

ACRE Certificate Series: Systematic Instruction

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+ Getting Started as an Employment Specialist

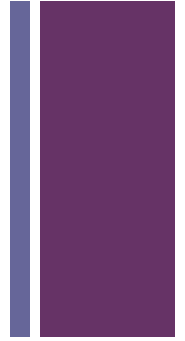
What You Need to Know Before You Start

+ Building the Right Skill Set

- Skills you need to succeed as an ES
- Become the tools in your tool kit
 - Don't need all for every person
 - Need to have them all to use them when needed
- General strategies for analyzing, teaching, supporting across situations
- Understanding the system & system supports

+ Putting the Right Tools in Your Toolbox: Teaching Tools

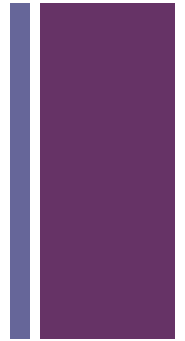
- Systematic Instruction (SI)
- Positive Behavior Supports (PBS)
- Technology



**“Who dares to teach must never
cease to learn.”**

- John Cotton Dana

+ Starting with a Question



- Based on your experience, what jobs do you think are the best fit for individuals with disabilities?
 - Type of jobs/duties
 - Nature of tasks
 - Duration
- What jobs have most/least success?
- Why do you think this is?

+ What Lies Beneath

- Subconscious assumptions guide actions
- Type & nature of work
 - Tasks should be clear & easy
 - Variation is bad
 - Jobs requiring flexibility will fail

+ Assumptions Drive Outcomes

- Emergence of “go to” places
- Fit the parameters type of tasks
 - Grocery stores
 - Food, filth, flowers

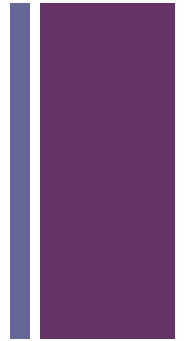
+ So the real question is...

- Are these jobs more a reflection of the needs of the job-seeker or the skill and experience of the employment specialist?

+ Exercise: Taking an Insider's Look at Bagging Groceries

- Get in groups of 2-3
- Describe the process for bagging groceries
- Consider:
 - Job pace, standard tasks
 - Task variation required
 - Work flow
 - Structure of day/schedule

+ Foundation: Try Another Way



- All people can demonstrate competence if given training supports appropriate to their needs
- Integration is more important than acquisition of skills



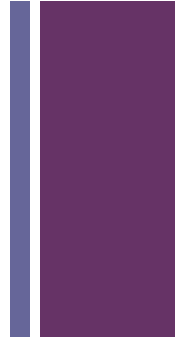
+ Foundation: Try Another Way

- Lack of learning should first be interpreted as insufficient use of teaching strategies NOT the inability of the learner

+ Foundation: Try Another Way

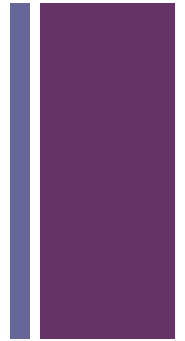
- Training should be done in environments where information will be used.
- We should train natural trainers as well as human services trainers.

+ Systematic Instruction



- Methodology to:
 - Plan, implement, & assess instructional strategies
 - Collect & utilize data used to make instructional decisions

+ Systematic Instruction



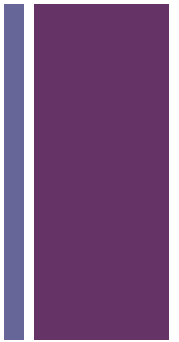
- Utilizes proven principles of learning
- Allows teaching skills of greater complexity
- Goal is to make teaching more:
 - Efficient, and
 - Effective

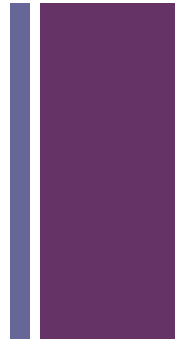
+ Systematic Instruction

- Requires flexibility & fluidity

- All will make mistakes

😊 So get over it and learn from them!!





**Never say, “Oops”. Always say,
“Ah, interesting”.**

- Author Unkown



The Changing Role of the ES

From Way Back When through Today

+ Two Key Considerations

- Role is to ***analyze, teach, support***- not to ***judge***
 - Applies to both SI & PBS
- The best instruction in the world will not overcome a bad job match
 - Teaching strategies are part of bigger CE process

+ Out With the Old...

