



## Cross Comparisons of Different Behavioral Assessment Tools

	<i>Behavioral Assessment Tool</i>				
	<b>Gymboss</b>	<b>Watchminder</b>	<b>BOSS</b>	<b>BASC-POP</b>	<b>Future Help Designs' iBAA</b>
Type of device	stand-alone interval timer	watch-type device	Palm OS software	Palm OS software	iphone / ipod touch application
Portability	✓	✓	✓	✓	✓
Unobtrusiveness of device	✓		✓	✓ (with PDA only, not laptop)	✓
Keeps track of interval	✓	✓	✓	✓	✓
Maximizes clinician's visual focus on subject	✓	✓	✓		✓
Discreteness of end-of-interval alert	✓ (if vibratory option chosen)	✓ (if vibratory option chosen)		✓	✓
Visual alert		✓		✓	
Auditory alert	✓	✓	✓		✓
Vibratory alert	✓	✓			✓
Potential for customization	of interval length only	✓ some		✓ some	✓
Stores, tabulates, summarizes behavioral data			✓	✓	✓
Ease of data entry	n/a	n/a	easy	moderate to easy depending on # of behavioral categories	easy
Option for simultaneous peer-referenced recording			✓		✓
Option for ABC recording					✓
Option for notations on qualitative observations					✓
Bluetooth compatible					✓
Cost	\$19.95	\$79.00	\$85.69	\$163.00	<b>\$124.99</b>



## Cross Comparisons of Different Behavioral Assessment Tools

	<i>Behavioral Intervention Plan Tool</i>		
	<b>Motivaider</b>	<b>Watchminder</b>	<b>Future Help Designs' Keep In Mind App</b>
Type of device	pager-like device	watch-type device	iphone application for device individual already owns / uses
Vibratory alert			
Auditory alert			
Visual messages			
Potential for customization / personalization of alert		 limited	
Ease of personalization	n/a	moderate	easy
Text alert to mobile device			
Alert to email			
Cost	\$59.50	\$79.00	<b>\$34.99</b> for application and 2 mos. free notifications, max. 4 notifications / day  In App purchase: \$9.99 / year max. 4 notifications / day \$24.99 / year unlimited notifications

Name:	
ID No.:	

**CLASSROOM OBSERVATION**

Class: \_\_\_\_\_ Activity Observed: \_\_\_\_\_ Time: \_\_\_\_\_ Teacher: \_\_\_\_\_

Please respond to the following statements:

	Yes	No
Is the classroom climate individualized to meet student's needs?	<input type="checkbox"/>	<input type="checkbox"/>
Is the instructional level an appropriate fit to allow the student to be able to engage in assessment and learning activities without being excessively challenged or frustrated?	<input type="checkbox"/>	<input type="checkbox"/>
Does the student demonstrate academic difficulty?	<input type="checkbox"/>	<input type="checkbox"/>
Was the observation indicative of the student's daily classroom performance as reported by the teacher?	<input type="checkbox"/>	<input type="checkbox"/>
Does the observation reflect the ability demonstrated in formal measures of achievement?	<input type="checkbox"/>	<input type="checkbox"/>
Was the student given the opportunity to participate in the instructional process?	<input type="checkbox"/>	<input type="checkbox"/>
Specify instructional level:		

Describe any significant observed behaviors noted to adversely affect the student's ability to benefit from the general education learning environment:


Skills noted:	Strength	Weakness	Skills noted	Strength	Weakness
Volunteers answers	<input type="checkbox"/>	<input type="checkbox"/>	Motivated to learn	<input type="checkbox"/>	<input type="checkbox"/>
When called upon, gives the correct answer	<input type="checkbox"/>	<input type="checkbox"/>	Follows directions without repetition	<input type="checkbox"/>	<input type="checkbox"/>
Attentive in class	<input type="checkbox"/>	<input type="checkbox"/>	Expresses thoughts/ideas appropriately	<input type="checkbox"/>	<input type="checkbox"/>
Stays on task	<input type="checkbox"/>	<input type="checkbox"/>	Has appropriate articulation (sound production) skills	<input type="checkbox"/>	<input type="checkbox"/>
Completes assigned work in required time	<input type="checkbox"/>	<input type="checkbox"/>	Has appropriate verbal language ability	<input type="checkbox"/>	<input type="checkbox"/>
Work is accurate	<input type="checkbox"/>	<input type="checkbox"/>	Displays fluent speech	<input type="checkbox"/>	<input type="checkbox"/>
Remains in seat when required	<input type="checkbox"/>	<input type="checkbox"/>	Has appropriate vocal quality	<input type="checkbox"/>	<input type="checkbox"/>

Interval recording not utilized (stop here—if not checked, proceed to page 2 of observation form).

