptations
  - Learning opportunities in routines
  - Individualized instructional goals
    - Techniques to integrate into instruction planning and implementation
      - scaffolding,
      - time, e.g., 20 minutes per session
      - intensity, e.g., 2x a week
      - episodes, e.g., # of responses per session

Really Good Reasons Why Therapies Should Be Integrated

Children learn the skills they need in the places they will use them
- Therapists can see whether or not the strategies they develop are feasible
- Children have increased practice opportunities
- Teachers and therapists focus on skills that will be immediately useful
- Children’s social relationships are fostered
- A child does not miss out on any classroom activities
- Assessment can be done across a variety of routines
- Teachers can see what therapists do


Goals of RBI
- Provide more natural intervention setting during routines of the day
- Improve engagement in intervention
- Improve generalization

**Structure of Intervention**

- Quality program & curriculum
- Adaptation and modifications
- Opportunities for learning within routines
- Individualized instructional goals

**Program Considerations**

- Is there a curriculum?
- Is there a schedule?
- Is fidelity kept?
- Is this an inclusive classroom?
- Is the teacher/child ratio appropriate?
- Is the physical environment adequate for child learning? (arrangement, materials, etc.)
- Are adult/child interactions frequent?

**Curriculum Considerations**

- Curriculum (4 early childhood approved in Missouri for programs receiving state and federal funding)
  1. Creative Curriculum
  2. Emerging Language & Literacy Curriculum
  3. High Scope
  4. Project Costruct
  
  Other curricula examples: Reggio Emilia, Montessori, OWL, Doors to Discovery, Between the Lions, etc.

- Key components
  - Key components, Quality features, Active ingredients, Essential elements, Core elements, Salient features, Core components

**The SLP and Preschool Curriculum**

- IDEA mandates that all students with disabilities have access to the general education curriculum
- Without clear understanding of the curriculum and classroom goals, SLP cannot provide consultative services that meet the teacher or child’s needs
- "...EC teachers can share their lesson plans with therapists and introduce them (related service providers) to the curriculum. This information will invite therapists to begin planning instruction with teachers, to use curricular themes in their intervention sessions, and to complement the early childhood curriculum when they interact with individual students.” Case-Smith, J., & Holland, T. (2009). Making decisions about service delivery in early childhood programs. LSHSS, Vol. 40(4), p 416-423.
Adaptations
Accommodations and modifications are types of adaptations that are made to the environment, curriculum, instruction, or assessment practices in order for students with disabilities to be successful learners and to actively participate with other students in the general education classroom and in school-wide activities.


About Adaptations
Making adaptations does not involve teaching children to perform particular skills. Rather, adaptations promote children’s successful participation in everyday routines and activities through the use of:

- Environmental accommodations.  
  - Rearrange the furniture in the room so that a child in a wheelchair can move about freely.
  - Adapt or add equipment (e.g., use a slant board to help a child participate in coloring activities, use wedge to provide supportive seating during circle activities).

- Adjustments to activities and routines.  
  - Add periodic movement activities to a story time activity to help children who have difficulty paying attention.
  - Extend the length of free choice time so that children have the opportunity to finish a block building project.

Materials and instructional modifications.  
- Make the pencil thicker by putting a foam curler around it or by wrapping the pencil with play dough or silly putty to help a child who has problems gripping pencils.
- Use assistive technology—as in the case of using a simple switch interface to help a child with motor difficulties activate a toy.

PA Groups: Sample Adaptations  
(Patterson & Trumbower)

<table>
<thead>
<tr>
<th>Alterable components</th>
<th>Specific adjustments</th>
<th>Consider two short periods a day three days a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Increase attendance</td>
<td>Two times a week, 10-20 minutes</td>
</tr>
<tr>
<td>Group size/Readiness</td>
<td>Check child’s placement-consider new grouping</td>
<td>Reduce group size Provide individual instruction</td>
</tr>
<tr>
<td>Program implementation</td>
<td>Increase teacher modeling of target(s); embed instruction in daily activities</td>
<td>Increase opportunities for child to respond. Change stimulus materials</td>
</tr>
<tr>
<td>Coordination of instruction</td>
<td>Check time, group, and implementation</td>
<td>Incorporate technology into instruction Establish communication across instructors</td>
</tr>
</tbody>
</table>