- Job Coach (early days)
 - Provided all training
 - Liaison to employer/ co-workers
 - Assisted with production
 - Covered if employee was out

+ Out With the Old... (cont.)

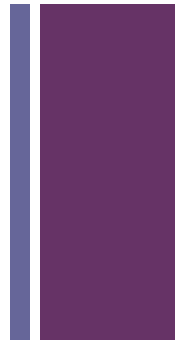
- Job Coach (more recently)
 - Develops training plan for employee
 - In lieu of typical orientation & training
 - Provides initial intensive training
 - Functions as expert & “go-to” person
 - Fades (or doesn’t!) when training is complete

+ Group Discussion

- What are some of the challenges you've seen or experienced with the traditional job coaching approach?

+ In With the New...

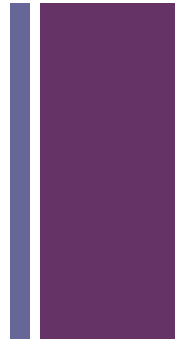
- ES = Consultant, Specialist, Facilitator
 - Works within existing training structure
 - Supports natural training & orientation
 - Evaluates/analyzes effectiveness
 - Augments training as necessary



+ SI AND Natural Supports

- Not an “either/or” scenario
- Natural Supports do not replace SI
- SI does not replace Natural Supports
- ES must be adept at facilitating both

+ Either/Or = Lose/Lose



Natural Only:

Drop at Door &
Wave Goodbye

SI Only:

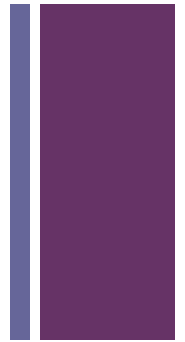
Taught only by
“expert” job coach

Goal:

**Blend approaches as seamlessly as possible based on
unique attributes of employee, employer, and
individual tasks**

+ Role of ES

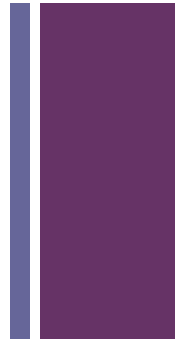
- Identify & facilitate natural supports
- Assist new employee to fit in
- Help identify all tasks requiring training
- Oversee training of new employee



+ Role of ES

- Consult with natural trainer
 - Support with teaching strategies or adaptations
- Provide training to employee as needed
- Ensure that all supports necessary are in place
 - Including those outside the job, e.g., transportation

+ 7-Phase Sequence



- Phases 1-4: The Natural Ways
 - Involve “cultural analysis” of work settings/tasks

- Phases 5-7: The Back-Up Ways
 - Augment training as needed
 - Strategies support work culture

- Process is dynamic, not fixed

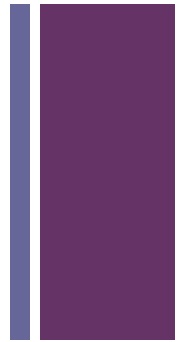
+ Phases 1-4: The Natural Ways

1. Communicate Natural Ways
2. Promote Natural Means
3. Utilize Natural People
4. Facilitate Successful Performance

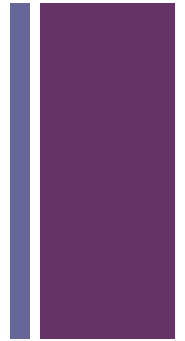
Goal: Support NT to build capacity... not to hijack training process!

+ Facilitate Successful Performance

- Default is natural procedures
- NT leads, ES provides feedback
- Dynamic process... can vary task to task
 - NT acting independently
 - NT leading, ES providing feedback
 - ES steps in and models

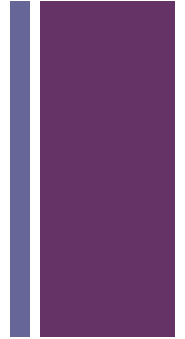


+ Phases 5-7: The “Back-Up” Ways

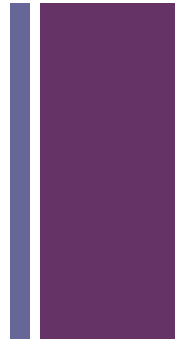


5. Support, Assist, Substitute for NT
 - NT is still expert
 - Model, substitute, provide feedback, brainstorm
6. Reconsider Natural Means
 - Option for another trainer?
7. Adapt, Modify, Change Natural Ways
 - Change time requirements, alter tasks
 - Phase 7 for 1 task ≠ Phase 7 for all!!!