Psychological Evaluation Report Continued - Page

Name:	
ID No.:	

**Directions for interval recording:** Observe the student for 15 minutes. Mark each 20" interval box as either 1 or 0, indicating whether the behavior occurred during that interval (1) or not (0), regardless of the actual number of occurrences within that interval.

Behavioral Category		Target Student			Random Peer <small>(if peer-referenced observation utilized)</small>		
		Totals <small>(from below)</small>	# of intervals	%	Totals <small>(from below)</small>	# of intervals	%
<i>(AE) Actively Engaged</i>	actively doing something related to a lesson, such as orally reading, responding to a teacher's inquiry, asking a question, writing, or doing a pencil-to-paper activity		/ 45 =			/ 45 =	
<i>(PE) Passively Engaged</i>	looking at the teacher, listening to teacher or peers, or reading silently		/ 45 =			/ 45 =	
<i>(OT) Off-Task / Not Attending</i>	not engaging in any of the above task-related activities		/ 45 =			/ 45 =	
<i>(IL) Inappropriate Location</i>	out of seat without permission		/ 45 =			/ 45 =	
<i>(N) Noisy</i>	talking without permission, singing, humming, tapping, etc.		/ 45 =			/ 45 =	
<i>(PN) Physically Negative</i>	Destructive, pushing, hitting, etc.		/ 45 =			/ 45 =	

Use split boxes for peer referenced observations: top half—student; bottom half—peer.

	:20	:40	:60	1:20	1:40	2:00	2:20	2:40	3:00	3:20	3:40	4:00	4:20	4:40	5:00	5:20	5:40	6:00	6:20	6:40	7:00	7:20	7:40	8:00
AE	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
PE	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
OT	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
IL	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
PN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

	8:20	8:40	9:00	9:20	9:30	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:20	13:40	14:00	14:20	14:40	15:00	
AE	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
PE	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
OT	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
IL	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
PN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

ABC recording not utilized (stop here—if not checked, proceed to page 3 of observation form).

Name:	
ID No.:	

**ABC Recording for Functional Behavioral Assessment**

Record Antecedents: What was going on at the time or just preceding the observed behavior? What was asked of the student? What was the task? Who was present? What time of day? What was the location? Etc.

Record the observed Behavior: Describe the behavior as specifically as possible, in terms which are quantifiable.

Record the Consequences: What happened after the occurrence of the behavior? What reinforcer is maintaining the behavior? What is the response of the teacher or adults in the environment?

Record the Duration: How long did the problem behavior last?

