Effective Instruction in the Classroom

What Matters in Effective Intervention?

- Student behavior won't change until adult behavior changes
  ADULT BEHAVIOR MATTERS
- ALL behavior change is an instructional process
  INSTRUCTION MATTERS
- Some things work better than others – what's the simplest way to make a difference in the success : failure ratio of a student?
  PROBABILITY MATTERS

FACT
Snowballs get bigger as they roll down hill

Project Follow-Through

Project Follow-Through began in 1967. Its express purpose was to study instructional methods that would lead to a reduction in the disparity between low- and high-performing students by improving the performance of low-performing students. It was ultimately concluded in 1995 after consuming $1 billion and conducting research on over 20,000 students nationwide.

Each program had four to eight sites, with children starting in either kindergarten or first grade. Each Follow-Through (FT) school district identified a non-Follow-Through (NFT) district to act as a control group.

The Department of Education hired two independent agencies to collect and analyze the data.

- *Metropolitan Achievement Test*
- *Wide Range Achievement Test*
- *Raven's Colored Progressive Matrices*
- *Intellectual Achievement Responsibility Scale*
- *Coopersmith Self-Esteem Inventory*

Basic Skills Models

- ***Behavior Reinforcement***: Social praise and tokens are given to children for correct responses and tokens are traded for desired activities. Teachers use scripts, and instruction is provided incrementally. Sponsored by the University of Kansas.

- ***Direct Instruction***: This program emphasizes the teaching of phonemic awareness and phonics, using the DI techniques described above. The reading curriculum here is essentially the same *SRA Reading Mastery* curriculum that we are using. Sponsored by the University of Oregon.

- ***Language Development***: is an eclectic approach emphasizing language development rather than explicit reading skills. Sponsored by the Southwest Educational Developmental Laboratory.


Affective Skills Models

- ***Learning Center***: is based on the "Head Start" nursery school approach, extended into elementary school. Children select their own learning options at learning centers where they select their own options in a classroom structured to provide maximal learning opportunities. Sponsored by the Bank Street College of Education.

- ***Open Education***: is based on the British Infant School model, extended into elementary school. Learning centers were used here also, and children were further assumed to be entirely responsible for their own learning, with no teacher-directed instruction provided. Sponsored by the Education Development Center.

- ***Self Esteem***: is another program utilizing learning centers, but here the curriculum emphasis was on the development of self-esteem. The central philosophy is that the curriculum must respond dynamically to the individual needs of each child. The specific curriculum here was the Responsive Education Model, sponsored by the Far West Laboratory.

Cognitive Skills Models

- ***Cognitively-Oriented Curriculum***: Based on Piaget's theories of underlying cognitive processes, this curriculum encourages children to schedule their own activities. Teaching emphasizes "labeling and explaining causal relationships". Sponsored by the High Scope Foundation.

- ***Parent Education***: Parents of disadvantaged children are taught to teach their own children. Teaching emphasizes language instruction (precise nature not specified) and development of motor and cognitive skills. Sponsored by the University of Florida.

- ***Self Directed Literature***: Students are exposed to literature relating to their own experiences and interest. Child-directed choices are emphasized, based in part on the assumption that student choice would enhance enjoyment and facilitate learning through each child's individual learning style. The specific curriculum here was the Tucson Early Education Model (TEEM), sponsored by the University of Arizona.