Structure of Intervention
Quality program & curriculum  
Adaptation and modifications  
Opportunities for learning within routines

Two Types of Learning Opportunities
- **Incidental**  
  - what children learn without specific instruction
- **Intentional**  
  - what children learn through specific instruction; instruction may be formal or informal
Other Important Factors

- Know how to identify learning opportunities within the preschool classroom (e.g., which routines on the preschool schedule present an opportunity for communication instruction.)
- Plan the instruction (presenting an opportunity is not the same as teaching)

Opportunities in Routines

- Parents—see handout
- Teachers
  - Teacher plan is based on the classroom schedule
  - Communication opportunities within the routines
- SLP
  - Uses IEP targets to determine the opportunities within the home or classroom routines

Structure of Intervention

Quality program & curriculum
Adaptation and modifications
Opportunities for learning within routines
Individualized instructional goals

Individualization

- IEP Goals
- SMART Routines
- Dosage:
  - time, e.g., 20 minutes per session
  - intensity, e.g., 2x a week
  - episodes, e.g., # of responses per session
- Assessment of progress
- An important technique: Scaffolding

Functionality of Goals

The problem
- Studies show goals are nonfunctional, IEPs are not always teacher or family-friendly
- Goals often identify skills isolated from context (why does the kid need this?)
- Goals often discipline-specific and full of jargon
- Actual needs get missed

A solution
- Participation-based RBI benchmarks/objectives
Adapted from: Quality Issues in Preschool Programs Formative and Summative Evaluation Tools Easing Community Programs Towards Excellent Classrooms R. A. McWilliam 2014

Participation-based benchmarks/objectives

- IEP goals are written as required by state/district
- Consider benchmarks or objectives as small steps related to the goal and begin with what routines child will participate in in classroom
  - Derived from needs identified during team meetings regarding child participation in classroom routines
  - NOT routines in which it would be nice to work on the skill
- Benchmark/objective related to the goal identifies skill child needs to participate in those routines
- Criteria for acquisition and generalization + time frame
Example of Yearly IEP Goal

- **Target goal**: child will increase overall communication skills by making 10 requests, comments, or protests using his preferred mode of communication (i.e., verbalization, pictures, voice-output device, sign) during four classroom routines with 80% accuracy for 3 out of 4 consecutive data days by the end of the IEP year.

Example of RBI Benchmark

- XXX will participate by initiating a request during writing learning center and snack. We will know he can do this when he makes 3 request(s) over 3 consecutive days.

Examples of Participation-Based Benchmarks

Rose will participate in circle and centers by using 2-word combinations. We will know she can do this when she uses three 2-word combinations (e.g., noun + verb or verb + noun) during each of these routines on 5 consecutive days.

James will participate in storybook reading by responding with accurate one word answers to two types of “wh” questions. We will know he can do this when he responds correctly to three “who” and three “what” questions with one word answers on three consecutive days.

Assessment of Progress—Teacher Friendly RBI benchmarks to collect data

**We will know he or she can do this when...**

1. He uses four single words in one day during snack, for 3 consecutive days.
2. He correctly points to 5 named (i.e., “Where’s the bunny!”) objects in books each day in 3 days in a week during storybook time.
3. He engages in back-and-forth conversations for 5 exchanges within 3 minutes for 3 consecutive days in the dramatic play center and art center.

Sample Data Collection Chart

<table>
<thead>
<tr>
<th>Dramatic Play</th>
<th>Observer</th>
<th>Art Center</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/11</td>
<td></td>
<td>4/exchanges</td>
<td>SLP</td>
</tr>
<tr>
<td>3/12</td>
<td>+</td>
<td>SLP</td>
<td></td>
</tr>
<tr>
<td>3/13</td>
<td>+</td>
<td>Teacher</td>
<td></td>
</tr>
<tr>
<td>3/14</td>
<td>+</td>
<td>Teacher</td>
<td></td>
</tr>
</tbody>
</table>

We will know he can do this when he engages in back-and-forth conversations for 5 exchanges within 3 minutes for 3 consecutive days in the dramatic play center and art center.
PA Groups: Examples of Scaffolding
(Patterson & Trumbower)