+ “Back-up” Support Considerations

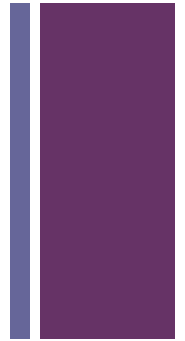


- Augmenting natural training may be needed
- ES does not replace NT
- ES can assist, support, substitute (Phase 5)
 - Only on tasks requiring additional support



Beware of tendency to assume natural processes won't be enough!!!



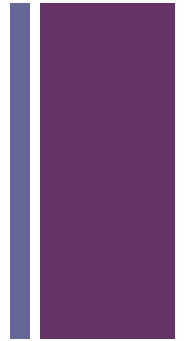


Do Not Step In and Take Over at first sign of problem!

Only provide support on tasks causing issues!



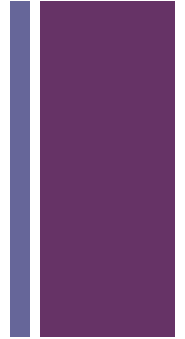
+ When to Offer Back-up Support



- Errors consistently occurring
 - Demoralizing for learner
 - Cause uncertainty on part of trainer
 - “Unlearning” errors impedes correct teaching
- Training not resulting in efficient acquisition
- NT or employee becoming frustrated
 - Facilitate if sense tension rising

+ Going Natural... Points to Ponder

- If supervisor, co-workers, etc. are experts of the workplace, what is ES expertise?
- How do you know when the natural ways (phases 1-3) are not enough?
- What do you do then?



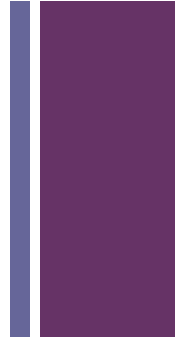
“An expert is a [person] who has made all the mistakes which can be made in a very narrow field.”

- Niels Bohr

+ What To Do When Natural Teaching Isn't Enough

- Specifically analyze problematic tasks
- Streamline & focus teaching processes
- Base teaching decision on data
- All teaching processes must respect the dignity of the individual!

+ Step 1: Identify “What” to Teach



- Observation is mandatory
 - Schedule time before job begins

- Goes beyond job tasks themselves
 - Company culture
 - Co-worker interactions
 - Pace & structure of day

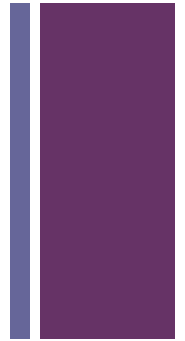
+ Activity: Looking Back... Your Employment History

- What was your favorite job?
- What made them the best job(s)?
 - Job tasks? Co-workers? Culture/Environment?
- Did you ever have a job where the tasks were the right fit but co-workers or company wasn't?
- Have you ever worked with someone who just didn't "fit" ?

+ What to Teach... Helpful Hint

*Only stepping in at sign of problem... but
proactively planning for how to teach
everything in beginning!!*

+ The Job Analysis Record (JAR)

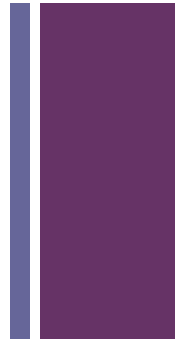


- Tool for identifying what to teach
- Tangible & intangible elements of job, e.g.:
 - Tasks, performance & quality measures
 - Rituals, natural trainers, “go to” people
- Writing it down = safety net for not overlooking critical components

+ JAR: When to Use

- Use the JAR as a foundation for:
 - Negotiating a job
 - Assessing what to teach once job has been secured

+ JAR: Key Components



- Project-oriented
- Developed for all work routines:
 - Core, Episodic, & Job-related
- Task steps should:
 - Reflect natural instruction
 - Be verified by supervisors/co-workers

(Callahan & Garner, 1997)

+ Core Routines

- Repeating cycles
- Performed most frequently during work day
- End of one cycle signals start of next
- Typically easiest to master
- Core routine examples?? (Starbucks...)

