



2014

National Autism Conference

August 4, 2014
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The A-B-C's Of ADLs



Funny Thing Happened...

- Solidified What It Takes To Manage The Rigorous Course Of Daily Life (And Not Kill Someone)
- Passions: Related to ADLs
 - Notion of Privacy & All It's Permutations
 - Impact on Socialization & Social/Sexual Development
 - Vulnerability To Victimization (including Bullying)
 - Age-Typicality & Trajectory
- Not So Much...
 - Primary Barriers Due To Physical or Motor Impairments
 - IMP!! But Warrants OT Consult, Collaboration, Services
 - *Refer: Amy McGinnis' Presentation (Wed, 9-12)



Activities Of Daily Living (ADLs)

- <u>Defined</u>: Routine Tasks & Activities People Do In Every Day Life At Home & In The Community
- <u>Historical Roots</u>: Rehabilitation (Medical & Physical) & Occupational Therapy
 - $\bullet \ \ \, \textbf{Primary Focus} \colon \mathsf{Aging, Chronic Illness \& Physical Disability}$
 - ADLs Dysfunctions: Activity Limitations That Restrict Participation
 - Goal of TX: Overcome Activity Limitations, Increase Function, Participation & Independence
 - TX Framework (OT): Create/Promote, Prevent/Maintain,
 *Modify/Adapt & Establish/Restore
 - *Most Commonly Used In Practice (James, 2008)



ADLs History...Conceptual Framework

- (1969) Lawton & Brody Conceptualized Function as:
- A Hierarchy Of Domains By Degree Of Complexity
 - Self Maintain Life→ Physical→ Instrumental→ Social Behavior
- First to Identify 2 Levels Of ADLs
 - (BADLs) Basic Activities of Daily Living:
 - Functional Mobility (Ambulation) & Personal Self-Care
 - (IADLs) Instrumental Activities of Daily Living:
 - Domestic & Community Activities
 - **Loss Of Independence Manifests 1ST (Aging Or Illness)
- ASD Diagnostic Criteria: Includes Social, Communication, Play & Behavior Patterns (Restricted, Stereotyped, etc)
 - Deficits in ADLs: <u>Not</u> An Inherent Characteristic Of Autism...Uhm?

Relating Conceptual Framework To ASD

PARAMETERS	Kids With ASD	Elderly, Chronic Illness
Developmental Course	Failure To Gain Skills	Loss Of Ability, Function, Skills
Progression	BADLs → IADLs	IADLs→ BADLs
Social Development	HIGHLY Relevant	Less So Vs Sustaining Life
PRIMARY OBJECTIVE	Build/Develop New Skills	Restore Prior Function
SOURCE OF CHALLANGES	Varied Range Of Deficits	Physical /Health Limitations
INTERVENTION	TEACH, TEACH, TEACH!!	Modify, Adapt, Accommodate
GOALS: Long Vs Short Term	PREPARE FOR FUTURE	Maximize Comfort, Easy Access
OUTCOME	YET TO BE DETERMINED	INEVITABLE (Relatively)



Taxonomy: BADLs For ASD

- Functional Mobility
 - Walk From Place To Place, Sustain Focus, Stay With Others, Wait, etc
- Personal Care: Hygiene & Grooming
 - <u>Intimate</u>: Bath, Dress & Undress, Toilet, Menstruation, etc. *Related: Privacy, Habits, etc.
 - Non-Intimate: Oral Hygiene, Hair Care, Shaving, *Dressing
 *Limited to: Outer Garments & Fasteners (buttons, zippers, snaps)
- Eating Skills
 - Arrange: Open/Close, Unpack/Repack, Set Up/Clean up, etc
 - · Execute: Manage Utensils, Chew, Swallow, Etc.
 - *Related: Tolerance, Pacing, Fluency, Cleanliness, Manners, etc.
- WHY These (Distinctions)...?



Taxonomy: IADLs For ASD

- · Residence/Domestic
 - Personal Space: Maintain, Pick Up & Store, Make Bed, Decor,
 - Meal Prep: Snacks, Microwave, Gather & Put Away Items, Cooking
 - Household: Trash, Pet Care, Set & Clear Table, Dishes, Laundry
 - · Daily Routines: Morning, Arrival, Evening, Bedtime
- · Community & School
 - Safe Mobility: Vehicle Transport, In Parking Lots, Sidewalks & Streets
 - Navigating Venues: Order Food, Shop, Purchase, Lines
 - Interface with Community Members
- Traverse Settings: Safety, Health, Technology
 - Technology: Communication & Information Access
 - Computer, Internet, Personal Devices (iPhones, MP3 Players, etc)
- Why These...



