Comprehensive Model: Activity Based Intervention

**Brief Introduction**

Activity-based intervention (ABI) provides a developmentally appropriate framework for incorporating several effective instructional strategies into a child’s daily activities. This approach is a promising way to utilize naturally occurring antecedents and consequences to teach children with autism target skills.

**Description**

Activity-based intervention (ABI) originated with Diane Bricker and her colleagues at the University of Oregon. It is defined as a “child-directed, transactional approach that embeds intervention on children’s individual goals and objectives in routine, planned, or child-initiated activities, and uses logically occurring antecedents and consequences to develop functional and generative skills” (Bricker & Cripe, 1992, p. 40).

Novick (1993) described ABI as a “combination of selected strategies found in early childhood and behavior analytic approaches and shares many theoretical and philosophical underpinnings with developmentally appropriate practice” (p. 405). It is considered a naturalistic teaching approach and is commonly described in terms of embedded instruction, routine-based intervention, or integrated therapy (Pretti-Frontczak, Barr, Macy, & Carter, 2003).

ABI evolved as part of a linked system that moves from assessment to goal development to intervention, through evaluation (Bricker & Cripe, 1992). A child-directed approach, it emphasizes following the child’s interest and actions. Four sequential key elements make up ABI: (a) the use of routine, planned, or child initiated-activities; (b) the embedding of goals and objectives in routine, planned, or child-initiated activities; (c) the use of logical antecedents and consequences; and (d) the selection of target skills that are generative and functional.

Bricker, Pretti-Frontczak, and McComas (1998) suggested a five-step process of selecting appropriate skills for intervention:

1. Administer comprehensive curriculum-based assessment/evaluation tools.
2. Summarize the results of the assessment in terms of interests, strengths, and needs.
3. Target skills that are (a) functional, (b) usable across settings with different people and materials, (c) observable and measurable, and (d) part of the child’s natural daily environment.
4. Identify appropriate goals and objectives through prioritizing skills.
5. Develop written goals and objectives that are observable, measurable, and clearly understandable to team members.

Two intervention criteria must be met in order for progress to occur: (a) goals and objectives must be addressed during developmentally appropriate activities, and (b) repeated opportunities for practicing targeted skills must be provided during these activities (Bricker et al., 1998).

### Research Summary: Activity-Based Intervention (ABI)

<table>
<thead>
<tr>
<th>Ages</th>
<th>Skills/Intervention Goals</th>
<th>Settings</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–12 years</td>
<td>Social, communication, behavior, play, cognitive, school readiness, academic, motor, adaptive</td>
<td>Home, school, community</td>
<td>Components that make up this intervention have support as EBPs</td>
</tr>
</tbody>
</table>

*The information found in the Research Summary table is updated yearly following a literature review of new research and this age range reflects information from this review.*
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Research


References


Resources and Materials

This guide shows parents and professionals how to make and use activity schedules—a set of pictures or words that cues a child to engage in a sequence of activities—to help children with autism become more independent.
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Steps for Implementation

Step 1. Identifying the Intervention Goals

A. Refer to the learner’s IEP/IFSP to identify potential intervention targets.

B. Discuss goals with team members, including family and learner.

C. Target goals that are (a) functional, (b) usable across settings with different people and materials, and (c) part of the child’s natural daily environment.

D. Decide how goals and objectives will be embedded in the child’s daily activities and who will be responsible for each goal and objective.

E. Develop a matrix for identifying the appropriate target skills by domain in a classroom setting. The following is an example of an activity matrix with the activities written in the first column, personnel responsible for implementing goals indicated within specific activities, and the child’s goals written across the top.

<table>
<thead>
<tr>
<th>Activity (location)</th>
<th>Time/ Instructor</th>
<th>Greet</th>
<th>Gain other’s attention</th>
<th>Answer W/h questions</th>
<th>Initiate interaction</th>
<th>Check Schedule</th>
<th>Take Turns</th>
<th>Raise Hand</th>
<th>Clean Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrival</td>
<td>8:45 / Pam, Kimberly</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hello Circle</td>
<td>9:00 / Pam</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choice</td>
<td>9:30 / Kimberly</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center Time</td>
<td>9:30 / Keyli, Kimberly</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Remember Time</td>
<td>9:45 / Pam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Group</td>
<td>10:15 / Keyli, Kimberly</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Snack Time</td>
<td>10:45 / Pam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book Time</td>
<td>11:00 / Keyli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>11:30 / Pam, Kimberly</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Step 2. Defining the Target Behavior or Skill

A. Clearly define the target behavior or skill so that it is observable and measurable.

Step 3. Collecting Baseline Data

A. Determine the type of data needed to assess the target skill.

B. Collect data on at least three occasions over 3–5 days to determine the learner’s skills prior to intervention.
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Step 4. Implementing the ABI

A. Determine the instructional techniques to be used in addressing the learner’s goals. Techniques could include (but are not limited to) modeling, role-playing, shaping, feedback, and reinforcement.

Step 5. Monitoring Learner Progress

A. Collect data to measure the effectiveness of the intervention on the target behaviors or skills for a minimum of two weeks.

B. Ask others who work or live with the learner to collect data on the target behaviors across settings.

Step 6. Reviewing Data and Modifying the ABI Plan if Necessary

A. Depending on intervention findings, continue or adapt the ABI.

B. When the ABI procedures are altered, change only one variable at a time.

C. Collect and review data following each adaptation or change.