Effective Instruction in the Classroom

Project Follow-Through Results
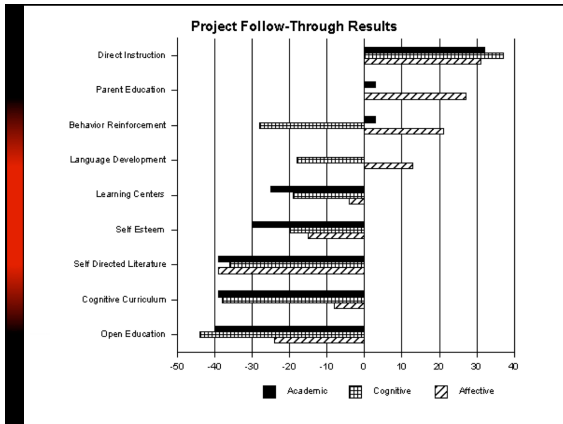
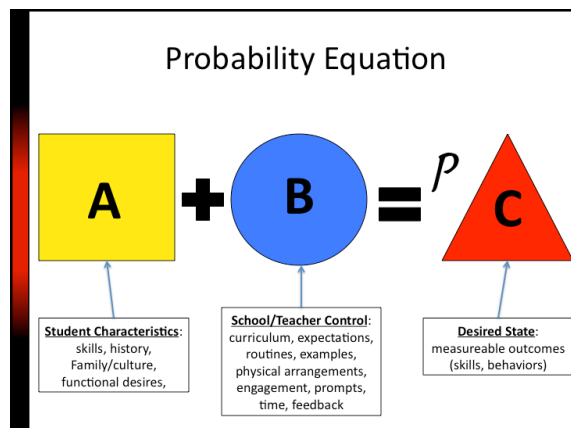## Explicit Instruction

Large-Scale Research and Meta Analyses

- **Direct Comparison Meta-Analysis**
  Favor explicit instruction   87.3 %
  Tie   0.6 %
  Favor other methods   12.1 %
- Students of all ages and abilities
- Academic and social behaviors
- Especially effective with low performers
- Very successful with disadvantaged students

Effective Instructional Foundations
what can adults do to affect student success?

✓ Effective Classrooms Literature from 1970s

✓ Effective instruction literature in the area of student/teacher interaction 1990s - present

✓ Meta-Analyses from past 15 years

Probability Equation

$$A + B = ^{p}C$$

Student Characteristics: skills, history, Family/culture, functional desires,

School/Teacher Control: curriculum, expectations, routines, examples, physical arrangements, engagement, prompts, time, feedback

Desired State: measureable outcomes (skills, behaviors)

Characteristics of Effective Classrooms

<u>Effective Classrooms</u>

-low incidence of behavior problems

-high success rates (80% or better)

-Academic learning time/engaged time

　-time with materials or activities related to the outcome measures that are being used

Adult Behaviors Associated with Effective Classrooms

- Clearly specified goals and objectives
  - ✓ Provide prompts and reminders throughout lesson
  - ✓ Explicit directions
  - ✓ Explaining, modeling, & demonstrating all content
- Engaging students throughout lesson
  - ✓ Provision of opportunities for students to respond during instruction
  - ✓ Group and individual responses
  - ✓ Guided practice
- High levels of feedback
  - ✓ Specific praise
  - ✓ Correction

Effective Instruction

Explicit
- Show and tell students what it is that is expected & why
- Monitor and guide to facilitate success

Engaging
- Opportunities to respond
  - Group (choral) or individual responses
  - Questioning strategies
  - Requests for student behavior (directions)

Frequent Feedback
- Verbal and Gestural
  - ✓ Positive and Negative
  - ✓ Correction

Instructional Concept #1

BE EXPLICIT

---

*In*effective Instruction

- Sets the occasion for student failure

Miss Bence liked to go over a few of her rules on the first day of school.

Instructional Concept #3

SELECT TEACHING EXAMPLES AND TEACH THEM

ACTIVITY

Let's try non-explicit social instruction:

What is Zore?

The concept is Zore
Social Concept
All examples are accurate

What is really happening in classrooms?