(Callahan & Garner, 1997)

+ Episodic Routines

- Have cycles/specific steps
- Performed less frequently
- Less opportunity to practice
- May be more difficult to master
- Episodic routine examples??

(Callahan & Garner, 1997)

+ Job-Related Routines

- Not related to job projects/tasks
 - Break time routine
 - “Looking very busy” routine
- Critical for successful employment
- Equally important... often overlooked!

(Callahan & Garner, 1997)

+ Step 2: Identify Criterion for Correct Performance

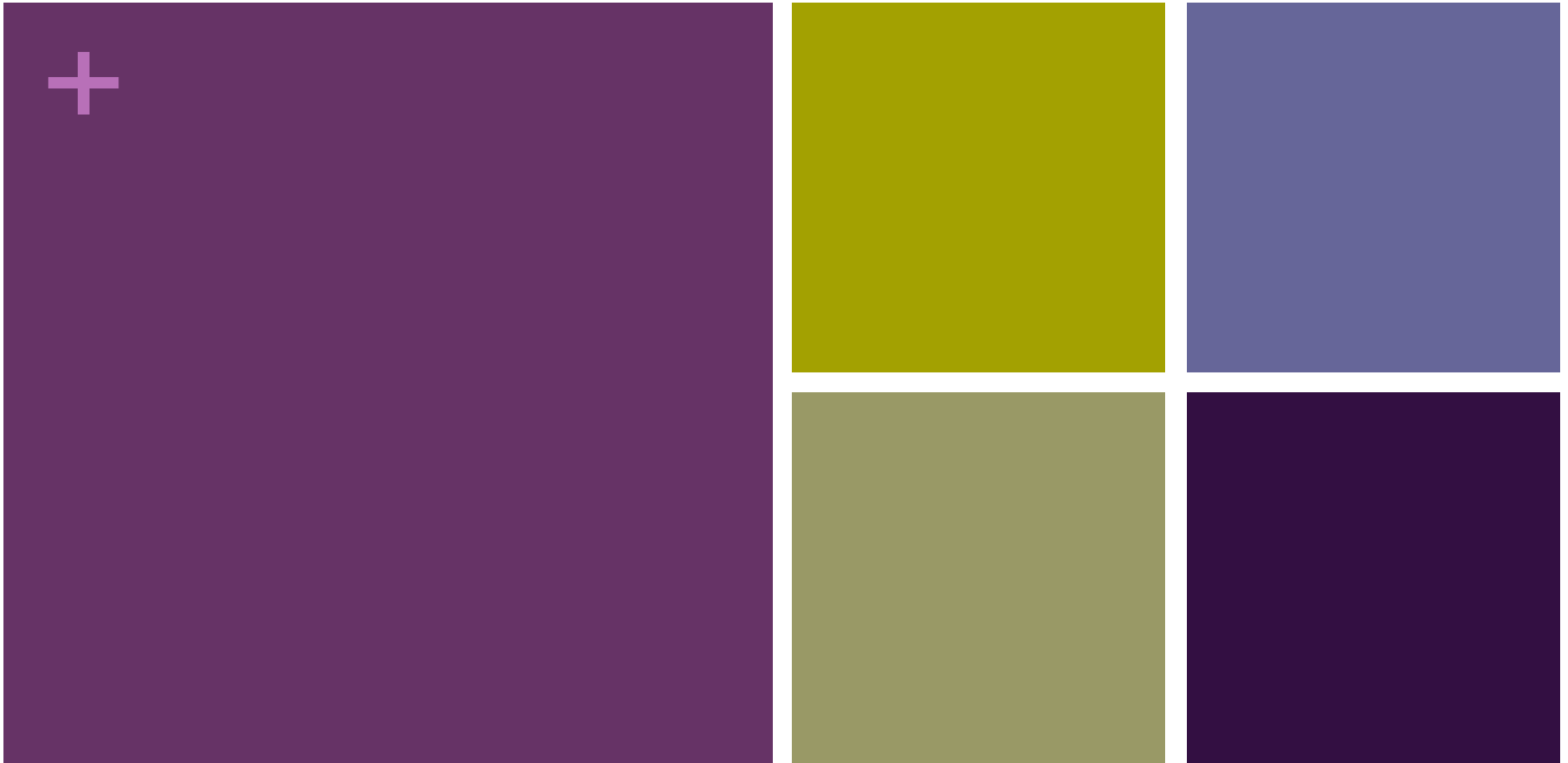
- Standards linked to company standards
 - Quality, time, etc.
- Observe multiple employees
- Verify with supervisors/co-workers

(Callahan & Garner, 1997)

+ 2 Ways to Assess Performance

1. Topographical Correctness
 - All steps performed correctly; quality is acceptable
 - Generally preferred method
2. Functional Correctness
 - Outcome met, but tasks performed atypically
 - Steps missed, modifications made
 - To greatest extent possible- try #1 first!