<table>
<thead>
<tr>
<th>Scaffolding Levels</th>
<th>Example #1 Alliteration</th>
<th>Example #2 Rhyming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intense</td>
<td>Give a child a sound and teacher shows an alliteration chart. Child says names of words on the chart.</td>
<td>Give a child a CVC word, show 2 pictures that rhyme, say them, have the child say them and then say, “they rhyme”</td>
</tr>
<tr>
<td>Moderate</td>
<td>Give a child a sound, show 3 pictures and child picks picture with the sounds</td>
<td>Give a child a CVC word, show 2 pictures and name them and child says whether or not they rhyme</td>
</tr>
<tr>
<td>Minimal</td>
<td>Give a child a sound, child sorts pictures that begin with the sound and says the words</td>
<td>Give a child a CVC word and show 3 objects and ask which 2 rhyme</td>
</tr>
<tr>
<td>None</td>
<td>Give a child a sound, s/he makes other words that start with the sound. All auditory.</td>
<td>Give a child a CVC word and s/he gives a rhyming word.</td>
</tr>
</tbody>
</table>

Objective 5

- Design a RBI plan for a child with an IEP

Before designing a plan, think about...

- Clarity of the IEP (are the goals functional)
- Are the benchmarks/objectives teacher and family-friendly
- Sharing the outcomes or expectations of intervention (has the team met to discuss how the goals of generalization will be met—people, setting, behavior)
- Seeing a shared responsibility (have the routines been chosen to best meet the goals)
- Ongoing assessment (what is the plan for progress monitoring—I will know he/she can do this when...)

Design an RBI Plan

Step 1: examine the IEP goals and benchmarks/objectives
Step 2: obtain the classroom schedule
Step 3: become familiar with the curriculum in the classroom
Step 4: determine the classroom routines within the schedule & curriculum
Step 5: determine the routine within the routines
Step 6: assess opportunities within the routines to target child’s goal(s)
Step 7: match the child’s goal(s) to routine(s)
Step 8: determine the dosage including extended opportunities
Step 9: deliver embedded intervention
Step 10: plan to monitor progress

Generalization

- Plans for RBI should move across people, settings, behaviors
- Written communication is a hallmark of RBI—the term “matrix” is often used to describe the shared plan
RBI Plan for B.B.

<table>
<thead>
<tr>
<th>Routine</th>
<th>Goal 1</th>
<th>Goal 2</th>
<th>Goal 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer 4 Wh</td>
<td>Use</td>
<td>Say the story setting</td>
</tr>
<tr>
<td>Storybook reading</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Opening circle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning centers</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small group focus: PA (alliteration)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transitions

Extended opportunities: Home-- car time, grocery shopping, Home-- Bath time, dressing for school, Home bedtime story.

Addressing the goals in the classroom

- Make a weekly priority poster identifying the 1-2 objectives that you will focus on with each child in your classroom for that week.
- Create folders for each center area that list the objectives and strategies so that any person playing in that area would be able to know how best to work with the kids in that center.
- Review individualized learning objectives at team meetings so that all teaching staff are informed on student progress.
- REMEMBER, not every routine is appropriate for intervention addressing IEP goals.

Instructional Priorities: Poster

<table>
<thead>
<tr>
<th>Child's Name</th>
<th>Learning Objectives</th>
<th>Where you will target the skill</th>
<th>Level of Support Provided</th>
<th>Strategies</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.L.</td>
<td>Gain others attention by calling their name or tapping the person on the shoulder</td>
<td>Centres and outside</td>
<td>Adult Prompts/SUPPORT</td>
<td>Modeling--Adult and Peer</td>
<td>Asking other children for materials, inviting them to play with him, practicing answering questions</td>
</tr>
<tr>
<td>S.K.</td>
<td>Judge whether 2 words rhyme</td>
<td>PA groups, language and literacy center, circle</td>
<td>No prompting</td>
<td>Modeling correct answers, dressing the time</td>
<td>Rhyming cards in Language and Literacy center, rhyming book during circle time</td>
</tr>
<tr>
<td>J.J.</td>
<td>Print first name without a model</td>
<td>Writing Center, Art Center, Circle</td>
<td>No assistance</td>
<td>Create natural opportunities for practice</td>
<td>Circle: Write name by her suggestion for the pet list, sign in at centers, sign artwork</td>
</tr>
</tbody>
</table>

Step 10: Monitor Progress

- I will know the child can do this when...
  - he answers three “wh” questions on five consecutive days during learning center selection.