Effective Instruction in the Classroom

Analysis of Instruction is our check of bodily temperature

- Observe how teachers and students interact during typical classroom instructional periods
- 15 minute observations of individual student in context of classroom
- Duration and frequency measures
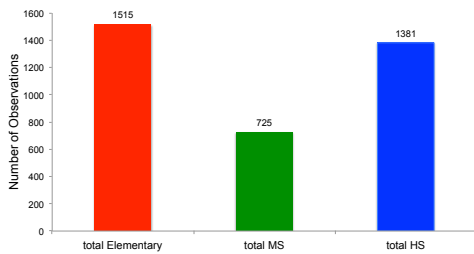- Look at descriptive stats, correlations, conditional probabilities, and higher level analyses
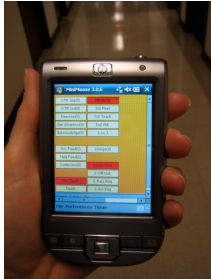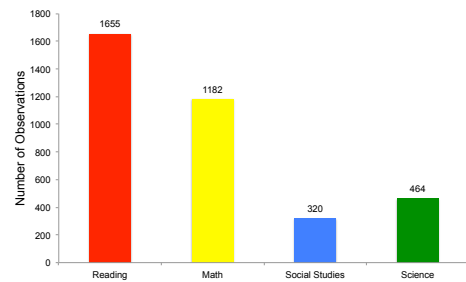
Observation Codes

Teacher Behaviors	Student Behaviors

• Teaching or Not Teaching
• Opportunities to respond
  ✓ Group
  ✓ Individual
• Feedback
  ✓ Positive
  ✓ Negative
  ✓ Correction
	• Engagement
	  ✓ Active
	  ✓ Passive
	  ✓ Off task
	  ✓ Down time
	• Disruption

Time Tchg	OTR Grp	OTR Indiv	Pos Feedbk	Neg Feedbk	TOTAL
.99	.93	.90	.88	.94	**.98**

Active Eng	Passive Eng	Off Task	Disruptive
.97	.98	.97	.94

General Education Settings
3621 Observations

Bar chart: total Elementary 1515, total MS 725, total HS 1381. Y-axis: Number of Observations.

Observations by Content Area
General Education Classrooms

Bar chart: Reading 1655, Math 1182, Social Studies 320, Science 464. Y-axis: Number of Observations.

Time Spent Teaching

Teacher is **Teaching** if . . .
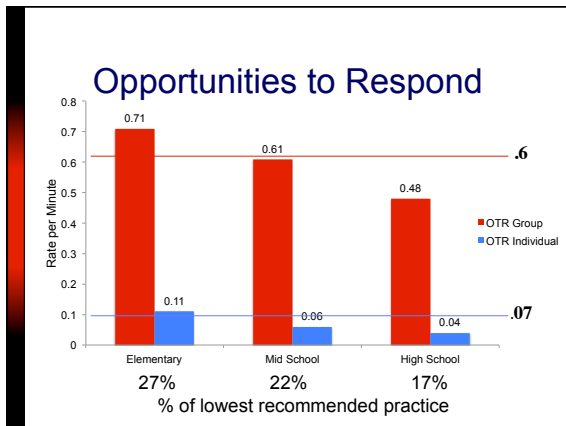- Working with curriculum
AND / OR
- Monitoring students

Bar chart: Elem 86%, MS 90%, HS 72%. Y-axis: Percent of Observed Time.

Pie chart: Not Teaching 19%, Teaching 81%. Overall Mean
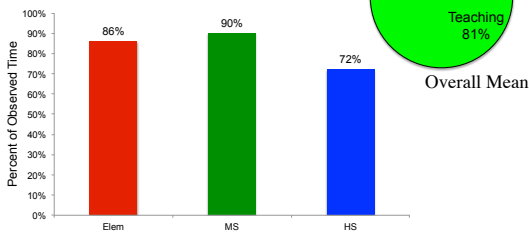
Recommended Practice: OTR

- CEC (1987)

Acquisition   4-6 per min @ 80%
Drill   8-12 per min @ 90%

ACADEMY

For Effective Instruction:

Working With
Mildly Handicapped Students

Design and Delivery
of Academic Lessons

- See positive effects on student engagement at **3 per minute**
- If student responds
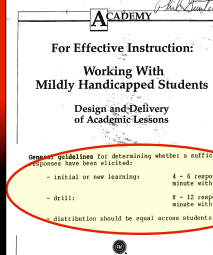
(Haydon, Mancil, & Van Loan, 2009; Partin, Robertson, Maggin, Oliver & Wehby , 2010; Sutherland, Alder & Gunter, 2003)
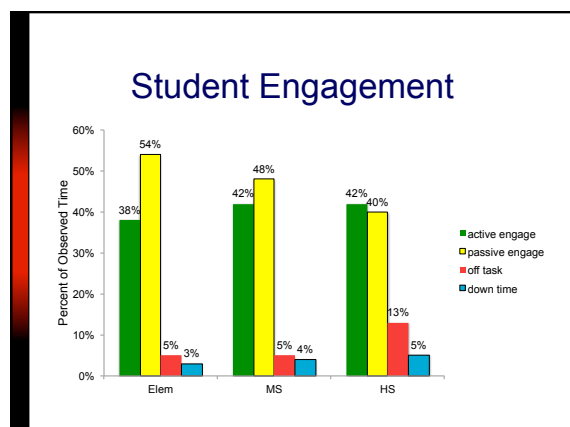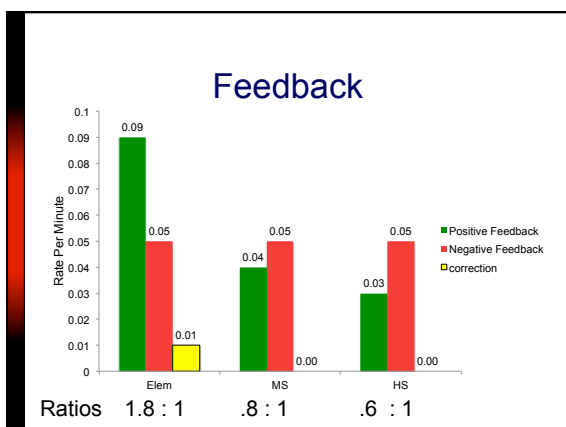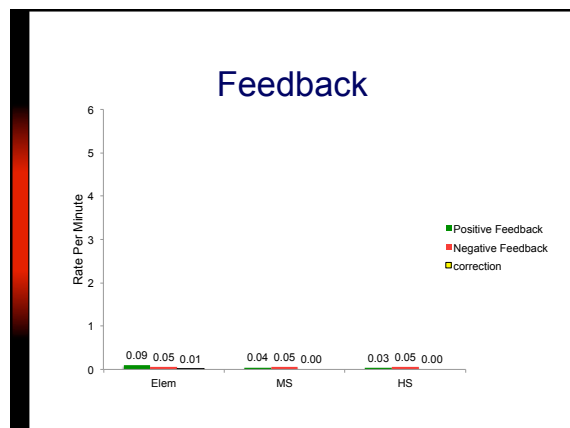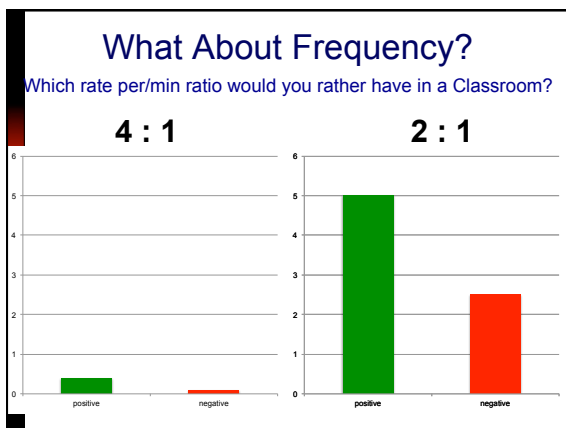
©Terrance M. Scott, 2013

Effective Instruction in the Classroom

Opportunities to Respond

Rate per Minute

- OTR Group: Elementary 0.71, Mid School 0.61, High School 0.48
- OTR Individual: Elementary 0.11, Mid School 0.06, High School 0.04