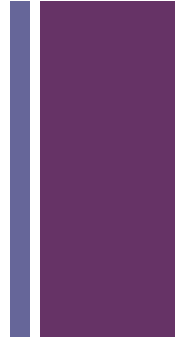
(Callahan & Garner, 1997)



Moving Forward

How to Teach

+ Step 3: Identify How to Teach



- Break tasks down into 2 component parts:
 1. Steps involved
 2. Outcome
- Tendency to focus on outcome
- Effective teaching: identify & focus on steps

+ Method: Task Analysis

- Breaking down a task into its component parts (teachable steps)
- Steps listed in sequence first to last
- Perform listed steps to assess accuracy & completeness

+ Task Analysis

- Initially based on natural teaching steps
- Observe someone else being taught
- Write down steps and words/cues used
- Confirm with Natural Trainer (NT)

+ Task Analysis: Considerations

- Amount of detail depends on individual
- Revise task analysis based on learner needs
- Update written task analysis
 - Use the additional steps when collecting data

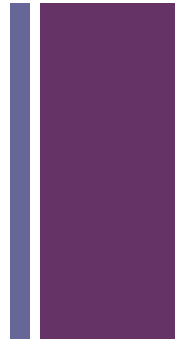
+ Exercise: How to Fold a T-shirt in 2 Seconds

- Divide into groups of 3. Assign roles: natural trainer, ES, & new employee
- Develop a task analysis from the video
- Determine criterion: functional or topographical (and give examples of each)

+ Activity Debrief

- How many steps in the initial task analysis
- How important is the wording
- Any thoughts on feedback to the NT before training even begins?
- Would it be important for you to observe/learn how to do this before day 1 onsite??!!!

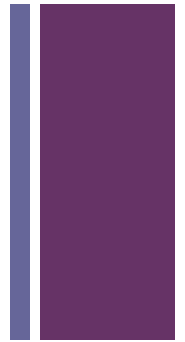
+ Teachable Steps: Considerations



- Total Task
- Task Clusters
 - Forward Chaining
 - Backward Chaining
- Mixed Formats
 - Mass trials

+ How to Teach: Strategies

- Errorless Learning
- Time Delay
- Prompting
- Reinforcement/Motivation



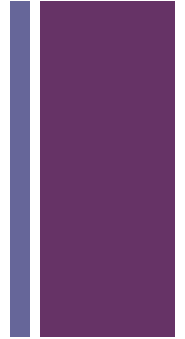
+ Errorless Learning

- Mistakes aren't always the best teacher
- Hard to unlearn the “wrong” way
- Mistakes can be demoralizing
- Minimize errors & decrease frustration
- Maximize correct learning

+ Errorless Learning

- Assist prior to mistake being made
- After decision, before mistake
- Some mistakes support learning
 - Mistake provides a “cue”
 - Employee has the skill to “catch”
 - If mistake not “caught”, go to errorless

+ Time Delay



- Time between cue & performance of step
- ES frequently prompt too quickly
- Increase time for new steps/tasks
 - Count of 5 general guide
- Intervene if mistake indicated/progress halts

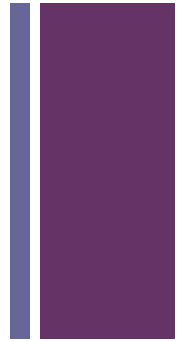
+ Exercise: How to Fold a T-shirt in 2 Seconds

- Get back into group of 3.
- Natural trainer teach new employee
- Employee challenged by one step
- ES step in to support to trainer... use errorless learning & time delay strategies
- After 2-3 minutes, sit down as a group to determine how to further break-down difficult step

+ Activity Debrief

- Was it challenging to intervene before a mistake was made?
- How did time delay support (or inhibit) the process?
- If you had to further break the task down, how would you do it??