Conclusion

- RBI promotes generalization of skills
- RBI puts intervention in a common context
- RBI promotes collaboration and coordination among all stakeholders in the child’s intervention

Thank You!

To contact us: seminarcolumbia@aol.com
# Routines-Based Intervention Matrix for the Classroom Teachers

**Name of student:**  S. T.  
**Age:**  4.8  
**Lead Teacher:**  Ms. Jones  
**Date:**  
**Specialists:**  OT: Ms. Smith  
**PT:**  none  
**SLP:**  Ms. Smiles

<table>
<thead>
<tr>
<th>IEP Learning</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routines</strong></td>
<td>(SLP goal) ST will use PECS or gestures to respond to Wh questions</td>
</tr>
<tr>
<td><strong>Arrival</strong></td>
<td>Greet ST on arrival asking child to identify cubbie (Where is your cubbie?) by pointing and encouraging use of gestures</td>
</tr>
<tr>
<td><strong>Opening Circle</strong></td>
<td>Ask ST to use PECS to indicate weather for the day (what is the weather today?)</td>
</tr>
<tr>
<td><strong>Snack</strong></td>
<td>Ask ST to choose from two snack choices (which do you want, apple or orange?)</td>
</tr>
<tr>
<td><strong>Small group circle</strong></td>
<td>Ask ST “What is your favorite zoo animal, the lion or the bear?” and let her vote.</td>
</tr>
<tr>
<td><strong>Story time</strong></td>
<td>Point to Goldilocks and ask ST to name the character in the book (Who is this?) using PECS</td>
</tr>
<tr>
<td><strong>Outside time</strong></td>
<td>Ask ST “Who would you like to play with outside?”</td>
</tr>
<tr>
<td><strong>Centers</strong></td>
<td>Ask ST “Which center do you want to work in today?”</td>
</tr>
</tbody>
</table>
Routines-Based Intervention Matrix for the Classroom Teachers

<table>
<thead>
<tr>
<th>Name of student:</th>
<th>Age:</th>
<th>Lead Teacher:</th>
<th>Date: ______________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialists: OT:</td>
<td>PT:</td>
<td>SLP:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IEP Learning</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routines</td>
<td>(SLP goal)</td>
</tr>
<tr>
<td></td>
<td>(OT goal)</td>
</tr>
<tr>
<td></td>
<td>PT GOALS</td>
</tr>
</tbody>
</table>

[Blank table rows and columns]
Designing the RBI Plan

**Objective 5. Design an RBI plan for a child with an IEP**

- **Step 1:** examine the IEP goals and benchmarks/objectives
- **Step 2:** obtain the classroom schedule
- **Step 3:** become familiar with the curriculum in the classroom
- **Step 4:** determine the classroom routines within the schedule & curriculum
- **Step 5:** determine the routine within the routines
- **Step 6:** assess opportunities within the routines to target child’s goal(s)
- **Step 7:** match the child’s goal(s) to routine(s)
- **Step 8:** determine the dosage including extended opportunities
- **Step 9:** deliver embedded intervention
- **Step 10:** plan to monitor progress

**Step 1:** examine the IEP goals and benchmarks/objectives

Think about one of the children on your workload. Write an IEP goal and benchmark for that child.

