Why Ecobehavioral Assessment Needed in Applied Behavior Analysis?

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Abstract. The purpose of this paper is to describe why ecobehavioral assessment (EBA) is needed in Applied Behavior Analysis (ABA). To answer the question, empirical studies were reviewed. In this study, a brief review of EBA research was conducted as a means for describing EBA methods, content, and findings. In addition, founded six experimental studies based on ecobehavioral assessments to collect ecological and behavioral variables for young children with disabilities were examined to support this empirical part.

Keywords: ecobehavioral assessment, applied behavioral analysis

1 Introduction

Currently, more software system that guides observers using an ecobehavioral approach to collect classroom observation data such as Ecobehavioral Behavioral Assessment System Software (EBASS) (Greenwood, Carta, Kamps, Terry, & Delquadri, 1994). Computer technology has played a significant supporting role in the development of observational instruments such as EBASS (Greenwood et al., 1994) and have long since replaced the mechanical stopwatches and counters previously used to record the duration and frequencies of behavior (Greenwood, Carta & Dawson, 2000).

2 Role of EBA

Five primary roles have been found from the studies as following; (1) special education vs. regular education, (2) inclusion and engagement, (3)
transiting, (4) English language learner, (5) progress towards school-wide ecobehavioral norm.

The six different EBA was using code system. All six EBA (ACCESS, ESCAPE, CAPER II, MS-CISSAR, CISSAR, ECSRIBE) include three categories; EBA, as compared to ABA, leads to better understanding of complex environmental conditions because it (a) measures both behavior and ecology (see Table 1); (b) shows the covariation between changes in ecology and change in behavior; (c) suggests why behaviors are different in different ecological settings; (d) describes the behaviors student will need relative to what is expected in future environments; and (f) it identifies students in which problem behaviors versus academic responding is promoted most. These EBA findings display some common findings across different

### Table 1. Ecobehavioral assessments

<table>
<thead>
<tr>
<th>Authors &amp; types of E</th>
<th>Ecological Variables Included</th>
<th>Primary Findings from EBA</th>
<th>Role of EBA</th>
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<tbody>
<tr>
<td>Agar et al. (1995)</td>
<td>ESCAPE (a) ecological (i.e., designated activity, activity indicator, materials), (b) ecological (i.e., location, grouping, composition), (c) teacher (i.e., teacher definition, behavior and focus), and (d) student (i.e., target, competing, and verbal behaviors) ACCESS (a) teacher (i.e., approval, instruction,</td>
<td>1. No opportunities for independent work tasks in preschool settings. 2. Play and gross motor activities were more frequent in preschool than kindergarten. 3. Teacher behavior was similar in pre to kindergarten in group instruction and transition</td>
<td>1. To develop and verify effective instructional practices 2. To make quantitative comparisons of differences in independent variables between baseline and experimental phase 3. To track a single child for an extended period of time</td>
</tr>
<tr>
<td>Brown et al. (1999)</td>
<td>The focal student’s immediate contextual circumstances: (a) group arrangement, (b) peer group composition, (c) activity area or activity, and (d) initiator of the activity</td>
<td>1. Children with disabilities are a) more likely to be involved in one-to-one with adult arrangement, b) spend more time in solitary activities</td>
<td>1. To collect information about preschool environments and behavior of adult and children within those environments</td>
</tr>
<tr>
<td>Johnston et al. (2003a)</td>
<td>(a) ecological variable (i.e., physical placement of the target child, size,</td>
<td>1. The strategy was successful in teaching preschool aged</td>
<td>1. To assess the impact of the intervention procedure on a</td>
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behavior of the defined teacher) and (c) student variables (activity student)

environmental arrangement and the gradual fading of adult

1. No noticeable changes or trends from all three participa

1. To assess the impact of the intervention procedure on a variety of classroom ecological variables

Johnston et al. (2003b) ESCAPE

(a) ecological variables (i.e., designated activity, activity initiator, materials, location, grouping, and composition). (b) teacher variables

1. Two times of proportion of play occurred in the ECE than ECSE

2. No difference found from both settings related to

1. To observe the level of the children’s development and social interaction delays.

2. To develop

Odom et al (1990) ESCAPE

(a) ecological variables, (b) teacher variables, and (c) student variables (same as Johnston, 2003a)

To observe specific social interaction add

2. With mixed abilities, children with severe disabilities has

1. Majority of language instruction was direct instruction of children with disabilities than pairs or larger groups.

1. To collect individual, detailed descriptive data on every child in the sample

2. Additionally, the Language Intervention Features Checklist (LIFC) adopted to collect descriptive

Schwartz et al. (1996) ESCAPE

(a) ecological variables (i.e., designated activity, activity initiator, materials, location, grouping, and composition). (b) teacher variables (i.e., teacher definition, behaviors, and focus) (c) student variables (i.e., target behaviors,

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studies, researchers, observation sampling designs, and EBA instruments recording sometimes different ecological or behavioral content. This appears to suggest that the approach used here in early childhood applications, modeled on other applications in K-12 special educations (e.g., Ysseldyke & Algozzine, 2006; Greenwood et al., 1994; Shogren, Wehmeyer, Palmer, Soukup, Little, Garner, & Lawrence, 2008), is systematic and conceptually sound. Overall, EBA was useful because (a) it makes available to describe the observed structure of environments across a variety of different settings (e.g., classroom, and home) and different individuals by quantifying other factors and events, (b) it makes available to build the effective intervention through experimental procedure, and (c) it makes available to response the importance of multiple causation and multiple effects on a variety of occasions.
References