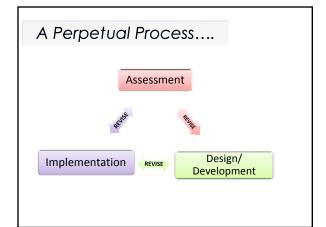
Functional Assessment: Commandments

- Purpose: Placement, Planning, Tracking, Etc
- Balance: Maladaptive & Adaptive (Strengths & Deficits)
- Motivation: Interests, Preferences, Passions
- Skill Functionality: Actual Deficit Or Willingness?
- **Developmental**: Individual & Comparative
- Impact: Social (Reputation) & Safety (Self & Others)
- Timeframe: Immediate & Projected
- Validity: Varied Sources, Measures, Contexts
- Methods: Indirect (Tier 1) & Direct (Tier 2)
- Scope/Direction: Broader To More Fine Tuned Focus



Adaptive Behavior Measures

- Widely Used Assessment Devices
 - Standardized, Norm-Referenced Measure Of Adaptive Functioning
 - Scores: Standard, Quotient/Composite & Percentile or Age-Equivalent
 - For Overall Functioning & Distinct Domains or Sub-Scales
- Benefits
 - Comprehensive: Evaluates A Wide Range of Skills
 - Comparative: Strengths & Weaknesses Of Individual & Relative to Typical Peers
- Efficient: Procedures Less Labor Intensive <u>Vs</u> Other Methods (e.g., FBAs)
- Limitations
 - Subjective: Informants' Impressions May Reflect Bias
 - General: Not Sufficient To Identify Specific Break Down Or Source
- PROCESS: Completing any formal Assessment is Just The Start...





Video: R & B Gals

- Came For the Food... Stayed For the Money
 - To Assess Generalization of Eating Skills
 - Request To Staff: No Intervention (Try your best)
- Assessment Revealed....
 - Eating Skills, LOVELY (We'll See Later)
 - Purchasing: Keystone Cops... Eye-Opening
 - Type & Degree of Deficits
 - Extent of Guidance & Prompts Staff Had Been Providing
 - Point Is... Don't Assume, ASSESS!!

Global Considerations



Global, Meaning Big Picture

- Applies Across All/Most Skill Domains (not ADLs specific) And Facets of Treatment
 - Design → Implement → Evaluate → Revise, etc
- Assessment → Design, Can't do it all!
 - How Do You Proceed? Start At The End....



What's Your Destination?

- Ask Yourself:
 - Where Should This Kid Be In 10 Years?
 - What Proficiencies Are **Most** Critical Long Term?
 - What Competencies Are Essential To Get There?



Plotting The Course

- Considerations: To Prioritize & Integrate Objectives
- Holistic View Of The Student
- Big Picture: Immediate → Future (Quality Of Life)
- Progression: Developmental & Skills (Acquisition)
- Significance: Safety, Legal & Social Ramifications



Meet JOEY (10 Years Old)

- Spends 90% Of Day On Cognitive, Academic & Language Skills, YET He...
- <u>Doesn't</u>: Eat w/o Making A Mess, Attend w/o Explicit Directives Or Wipe His Butt w/o Help From His Aide
- <u>Does Best</u>: Under Highly Structured Conditions, And Promise To Earn *Power Rangers* Video
- Is Easily Agitated: By Unpredictable Events (Change In Routine, Staff, New Activities, etc)
- <u>Often Distracted</u>: By Others Talking, Or Item Of Interest (Wanders From Group) w/o Constant Reminders...

What's Wrong with this picture??



Cultivating Dependency

- Culture Of Disability
 - Impact Of A Child's Disability On Their Quality Of Life Very Much Depends On How Others Treat Them.

*Mark Bellis, Lead Researcher WHO (2012)

- Common Inadvertent Missteps
 - Regard: Eternally Young, Less Capable
 - Practices: Ignore, Excuse, Enable, Avoid
 - Approach: Over-Rely on External Control & Direction
- Our Vision & Efforts Are Out of Sync
 - · Aspire to Quality of Life Long Term
 - Focus On Less Meaningful Pursuits Short Term



Weather Forecasting

- Prediction
 - Emergence: Adaptive Behavior Needs & Deficits
 - Trajectory: $3 \rightarrow 8$, $5 \rightarrow 10$, $10 \rightarrow 20$, etc
 - Inverse Relationship: Age & Tolerance
 - Reality: Time Is NOT On Our Side
 - Compound Exponentially: Discrepancy Norms & Abilities
- Pre-Emption: Tips & Themes
 - Building Foundations → Maximum Gain
 - Course Corrections → Avert Disaster Later
 - Typical Norms → Guide Expectations



Basic <u>Self Care:</u> Skills, Routines & Habits

- . Dressing, Bathing, Toileting
 - Disrobe & Re-dress: Within Designated Areas
 - Privacy: Closing The Door, Knocking
- Potty Proficiency & Habits
 - Wiping: 3 VS 10 Years
 - Degree of Undress: Don't Be That Guy
 - Pants to Ankles? Naked To Poop?