---

**Step 2. obtain the classroom schedule**

Here is one to work with today

### Preschool Schedule

- 8:25-8:40: breakfast/sign-in time
- 8:40-8:50: greeting time
- 8:50-9:20: outside time
- 9:25-9:45: small group time
- 9:45-9:55: planning time
- 9:55-10:45: work time
- 10:45-10:55: clean-up time
- 10:55-11:05: recall time
- 11:05-11:15: story time
- 11:15-11:30: large group time
- 11:30: dismissal

---

**Step 3. become familiar with the curriculum**

**Step 4. determine the classroom routines within the schedule & curriculum**

### Four approved EC curricula in Missouri

- Creative Curriculum
- Emerging Language & Literacy Curriculum
- High Scope
- Project Construct

### Other:
Step 5. determine the routine within the routines
Step 6: assess opportunities within the routines to target child’s goal(s)
Step 7: match the child’s goal(s) to routine(s)

Write the routine within one routine and look at the routine to decide if there is an intervention opportunity that is consistent with the child’s goals and benchmarks

Step 8. determine the dosage including extended opportunities

Step 9: deliver embedded intervention
Who:
What:
When:
Where:

Step 10: plan to monitor progress
[The child] will participate in [the routines]
“... by _____ ing insert the desired behavior)
We will know this when he or she _____ and (add a measurable acquisition criterion)
# Home Routine-based Opportunities for Coaching

**Child:** ____________________

**Target goals:** 1. __________________________________________

**Date of plan:** ________________

**Place:** ____________________

2. __________________________________________

3. __________________________________________

<table>
<thead>
<tr>
<th>Identified Routine category</th>
<th>Care taking/self-help (dressing, hygiene, food, comfort/disability related)</th>
<th>Family/community (errands, chores, recreation, socialization)</th>
<th>Pre academic (reading, writing, math, songs, technology)</th>
<th>Play (pretend, social, constructive, physical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name the routine:</td>
<td>(e.g., eating, hand washing)</td>
<td>(e.g., grocery shopping, washing dishes)</td>
<td>(e.g., watching TV, storybook time)</td>
<td>(e.g., building with blocks, swinging)</td>
</tr>
</tbody>
</table>

** Opportunity**
- request
- joint attention
- imitation
- turn taking
- vocalize
- respond
- gesture (e.g. point, reach, sign, show)
- label
- verbalize

** Strategies**
- turn taking
- notice & respond
- repetition
- self-talk
- parallel-talk
- expansion
- prompt
- wait/time delay
- model
SLP Routine-based Intervention

Child: ______________________ Date of plan: ________________ Place: __________________________

**Target goal:** child will increase overall communication skills by making 10 requests, comments, or protests using his preferred mode of communication (i.e., verbalization, pictures, voice-output device, sign) with 80% accuracy for 3 out of 4 consecutive data days by the end of the IEP year.

1. will participate by initiating a request in two routines. We will know he can do this when he makes 3 requests a day in each routine over 3 consecutive days.

**Target goal:** child will increase both receptive and expressive language skills by identifying (pointing to and/or labeling) 15 new vocabulary concepts (i.e., nouns and verbs) from a field of 2-3 with 80% accuracy for 3 out of 4 consecutive data days by the end of the IEP year

2. will participate during two routines by naming an action (verb). We will know he can do this when he responds to two questions with correct verbs over 3 consecutive days

3. will participate in routines by naming specified pictures (nouns) in storybooks and choosing art materials from the art shelf. We will know he can do this when he names 5 pictures in storybooks and 5 objects in art and writing center over 3 consecutive days.

<table>
<thead>
<tr>
<th>Identified Routine within the classroom schedule</th>
<th>Arrival</th>
<th>Opening circle</th>
<th>Snack</th>
<th>Story book reading</th>
<th>Outside</th>
<th>Center time</th>
<th>Small group preacademic</th>
<th>Closing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group size</td>
<td>Full group</td>
<td>Small tables</td>
<td>Small group</td>
<td>Full group</td>
<td>Full group</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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**Opportunity**
- request
- joint attention
- imitation
- turn taking
- vocalize
- respond
- gesture (e.g. point, reach, sign, show)
- label
- verbalize e.g., nouns, verbs, noun+verb, expanded noun phrase, initiate conversation, etc

<table>
<thead>
<tr>
<th>Strategies</th>
</tr>
</thead>
</table>
- turn taking
- notice & respond
- repetition
- self-talk
- parallel-talk
- expansion
- prompt
- wait/time delay
- model

**RBI benchmarks**

**Typical IEP goal**

**RBI benchmarks**
### SLP Routine-based Intervention

**Child:** ______________________  **Date of plan:** ________________  **Place:** __________________________

**Target goal:**

RBI benchmark(s):

**Target goal:**

RBI benchmark(s):

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<td>respond</td>
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<tr>
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Glossary of Terms

- **3:1 Model**: The model follows a calendar in which speech pathologists provide traditional, direct intervention to students three consecutive weeks, followed by a week of consultative services.

