Next Year Is Now

William L. Heward
The Ohio State University
2017 National Autism Conference
2016!
Tyler Lewis talks about His Progress in the General Education Curriculum
Tyler Lewis: 9th grader (2012)
How to become a millionaire.

First, get a million dollars.

Steve Martin
SPORTING NEWS
ALL-STAR TEAM
1972
My All Star Team

Ernie Banks - Don Baer - Yogi Berra
Benjamin Bloom - Rodney Cavanaugh
W. C. Fields - Dirty Harry - Temple Grandin
Rogers Hornsby - Lord Kelvin - Bill Klem
Steve Martin – “Bobo” Nickerson - Tom Lovitt
Dick Malott - Ellen Reese - B. F. Skinner
Ronnie Hochman Spratt - Casey Stengel
Cathy Watkins - Ron Van Houten
Why is ABA the basis for the most effective education and treatment for children with autism?

ABA is the discipline that has most consistently studied the problem of what behavior changes, made in what order and by what techniques, will confer the maximal benefit to the child.

~ Donald M. Baer (2005)
What are the usual behavior changes ABA chooses for children with autism?

The highest priority often is communication skills, .. to give the child more and more control of the social environment.

~ Don Baer (2005)
What are the usual behavior changes ABA chooses for children with autism?

The next priority is social skills, to make the child endearing to the parents and acceptable to others, and again to give the child more and more control of the social environment, of the kind that the social environment finds desirable or acceptable.

~ Don Baer (2005)
What behavior changes are most important?

Learning independence skills enables a child to control his physical environment and become a self-directed learner.

~ Don Baer (2005)
Suggestions for Teachers
design, implement, and evaluate instruction by which children acquire, generalize, and maintain new knowledge and skills that improve the quality of their lives.
Suggestions for teachers

- Take the long view (because next year is now)
- Realize you can’t teach everything
You can’t teach everything a student with autism needs to learn

- Attempting to treat all of a student’s learning needs at once invites failure. Neither the student nor his teacher(s) can devote the time and resources needed for so many behavior changes.
- Sometimes “thinking small” leads to the biggest learning gains because it focuses instructional resources on the most important and accessible behavior changes.
- Narrow the field of potential target behaviors by first judging the relevance of each candidate, then prioritizing the most relevant ones.
### Judging the Relevance of a Target Behavior

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Assessment</th>
<th>Rationale/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this behavior likely to produce reinforcement in the client’s natural...</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Is this behavior a necessary prerequisite for a more complex and functional skill?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Will this behavior increase the client’s access to environments in which other important behaviors can be acquired and used?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Will changing this behavior predispose others to interact with the client in a more appropriate and supportive manner?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Is this behavior a pivotal behavior or behavioral cusp?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Is this an age-appropriate behavior?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>If this behavior is to be reduced or eliminated from the client’s repertoire, has an adaptive and functional behavior been selected to replace it?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Does this behavior represent the actual problem/goal, or is it only indirectly related?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>Is this “just talk,” or is it the real behavior of interest?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
<tr>
<td>If the goal itself is not a specific behavior (e.g., losing 20 lbs.), will this behavior help achieve it?</td>
<td>Yes/No/Not sure</td>
<td></td>
</tr>
</tbody>
</table>

**Summary notes/comments:**

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### Prioritizing Potential Target Behaviors

**Directions:** Use the key below to rank each potential target behavior by the extent to which it meets or fulfills each prioritization criteria. Add each team member’s ranking of each potential target behavior. The behavior(s) with the highest total scores would presumably be the highest priority for intervention. Other criteria relevant to a particular program or individual’s situation can be added, and the criteria can be differentially weighted.

**Key:** 0 = No or Never; 1 = Rarely; 2 = Maybe or Sometimes; 3 = Probably or Usually; 4 = Yes or Always

<table>
<thead>
<tr>
<th>Potential Target Behaviors</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does this behavior pose danger to the person or to others?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>How many opportunities will the person have to use this new skill in the natural environment?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>How often does the problem behavior occur?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>How long-standing is the problem or skill deficit?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>Will changing this behavior produce a higher rate of reinforcement for the person?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>What is the relative importance of this target behavior to future skill development and independent functioning?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>Will changing this behavior reduce negative or unwanted attention from others?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>Will changing this behavior produce reinforcement for significant others?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>How likely is success in changing this behavior?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>How much will it cost to change this behavior?</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>

**Totals:**

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Source: *Applied Behavior Analysis* (2nd ed.) by J. O. Cooper, T. E. Heron, & W. L. Heward © 2007 by Pearson Education.
Set functional performance aims!

- functional behaviors produce reinforcement in the learner’s natural environment
- consider relevant dimensions of behavior
  - accuracy (topography)
  - latency
  - duration
  - magnitude
  - rate
Suggestions for teachers

- Take the long view (because next year is now)
- Realize you can’t teach everything
- Design and deliver lessons for maximum effectiveness and efficiency
It’s a race against the clock

- students with ASD behind typically developing peers
- they must be taught more in less time or fall even farther behind
EXPRESSIVE LANGUAGE TRAJECTORIES

“Catching Up is hard to do”

It’s a race against the clock

- students with ASD behind typically developing peers
- they must be taught more in less time or fall even farther behind
- instructional time a precious commodity
We are a much improved ball club, now we lose in extra innings!