Antecedent	Behavior	Consequence	Duration	Intensity
<p>Date: _____ Time: _____</p> <p> <input type="checkbox"/> Alone                      <input type="checkbox"/> With peers  <input type="checkbox"/> Asked to do something    <input type="checkbox"/> Told "no" / "not to..."  <input type="checkbox"/> With teacher/aide        <input type="checkbox"/> In group  <input type="checkbox"/> Redirected                   <input type="checkbox"/> Being ignored  <input type="checkbox"/> Structured activity        <input type="checkbox"/> Unstructured activity  <input type="checkbox"/> Riding to/from school    <input type="checkbox"/> Lunch  <input type="checkbox"/> Recess                      <input type="checkbox"/> Transitioning  <input type="checkbox"/> Starting a new activity    <input type="checkbox"/> Ending an activity  <input type="checkbox"/> Working on academics:   <input type="checkbox"/> Other: Describe:                      Which one? _____                 </p>		<p>What maintains behavior?</p> <p><input type="checkbox"/> Reinforcement, describe: _____</p> <p><input type="checkbox"/> Escape from demands, describe: _____</p> <p><input type="checkbox"/> Other, describe: _____</p> <hr/> <p>Teacher/Adult response:</p> <p> <input type="checkbox"/> Student ignored            <input type="checkbox"/> Time out  <input type="checkbox"/> Student redirected        <input type="checkbox"/> Sent out of room  <input type="checkbox"/> Proximity control        <input type="checkbox"/> Office referral  <input type="checkbox"/> Warning                    <input type="checkbox"/> Detention  <input type="checkbox"/> Verbal / nonverbal cue   <input type="checkbox"/> Suspension  <input type="checkbox"/> Loss of points/ privilege <input type="checkbox"/> Changed activity  <input type="checkbox"/> Physical assist / prompt <input type="checkbox"/> Physical escort  <input type="checkbox"/> Physical management  <input type="checkbox"/> Other: Describe: _____                 </p>	<p><input type="checkbox"/> &lt; 1 min.</p> <p><input type="checkbox"/> 1-5 min.</p> <p><input type="checkbox"/> 5-10 min.</p> <p><input type="checkbox"/> 10-20 min.</p> <p><input type="checkbox"/> 20-30 min.</p> <p><input type="checkbox"/> ½ - 1 hour</p> <p><input type="checkbox"/> 1-2 hours</p> <p><input type="checkbox"/> 2-3 hours</p> <p><input type="checkbox"/> 3+ hours</p>	<p><input type="checkbox"/> 1 Low</p> <p><input type="checkbox"/> 2</p> <p><input type="checkbox"/> 3</p> <p><input type="checkbox"/> 4</p> <p><input type="checkbox"/> 5 High</p>

**Additional notes:**


Utilize additional copies of this page as needed for on-going documentation of problem behaviors.



### Enhancing FBAs and BIPs with iPod Touch/iPhone Applications

Paul Chrustowski, Ph.D,  
&  
Future Help Designs:  
Glen Konopaskie, Director of Product Design  
&  
Christian Marcillo, Direct of Creative Design

Using today's technology to advance our field



Presentation to the Michigan Association of School Psychologists October 19, 2009

### Optimal Behavioral Assessments:

- yield *meaningful* and *useable* data
- are *unobtrusive* to the observed subject / student and the observational environment
- maximize the *clinician's ability to fully attend* to the subject/student
- are *time and cost efficient*

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### Approaches to Behavioral Assessment: "No" Tech

- Qualitative assessment
- Observe subject/student and summarize your observations in a anecdotal narrative



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### Approaches to Behavioral Assessment: "No" Tech

- Pro--Can yield valuable data for a keen observer specializing in human behavior.
- Good when reasons for referral are vague, when there is no clear target behavior identified, and no hypotheses formulated yet.
- Con—No quantitative data for accountability or data-based decision-making.
- "If it can't be graphed, it's not real data."

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### Approaches to Behavioral Assessment: Low Tech

- Basic quantitative data.
- Behavioral frequencies.
- Enter observation session with a clear, predetermined operational definition of the target behavior.
- Observe, count and tally.



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### Approaches to Behavioral Assessment: Low Tech

- Low tech tools to assist with this:
- "Clicker" hand tally
- Ranger beads



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## Approaches to Behavioral Assessment: Low Tech

- Problems: Not all behaviors are discrete enough to count frequencies.
- E.g. In a 20-minute observation, the student is not on task at all. If the target behavior is academic engagement, is that one incident of off-task behavior? 20????
- Solution: Interval recording.

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## Interval Recording

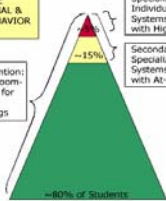
- Break a unit of time into smaller equal intervals and record whether or not a behavior occurs during that interval.
- Each interval can be marked either 1 (behavior occurred) or 0 (behavior did not occur) regardless of the actual number of discrete incidents of the behavior in that interval or the duration of time in that interval spent engaged in that behavior.