.6

.07

Elementary 27% — Mid School 22% — High School 17%

% of lowest recommended practice

Recommended Practice: Feedback

- The field at large recommends somewhere between 3 and 6 positive to every 1 negative
  (Gable, Hester, Rock, & Hughes, 2009; Kerr & Nelson, 2006; Nafpaktitis, Mayer, & Butterworth, 1985; Scott, Anderson, & Alter, 2011; Stichter et al., 2009; Walker, Ramsey, & Gresham, 2004)
- Mental health (Fredrickson & Losada, 2005)
  o 2.5 : 1 predicts normal functioning
  o 4.3 : 1 predicts optimal functioning
  o Tipping point seems to be 2.9 : 1
- Marriage (Gottman, 1994)
  o Flourishing marriage 4.7:1 actions; 5.1:1 speech
  o Poor marriage .7:1 actions; .9:1 speech

4:1 ?

What About Frequency?

Which rate per/min ratio would you rather have in a Classroom?

4 : 1 — positive, negative

2 : 1 — positive 5, negative 2.5

Feedback

Rate Per Minute

- Positive Feedback
- Negative Feedback
- correction

Elem: 0.09, 0.05, 0.01
MS: 0.04, 0.05, 0.00
HS: 0.03, 0.05, 0.00

Feedback

Rate Per Minute

- Positive Feedback
- Negative Feedback
- correction

Elem: 0.09, 0.05, 0.01
MS: 0.04, 0.05, 0.00
HS: 0.03, 0.05, 0.00

Ratios: Elem 1.8 : 1, MS .8 : 1, HS .6 : 1

Student Engagement

Percent of Observed Time

- active engage
- passive engage
- off task
- down time

Elem: active 38%, passive 54%, off task 5%, down time 3%
MS: active 42%, passive 48%, off task 5%, down time 4%
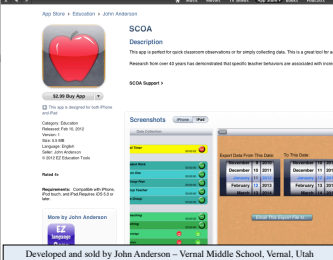HS: active 42%, passive 40%, off task 13%, down time 5%

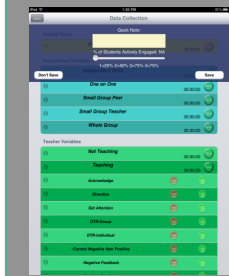# Effective Instruction in the Classroom

SCOA iPad Application
School/Classroom Observation & Evaluation

- Includes all effective instruction codes for teachers and students
- New codes may be added
- Duration and frequency data
- Includes walk-through assessment component
- Generates graphs (export)
- Facilitates repeated observations of same teacher/context/student
- Data can be dumped into Excel or SPSS for reliability calculations and complex analyses
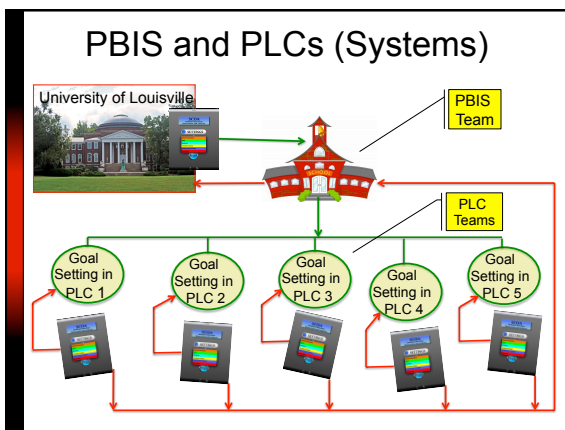- Continuing updates

Developed and sold by John Anderson – Vernal Middle School, Vernal, Utah

Full User Manual Available Free Online
www.louisville.edu/education/abri/assessment