*Casey Stengel - New York Mets Manager, 1963*
It’s a race against the clock

- students with ASD behind typically developing peers
- they must be taught more in less time or fall even farther behind
- instructional time a precious commodity
- every lesson must be planned and delivered with optimal effectiveness as its goal
- use only teaching methods with proven effectiveness
Focus on alterable variables

- reliably affect student learning
- can be controlled by teaching practices

~ Benjamin Bloom
Active student responding: A kingpin alterable variable

- ASR occurs when a student makes a detectable response to the lesson.
- High-ASR lessons produce more learning than lessons in which students make few responses or passively attend.
- Teachers know active student participation is important.
- The challenge: providing all students with frequent opportunities to respond during group instruction.
Group instruction challenges teachers to:

- maintain students' attention
- provide each student with sufficient opportunities to respond
- provide feedback for student responses
- prevent and deal with disruptive behavior
- monitor student learning
You gotta be low ball hitter and a high ball drinker.
Frank “Bobo” Nickerson
Tactics for increasing ASR in group lessons

- choral responding
- response cards
- guided notes and structured worksheets
- classwide peer tutoring
- fluency-building activities
Direct Instruction Reading Lesson
(Part A – Vocabulary & Fluency)
How much ASR is necessary?

“It takes what it takes.” - Cathy Watkins
“Son, when you pitch a strike, Mr. Hornsby will let you know.” ~ Umpire Bill Klem

Rogers Hornsby

Bill (It ain’t nothin’ ’til I call it) Klem
Plan and program for generalization and maintenance during the acquisition stage of learning

- Students who do not use newly learned knowledge and skills in relevant settings over time, do not experience an improved quality of life.
- “Train and hope” won’t cut it.
- ABA research has identified strategies and tactics for promoting generalization and maintenance.
- Special educators should know these methods and skillfully use them.
Seed your lessons with secondary learning targets
Suggestions for teachers

- Take the long view (because next year is now)
- Realize you can’t teach everything
- Design and deliver lessons for maximum effectiveness and efficiency
- Measure student performance and use those data to guide lesson modifications
You can observe a lot by watching.

~ Yogi Berra
When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind.

~ Lord Kelvin (circa 1883)
Direct and frequent measurement: The foundation of ABA

• Enables teachers to detect their successes and, equally important, their failures.

• Teachers who do not measure their students’ performance are prone to two fundamental mistakes.
Suggestions for parents

- Give your child a variety of early work experiences
We’ve got to start working more on building up the kids’ strengths. Kids .. often have uneven skills. Good at one thing, bad at something else. We need a lot more emphasis on building up the things they’re good at — the things they can turn into a career.

~ Temple Grandin
We should spend more time concentrating on these youngsters’ positive qualities. If a girl is inclined toward mechanics, or a boy to being a chef, we should nurture those skills. And if a child doesn’t have a negotiable behavior, we should locate one and promote it. … If children knew they could excel in something, that might help them become competent in other areas as well. ~ Tom Lovitt
Suggestions for parents

- Give your child a variety of early work experiences.
- Ask teachers who work with your child to provide regular data-based reports of progress (“Show me the data”).
Suggestions for parents

- Give your child a variety of early work experiences.
- Ask teachers who work with your child to provide regular data-based reports of progress (“Show me the data”).
- Tell the teachers who work with your child how much you appreciate their efforts.
Reflections on Being a Special Education Teacher
Suggestions for all of us

- Ensure success experiences for students.
Nothing succeeds like success!

Ronnie Hochman Spratt
It’s possible to change behavior by punishing errors and ignoring correct behavior, but we learn more efficiently when correct behavior is acknowledged and reinforced.

~ Ellen P. Reese
“A very reinforcer is available. ..

.. It does not need to be contrived for instructional purposes; it is unrelated to any particular kind of behavior and hence always available. We call it success.”

Try to keep your praise on the leading edge of the student's improvement.

~ Ron Van Houten
Set behavior traps

• “Baited” with powerful, virtually irresistible reinforcers that “lure” the student into the trap.

• Only a low-effort response already in the student’s repertoire is necessary to enter the trap.

• Once inside, interrelated contingencies of reinforcement motivate the student to acquire, extend, and maintain targeted academic and/or social skills.

• Remain effective for a long time because the student shows relatively little, if any, satiation effects.
Suggestions for all of us

- Ensure success experiences for students.
- Be a team player.
Vance Cotter (1934-1981)
Suggestions for all of us

- Ensure success experiences for students.
- Be a team player.
- Have fun.
A behavioral analysis of fun

It’s gotta be fun, or else . . .

it won’t be fun!

Dick Malott
“It's a great day for a ball game; let’s play two!”
Suggestions for all of us

- Ensure success experiences for students.
- Be a team player.
- Have fun.
- Don’t give up.
It all comes down to methods. Everybody wants results, but nobody wants to do what it takes.

Dirty Harry (Sudden Impact)
A failure is not always a mistake: it may simply be the best one can do under the circumstances. The real mistake is to stop trying. - B. F. Skinner.
Resources available on the NAC 2017 website

“GOTCHA!”
Twenty-Five Behavior Traps Guaranteed to Extend Your Students’ Academic and Social Skills

Have Students Self-Manage Their Academic Performance
Laurice M. Joseph and Moira Konrad

How to improve student learning in every classroom now
Janet S. Twyman\textsuperscript{a}, William L. Heward\textsuperscript{b,}\textsuperscript{*}

SCIENCE IN AUTISM TREATMENT
Newsletter of the Association for Science in Autism Treatment
Fall 2012

It’s Ok to Say I Don’t Know:

Teaching Students to Recruit Positive Attention: A Review and Recommendations\textsuperscript{1}

Behavior Traps: Turning Obsessions to Motivational Gold

Ten Faulty Notions About Teaching and Learning That Hinder the Effectiveness of Special Education