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## Interval Recording

CONTINUUM OF SCHOOL-WIDE INSTRUCTIONAL & POSITIVE BEHAVIOR SUPPORT

Primary Prevention: School-/Classroom-Wide Systems for All Students, Staff, & Settings



Tertiary Prevention: Specialized Individualized Systems for Students with High-Risk Behavior

Secondary Prevention: Specialized Group Systems for Students with At-Risk Behavior

- This provides quantifiable data for decision-making, hypothesis-testing, and intra- or inter-student comparisons.
- Data lends itself to use for level 1 and level 2 interventions in a Response to Intervention (RtI) model.

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## Interval Recording



- However, observation has become more complicated.
- Observer must keep in mind behavioral categories, observe the subject/student, *and* keep track of time.

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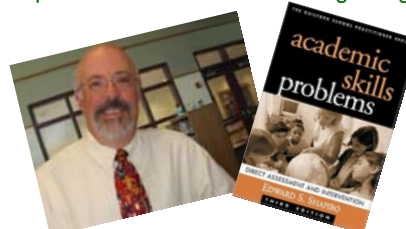
## Interval Recording

- What categories of behavior and for how long?
- When using these categories, observations of 15-minutes total do not yield statistically different data than longer observations, thus maximizing time efficiency.

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## Interval Recording

- For classroom observations, leading researcher in school psychology, Edward Shapiro recommends the following categories:



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## Interval Recording

- Actively engaged: reading orally, verbally responding to a teacher, doing a paper-to-pencil activity.
- Passively engaged: reading silently, listening to instruction.
- Off task: can further break down into off task motor, off-task verbal, etc.

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## Interval Recording



- Dan Reschly, leading researcher in Rtl, special education and school psychology recommends the following categories for problematic behaviors:

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## Interval Recording

- Noisy: talking out of turn, yelling/shouting out, singing, humming, arguing, tapping.
- Inappropriate location: out of seat without permission.
- Physically negative: pushing, hitting, fighting, aggression, provoking, intimidating, threatening, etc.
- Using these broad categories will encompass the vast majority of the most common teacher complaints about student behavior.

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## Tools for Interval Recording

- Higher Tech:
- *Gymboss* interval timer
- *Watchminder*



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## Tools for Interval Recording

- Such tools can be programmed to provide an alert to the observer at the end of predetermined intervals, freeing the observer from keeping track of the time.
- Alerts can be vibratory to minimize disruption to the classroom environment.

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## Approaches to Behavioral Assessment: High Tech

- Software has been designed and marketed for use on laptops and PDAs to assist with interval recording.



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## Approaches to Behavioral Assessment: High Tech

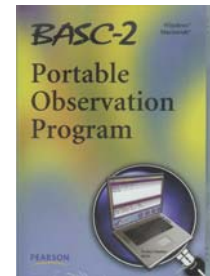
**B.O.S.S.**<sup>TM</sup>  
Behavioral Observation  
of Students in Schools<sup>TM</sup>



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## Approaches to Behavioral Assessment: High Tech

- Behavioral Assessment System for Children—Second Edition, Portable Observation Program
- (BASC-2, POP)



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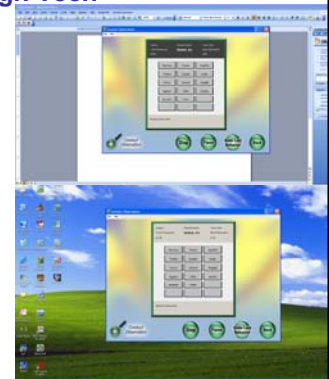
## Approaches to Behavioral Assessment: High Tech

- Allows for the portability of technological tools into the classroom.
- Behavioral data is directly entered into the laptop or PDA for the software to tally and provide graphs.
- The program keeps track of the intervals, allowing the psychologist to focus more on the student/subject and not on the stopwatch.

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## Approaches to Behavioral Assessment: High Tech

- BASC-POP: Intervals are indicated by a screen flash, followed by an opportunity to enter the behavioral data.
- Behavioral categories can be customized to a degree.



## Approaches to Behavioral Assessment: High Tech

- BOSS: Behavioral categories are preset.
- Does provide option for peer-referenced recording.
- Intervals are indicated by an audible cue which can be disruptive to the observational environment.