+ Prompting



- Critical, powerful teaching technique
- Rarely understood
- Frequently misused

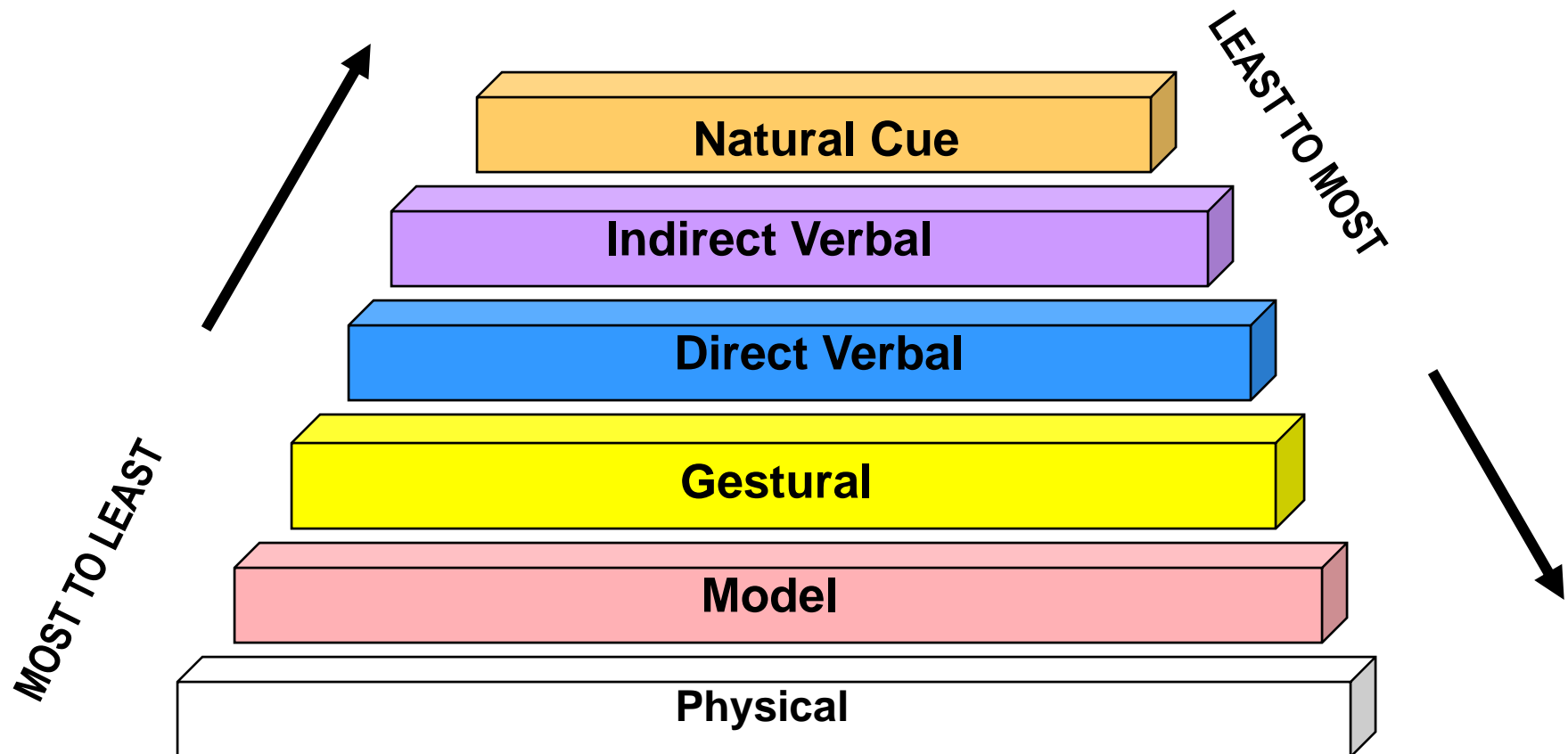
Correct: Facilitate learning, support independence

Incorrect: Inhibit learning, create overdependence

+ Types of Prompts

- Verbal: Spoken instruction/reminder
- Gestural: Gesture indicating next step
- Model: Show how to do task
- Physical: Provide physical assistance
(hand over hand)

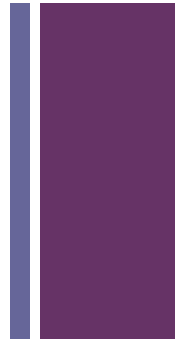
Prompting Hierarchy



+ Using the Hierarchy

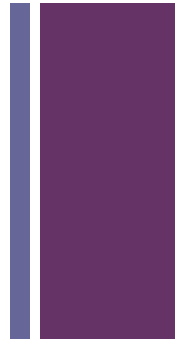
- Begin with least intrusive prompt
- Wait 3-5 seconds
 - Intervene if error about to be made (errorless learning)
- Go to next prompt only if step not performed
- Wait 3-5 second
- Continue process as necessary

+ In a nod to Run DMC...