Social Awareness: Stay AHEAD Of the Jones'

- Basic Etiquette: Eating Skills & Manners
 - Food Stealing, Mealtime Vs Grazing, Tolerance & Flexibility
 - Expectations: Remain Seated, Regulate Pace, Neatness
- Personal Space & Boundaries
 - Grabbing, Climbing, Touching
 - Functional Concepts: Private ←→ Public (Setting, Behavior, Info)
- Prepare: Sooner Vs Later... What's coming
 - Public Urinals: Which One? Looking? Chatting?
 - Menstruation



Self-Sufficiency

- Personal Autonomy
 - Decision Making: Simple Choices
 - Responsibility: Keep Track of Your Own...Stuff
- "Community" Safety (Starts at Home & School)
 - Stay With Me, The Group, In Your Area
 - Transitions, Checking In, Notification
 - "Set Ups": Losing & Seeking Assistance
 - Internet: Safe Navigation Guidelines



Self Regulation...

- Daily, Golden Teaching Opportunities Are Predicated on The Student's Availability To Learn
- Goal Of Self Regulation Is Independence
 - NOT Us Controlling, Managing Interfering Behavior
 - Means Devoting Attention & Time To Systematically <u>Build</u> Requisite Skills For Learning
 - Otherwise Attempts To Teach Anything are Doomed

How Can We Possibly Be Effective...?



We Must



To Reach



IF We Build It...They Will Learn



Learning How to Learn

- Attention: Visual, Auditory & Combined
 - Orient, Sustain, Shift, Filter, etc.
- Responsiveness: Keenness & 1st Time
- Regulate Self Stim: Control Your Body
- Hands: Have a *Home* & Materials Management
- Brands Of Waiting:
 - Expected: Next Instruction, Teacher Busy, etc.
 - Directed: Gotta Powder My Nose
 - Request: Immediate & Future



Emotional Regulation

- Triggers: Identify & Categorize
 - Consider Respondent Components
 - Shape "Calm" Behavior: Label & Reinforce
- Emotion Meter: Identify Calm, Stress & Excitement
- Strategies & Techniques: For Coping Skills
 - Systematic Exposure: Tolerance & Inoculation
 - Relaxation, Imagery, Cog Lists
 - Local Breaks: Protocol & Permutations
 - Stop, Regroup & Resume (Not Avoid)











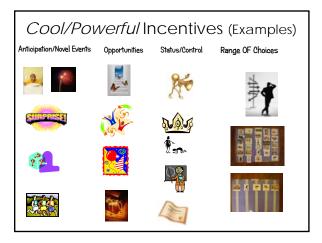
Motivation & Momentum

- Self Regulating Is HARD Work!
- To Be Available, Our Kids Need to Give A #%&\$!!
- Means We Need to Make It Worth Their While...



Incentives: Key Elements

- Reinforcement: Care & Feeding
 - Powerful: Meaningful, FUN, Unpredictable, "Fresh"
 - Cool: Age-Typical, Social, Engaging <u>VS</u> Solitary, Self-Stimulatory
- Guidelines
 - Assess/Identify: Existing Interests & Preferences
 - Be Creative: Develop New & Expand Range
 - Access: Restricted, Time Limited & Practical
- Evolve: Artificial → Naturalistic
 - Rationale Building \rightarrow Develop Intrinsic Motivation
 - Natural Consequences: (Ex) Lost Your Money, Miss Out





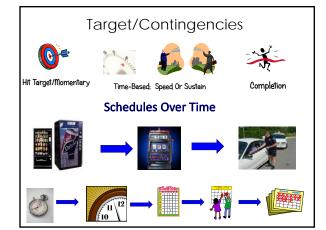
Incentives: Listed (At Participant Request)

- Novelty: Pertains To Engaging Delivery
 - Anticipation, Excitement, Surprises, A Mystery, Competition
- Opportunities: Time Limited Access
 - Freedom, FUN Group Activity, Party Area, Treasure Chest
- Status/Control:
 - Announcer, King For A Day (Minutes), Be The Teacher/Boss, Public Recognition (e.g., Best Effort Award)
- Range Of Choices: Quantity & Quality Is Contingent
 - From Master Menu: Available Options Rotated



Contingencies: Key Elements

- Target & Contingency
 - Clear Definition & Criteria (Expectation)
 - Reflected In Schedule: Timing of Delivery & Feedback
- Examples Of Schedules
 - Frequency: Each Instance→ Every X Times, etc.
 - Duration: X Seconds → X Minutes, etc.
 - Amount: Complete 1 Step→ All Steps
- Over Time: Artificial → Naturalistic, Real World
 - Schedules: Continuous → Avoidance
 - Earning Term: Brief → Extended