Classroom Data Collection
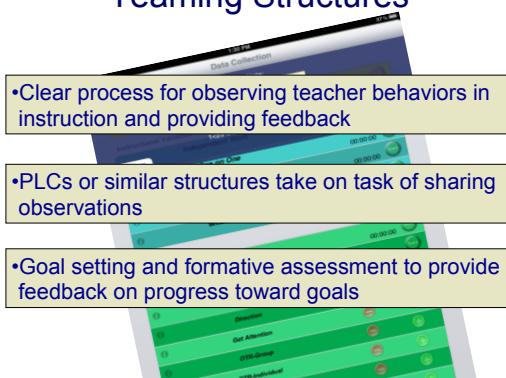
Notes can be entered here.
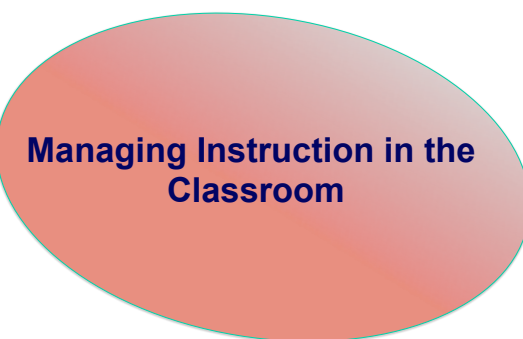
Level of student engagement. A range between 1 and 4.

PBIS and PLCs (Systems)

University of Louisville

PBIS Team

PLC Teams

Goal Setting in PLC 1
Goal Setting in PLC 2
Goal Setting in PLC 3
Goal Setting in PLC 4
Goal Setting in PLC 5

Teaming Structures

- Clear process for observing teacher behaviors in instruction and providing feedback

- PLCs or similar structures take on task of sharing observations

- Goal setting and formative assessment to provide feedback on progress toward goals

Managing Instruction in the Classroom

Procedures and Routines

- Define and teach classroom routines
  - **How** to enter class and begin to work
  - **How** to predict the schedule for the day
  - **What** to do if you do not have materials
  - **What** to do if you need help
  - **What** to do if you need to go to the bathroom
  - **What** to do if you are handing in late material
  - **What** to do if someone is bothering you.
- Establish a signal for obtaining class attention
- Teach effective transitions.

©Terrance M. Scott, 2013
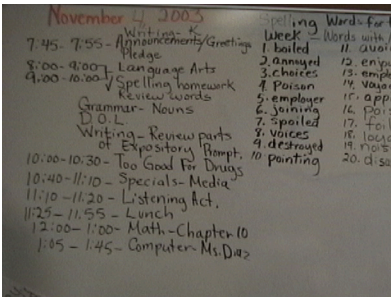
Effective Instruction in the Classroom

Schedule

- Consistency!!
- Expectations for arrival times
- Sequencing and length of activities
- Planned clean-up/transitioning routine
- Explaining changes

Advance Organizers

- Public display
- Consistency
- Prompts

Physical Arrangement

- Seating
  - ✓ Teacher's desk
  - ✓ Students' desks
- Sight lines
  - ✓ Teacher positions
- Traffic Flow
  - ✓ Associated activities
  - ✓ (e.g., pencil sharpening,
  - ✓ getting water, using the
  - ✓ bathroom, beginning and
  - ✓ end of day)

Proximity

Consideration of the teacher's placement in the room in relation to the students.

- Movement
  - ✓ Continue moving around room and maintain frequent close proximity to all students
- Approach
  - ✓ Hovering near to a particular student or area

Continuum of Reinforcement

- Natural success
- Nod, wink, etc.
- "thanks"
- Public acknowledgement
- Token acknowledgement
- Privileges
- Tangibles
  - ✓ Small to large
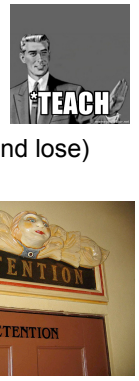
Continuum of Discouragement Procedures

- Correction
- Ignoring (extinction)
- Response cost (ability to gain and lose)
- Time out from reinforcement
- Overcorrection
  - ✓ Positive practice
  - ✓ Restitution
- Remove Privileges
- Corporal Punishment
  - ✓ Small to large

Consider Function

Does this look like a punishment to you?

Good Behavior Game
Group contingency involving competing teams

✓ Define teams and rules
- how many teams?
- what behaviors are the focus?
- what is the contingency and how much is needed?
- what is the length of time (hourly, daily, weekly)?