- **5-Minute Model**: therapy is scheduled for short intensive drill sessions several times a week

- **Activity-based intervention**: refers to instruction that is embedded within children's and families' daily activities and routines. The instructional strategies vary according to child goals and needs, but the approach emphasizes child-directed contexts for instruction and the use of naturally occurring antecedents and consequences to develop functional skills. Similar concept to RBI

- **Block system**: Direct services are provided for a specified period of time followed by a similar time of indirect services (e.g., 9 weeks of direct intervention, followed by 9 weeks of indirect services).

- **Collaborative**: The SLP works with the IEP team (e.g. families, teachers, caregivers, other specialists) to provide information, direction, and intervention plans. This model may include both direct and indirect intervention by the SLP. This word is often a synonym for “Consultation.”

- **Consultation**: The SLP works with the IEP team (e.g. families, teachers, caregivers, other specialists) to provide information, direction, and intervention plans. In this model, the SLP does not work directly with the child.

- **Co-teaching**: an intervention delivery method that may be considered as part of the Collaborative Model. The SLP may deliver intervention side-by-side with the Classroom Teacher; one may teach, one may observe; one teachers, one drifts, for example.

- **Direct service delivery**: The SLP provides intervention directly to children on the workload.

- **Embedded intervention**: addresses a specific learning goal within the context of everyday activities, routines, and transitions at home, at school, or in the community—similar concept to RBI

- **Enhanced Milieu Teaching (EMT)**: EMT is a naturalistic, conversation-based intervention that uses child interests and initiations as opportunities to model and prompt language in everyday contexts.

- **Functional Outcomes**: refer to things that are meaningful to the child in the context of everyday living and an integrated series of behaviors or skills that allow the child to achieve the important everyday goals.

- **Generalization**: what we want to happen as a result of our treatment; It is nothing less than the goal of behavior change—also known as habituation, carryover and transfer across people, settings and behaviors

- **Indirect service delivery**: includes but is not limited to, meeting with teachers, parents, and other specialists, developing treatment materials, reviewing and writing IEP goals, and completing paperwork.

- **Itinerate**: to move from place to place on a circuit to perform one’s professional duty

- **Non-itinerate**: to perform one’s professional duty in one location
- **Play-based intervention**: practices designed to improve socio-emotional, physical, language, and cognitive development through guided interactive play—similar concept to RBI
- **Pull-out**: The SLP works with children one-on-one or in small groups outside of the classroom.
- **Push-in**: The SLP works with children one-on-one or in small groups in the classroom.
- **Response-to-intervention (RtI)**: RtI is a framework supporting differentiating instructional interventions for individual students based on their demonstrated need. Commonly described as Multi-Tier Systems of Support (MTSS), interventions of increasing intensity are used to provide an appropriate intensity of service, one matching a child’s demonstrated response to intervention. RtI uses a unique measurement approach that begins with universal screenings of all children on multiple occasions during the school year.
- **Routine**: predictable sequence that has a beginning, middle and end. Activities and procedures that occur regularly in the natural environment/meaningful contexts. Each routine includes many different activities and many different learning opportunities.
- **Routines-based intervention**: is a process for using the routines of the day to teach skills a child needs to be successful. Teaching within routines allows generalization toward goals that are “functional” or goals that the child needs to use in their daily life. It is unique in its use of specific intervention strategies targeting individualized developmental outcomes for a specific child by embedding the strategies in daily routines. Similar concepts are: embedded intervention, play-based intervention, activities-based intervention
- **Schedule**: A sequence of blocks of time for classroom activities
- **Service Delivery**: how the SLP works on goals from the IEP—recommendations tell us how many times per week the child will have intervention, for how many minutes, and where
- **Telehealth**: a term commonly used in the fields of speech-language pathology and audiology to refer to a service delivery model in which assessment and intervention services are provided over a telecommunications network (ASHA, 2005). Also referred to as teleconferencing, distance treatment, videoconferencing, telepractice