***ONLY PROVIDE ONE PROMPT AT A
TIME!!***

+ Fading Prompts



- Fading correctly is equally critical component
- Goal is to “back-out” of the prompting hierarchy
- Start working on fading as soon as correct prompt level has been determined

+ Prompting Example

- Andy is learning to type and send e-mails to a distribution list. He enters the distribution list and subject, types the message and pauses. This has happened several times in a row, and the ES is stepping in to support the NT.
- How should the ES start and move through the prompting process?

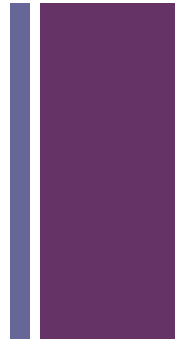
+ Fading Prompts, Example

- Andy required a gestural prompt (ES pointed to the “send” button) to correctly send the e-mail.
- Where should the ES start prompting on the next e-mail?
- How can the ES successfully fade this prompt?

+ Instructional Assists

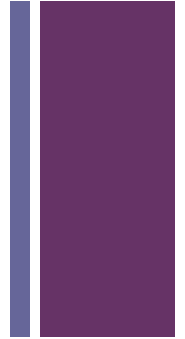
- Permanent product to provide prompt
 - Checklists, photos, written/visual schedules, etc.
- Use if task not mastered despite correct prompting & teaching strategies
- What might be a possible instructional assist for Andy?

+ Prompting Pitfalls



- Too Much Information!!
 - Multiple prompts given concurrently
 - Prompt mixed with extra conversation
- “I’m There for You”
 - Prompt automatically, not based on data or need
 - Level/type of prompt not assessed or decreased
- The Dreaded... Prompt Dependency

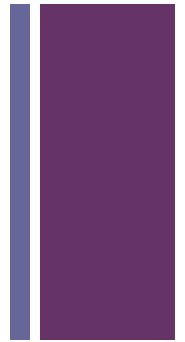
+ Prompt Dependency



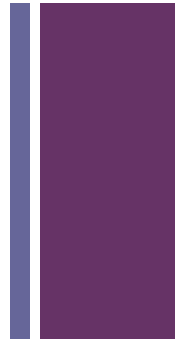
- Employee gets “hooked” on prompts
- Occurs when:
 - Prompts not used systematically
 - Progress isn’t assessed regularly
 - Teaching strategies do not include fading

+ Systematic Instruction: Steps to Teaching

- Explain & Demonstrate Task
- Use Time Delay
- Allow for Self-Correction
- Intervene after a decision is made but before the learner acts
- Apologize for Mistakes (trainer)!!

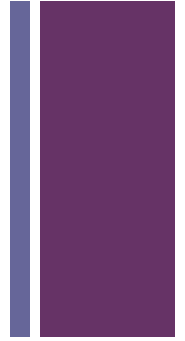


+ Reinforcement



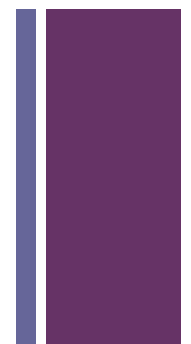
- The purposeful arrangement of events in order to increase recurrence of desired behavior
- If behavior doesn't increase or recur... it wasn't reinforcing!!

+ R+: Common Misconceptions

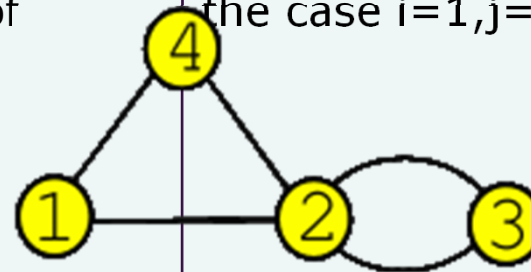


- If it is a good or desirable thing, it is a reinforcer
- The most powerful reinforcer should always result in correct task performance

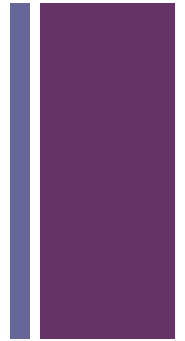
+ Pizza to the Solver!