✓ Considerations
- is it possible to focus on positive behavior (replacements)?
- must be taught to class
  – Focus on replacement behaviors!!
- present/remove points immediately upon behavior
- make points public – chart progress

Good Behavior Game: Research

- Eighty-six percent of Good Behavior Game participants attained a high school diploma, compared with a rate of 19 percent among similar students who did not participate in the program.

- Ninety-nine percent of nonparticipants went on to use illicit drugs, compared with 66 percent of participants.

- Eighty percent of nonparticipants demonstrated antisocial behavior in later years, compared with 43 percent of participants.

Ialongo, N. S., Werthamer, L., Kellam, S., Brown, C. H., Wang, S., & Lin, Y. (1999). Proximal impact of two first-grade preventive interventions on the early risk behaviors for later substance abuse, depression, and antisocial behavior. *American Journal of Community Psychology, 27,* 599–641.
Kellam, S. G., Ling, X., Merisca, R., Brown, C. H., & Ialongo, N. (1998). The effect of the level of aggression in the first grade classroom on the course and malleability of aggressive behavior into middle school. *Development and Psychopathology, 10,* 165–185.
Kellam, S. G., Ling, X., Merisca, R., Brown, C. H., & Ialongo, N. (2000). The effect of the level of aggression in the first grade classroom on the course and malleability of aggressive behavior into middle school: Results of a developmental epidemiology-based prevention trial: Erratum. *Development and Psychopathology, 12,*107.

Positive Peer Reporting
Group Contingency with Focus on Individuals

✓ Define students and rules
- how many target students – vary by day?
- what behaviors are the focus?
- what is the group contingency – and how much is needed?
- what is the length of time (hourly, daily, weekly)?

✓ Considerations
- must keep focus on positive behavior (replacements)?
- vary target students – nobody is target every day
- must be taught to class
  – Focus on how to compliment others
- teach for presentation of points immediately upon behavior
- make points public – chart progress

...vin, R.A., Miller, P.M., & Friman, P.C. (1996). Feed the hungry bee: Using positive peer reports to improve the social ...eractions and acceptance of a socially rejected girl in residential care. Journal of Applied Behavior Analysis, 29, 251-253.

Group Contingency (all for 1)

- A strategy for facilitating compliance from among an entire group of students that includes one student in need of change .

Normal	Jimmy, stop making goofy noises and get to work – you need to have this done by the end of the period.	(fart noise)!	Laughter from the room
Group Contingency	If there are no noises and nobody laughing at inappropriate noises we'll take 10 minutes extra for free time today	Working	All reinforced
		(fart noise)!	Others ignore

Behavior Momentum

- A strategy for <u>increasing the probability</u> of compliant behavior by asking a student to do two or three things they typically want to do and then following these requests with a request for a behavior the student typically does not want to do.

Normal	Johnny, you should get your project finished this morning			NO!
Behavior Momentum	Johnny, can you help me with these books?	Johnny, will you sharpen my pencil	Johnny, you should get your project finished this morning	OK

©Terrance M. Scott, 2013

Using Choice

- Students are provided opportunities to independently make decisions between two or more options that affect their daily routine.

Normal	Johnny, you should get your project finished this morning	Bite Me!
Choice	Johnny, I want you to make a choice - you get to decide. You can either get your math project done or you can get started on your writing assignment. It's totally up to you - which one?	Math project

What Matters in Effective Intervention?

- Student behavior won't change until adult behavior changes
  ADULT BEHAVIOR MATTERS
- ALL behavior change is an instructional process
  INSTRUCTION MATTERS
- Some things work better than others – what's the simplest way to make a difference in the success : failure ratio of a student?
  PROBABILITY MATTERS

The University of Louisville
Doctoral Program In Behavior Disorders

Terry Scott
Professor and Distinguished University Scholar
College of Education and Human Development
University of Louisville
Louisville, KY 40292
t.scott@louisville.edu
(502) 852-0576

©Terrance M. Scott, 2013