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## Approaches to Behavioral Assessment: High Tech

- Problems / Limitations: end-of-interval alerts are still either 1.) audible and potentially disruptive to the observational environment or 2.) visual (e.g. flashing screen) requiring that the observer still, to some extent, take his/her attention off the student/subject.
- Customization of behavioral categories is limited or nonexistent.
- Set-up can be complicated and cumbersome.

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### Approaches to Behavioral Assessment: High Tech

- Problems / Limitations : limited options for recording of additional data for Functional Behavioral Assessments (FBAs), such as ABC recording (Antecedents, Behaviors, Consequences).

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### Approaches to Behavioral Assessment: High Tech

- If behavioral data leads to the development of a Behavior Intervention Plan (BIP), there are limited tools to assist with BIP.
- Other software designed to assist in the development and writing of a Behavior Intervention Plan (BIP).

**ARCHITEXT**  
Behavior Action Planner

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### Approaches to Behavioral Assessment: High Tech

- Often BIPs necessitate keeping track of longer intervals.
- E.g. Administering reinforcement to subjects at specified times, prompts for those implementing the plan, prompts for self-monitoring, etc.

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### Approaches to Behavioral Assessment: High Tech

- Therefore, one could utilize tools such as the *Watchminder* (already mentioned) which can be programmed to keep track of the interval, provide a vibratory or auditory alarm, and provide a brief visual prompt.



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### Approaches to Behavioral Assessment: High Tech

- Problems / Limitation with *Watchminder*.
- Offering so many functions on a watch device makes programming challenging with only 4 small buttons to program all functions.
- Device is a bit “clunky” and may attract unwanted attention from others.

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### Approaches to Behavioral Assessment: High Tech

- Less cumbersome tools are available to provide vibratory and/or auditory alarm prompts at specified intervals, but without the visual prompt.
- E.g. *Motivaider*



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### The Ideal Behavioral Assessment Tool Would:

- Be portable, unobtrusive, and discrete to use
- Not require an additional device
- Allow for customization (i.e. behavioral categories, length of intervals, etc.)
- Keep track of intervals
- Provide discrete end-of-interval alerts (i.e. vibratory or audible to observer only)
- Allow for direct and easy entry of behavioral data
- Store, tabulate and summarize behavioral data
- Ensure security of entered data
- Provide options for recording of peer-referenced data, antecedents and consequences for FBA, and qualitative notations
- Be modestly priced

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### The Next Generation of Behavioral Assessment Tools

- Utilizing the latest technological advances for iPhones and iPod Touch and Bluetooth



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### The Next Generation of Behavioral Assessment Tools

- As of September 2009
- iPhone is the top handset in the US
- > 30 million iPhones sold
- > 20 million iPod Touch sold
- > 1 billion applications downloaded



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### The Next Generation of Behavioral Assessment Tools

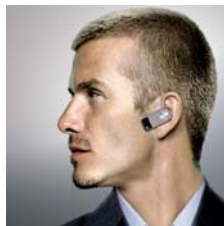
- Maximally customizable application for a device already in many clinicians' possession.
- Accomplishes all tasks of previous behavioral assessment tools with regards to interval recording and data recording and tabulation.
- Overcomes many shortcomings of other tools.
- Allows for simultaneous peer-referenced observations.
- Provides option for recording antecedents and consequences for FBA as well as qualitative observations.



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### The Next Generation of Behavioral Assessment Tools

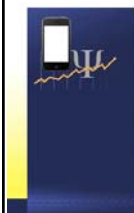
- Prompts can be vibratory or auditory delivered discretely through a Bluetooth headset, thus maximizing the observer's capacity to more fully attend to the student/subject and the observational environment.



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### The Next Generation of Behavioral Assessment Tools

Introducing...2 new applications from Future Help Designs



iBAA Behavioral Assessment Application



Keep In Mind BIP application



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## References

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## Contact

Dr. Chrustowski can be reached at...

[www.drchrustowski.com](http://www.drchrustowski.com)

[cpsych@cavtel.net](mailto:cpsych@cavtel.net)

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