<p>1) Find the adjacency matrix A of the graph G</p>	<p>The adjacency matrix L encodes the graph. The entry L_{ij} is equal to k if there are k connections between node i and j. Otherwise, the entry is zero. Problem 2 asks to find the matrix which encodes all possible paths of length 3.</p>	<p>Generating function. To a graph one can assign for pair of nodes i, j a series, where $a_n^{(ij)}$ is the number of walks from i to j with n steps. Problem 3) asks for a formula for $f(z)$ and in problem 4) an explicit expression in the case $i=1, j=3$.</p>
<p>2) Find the matrix giving the number of 3 step walks in G.</p>		
<p>3) Find the generating function for walks from point i to j.</p>		
<p>4) Find the generating function for walks from points 1 to 3.</p>		



+ Prompting vs. Reinforcing

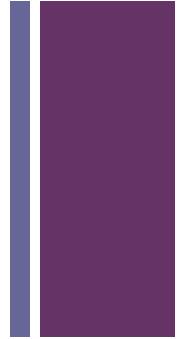


- Prompts used to assist with skills acquisition
- Reinforcement used for motivation
- If performance issue exists:
 - Determine if issue is skills or motivation based
 - Does the person know how to perform the task?
 - Determine appropriate teaching strategy

+ Motivation

- Natural features of an environment that promote desire, initiative, cooperation & other desired behaviors

+ Motivation

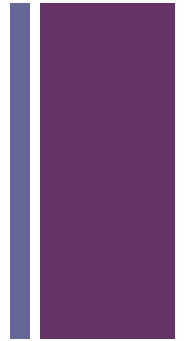


- Functionally impossible to “motivate” anyone to do anything
- Motivation comes from the inside
- DPG critical to finding a good job match
- Work & environment must be intrinsically motivating

+ Natural Reinforcers

- Reinforcers occur naturally in workplace
 - Paycheck
 - Recognition in staff meeting
 - “Thank-you” or appreciation from co-workers
 - Good review

+ Artificial Reinforcers



- Increased rate in natural reinforcers

- Artificial reinforcers
 - Increased praise
 - More frequent breaks
 - Shorter timeline for paycheck

+ Artificial R+: Considerations

- Can be a powerful training tool
- Danger for getting “hooked”
- Use systematically
- Always develop & use plan for fading R+

+ Silence is Golden

- “No News is Good News”
 - No feedback (verbal or otherwise) for steps performed correctly
 - Challenging but critically important!!
 - Not being cold or unkind... only way to support independence

+ Fading Reinforcers

- Fade systematically... same as prompting
- Goal: return to natural R+ schedule
- Systematically increase time on task between breaks or praise until back to natural level

+ Exercise: Teach in Silence

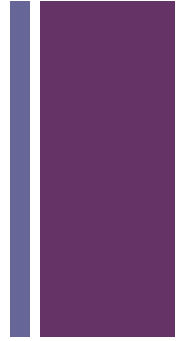
- Reform into groups of 3
- NT begins teaching, supported by ES
- Use prompts PRN according to hierarchy
- DO NOT SAY A WORD!!
- Work for 5 minutes, then switch
- Repeat until all members have been in all roles

+ Guiding Principles When Teaching

- Teach with a minimum of Conversation
- Save Verbals for Reward
- The task is the Reward
- Teachers Use Powerful Informing Strategies
- Mistakes indicate a teaching error
- Try Another Way

+ What to Do if Training Strategies Aren't Enough

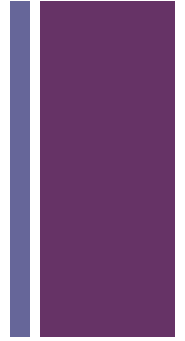
- Adapt or Modify Task
 - Visual or written cues
 - Photographs
- Negotiate Changes
- Negotiate Partial Assistance



“If you don’t know where you are going, you might wind up someplace else .”

- Yogi Berra

+ Hooray!



Questions??? Comments???

THANK-YOU!!!