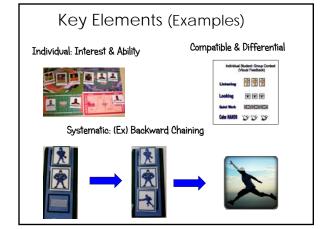




Incentive Systems

Design

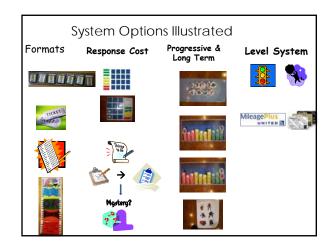
- · Individualized: Student Interests, Ability
- Differential: Delivery & Cash In
- Compatible: Context, Delivery, Targets
 - *Ex: Student In Group (Words/Symbols)
- Systematic: Implementation & Maintenance
 - #1 Mistake: Failing to Teach & Expect It Will Work
 - Initial Phases (Be Patient!)
 - Hook Em In!
 - Understand System & Expectation
 - Connect Target → Representation → Incentive
 - #2 Mistake: Setting It aside Until... There's A Problem

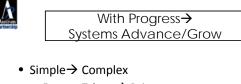




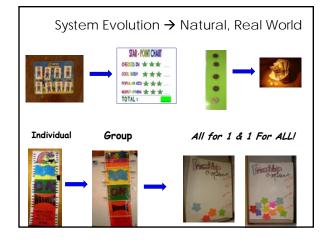
Incentive System: Options

- Formats: Tokens, Tickets, Meter, Points, etc
- Simple → Complex
 - Fill the Board...Progressive...Level Systems...
- Other Alternatives:
 - Contingencies: Pay Offs ONLY Or Pay Offs & Costs
 - Targets & System: Individual Or Group Based
 - *Examples: Meter Or Red/Green System





- Format: Tokens → Points
- Source of Evaluation: Teacher → Student
- Real World: (Ex) Monetary System
- All About Me → ALL About Us (Group-Wide)
 - Targets & Contingency: (Ex) Friendship Daisies
 - Earned or Not Through Team Effort





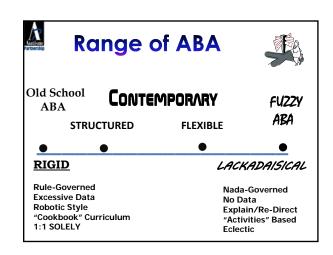
- Style: "Come Here" Vs Yo Dude, Come See Me...
 - "Everybody..." Vs Hey Guys, Check This out...
- **Diminishing Field**: "Correct" → Removed (Done!)
- Intro New Task: Initial Objective?
 - MOST Often Is Work, Consider FUN, Easy, etc.
 - WHY? History of Respondent Conditioning
- Joy Of Victory: Competitive Race



SYSTEMATIC APPROACH

INTERVENTION/IMPLEMENTATION

What Constitutes SYSTEMATIC?





Evidence-Based Interventions (Exs)

- ASD & ADLs
 - Visual Supports (Pictorial, Symbols, Words) To Depict:
 - Tasks, Activities, Routines, Schedules (e.g., TEACCH)
 - Video-Modeling
 - Behavioral Skills Training (e.g., Safety)
 - Cognitive Behavior Therapy
 - Self Management
- Support/Relate To ADLs
 - Token Economy Systems
 - Augmentative & Alternative Communication (AAC)
 - Picture Exchange Communication System (PECS)
 - More Recent: Mobile Apps (e.g., Pro-Loquo)



Other Methods: Highlighted

- Discrete Trial Teaching, Cool <u>Vs</u> NOT Cool & Teaching Interactions
 - Versatile Application: Alone Or Combined
 - Across A Range of Skills & Students (Abilities)
 - Formats: 1 To 1 → Large Group
 - *Lesser Known/Used

Discrete Trial Teaching

• (A) Instruction /Cue→ (B) Response← (C) Feedback (P) Prompt (As Needed)



COOL <u>VS</u>. NOT COOL

- Discrimination Program
 - Demonstration of "Cool" or "Not Cool"
 - In-Vivo Modeling or Role Play
 - Pictures, Video-Clips
 - Student Identification (Receptive) + Feedback
 - Student Explanation (Expressive) + Feedback
 - *Option: Role Play/Practice Necessary For Some Students

Advantages

- Fun: Watching Teachers Be Naughty & Role Play
- Efficiency: In-Vivo Is Quick & Easy, No Material Prep!
- Reveal/Convey Behavior Nuances W/O Lengthy Explanation
- Generalization: Concept Readily Transfers

Current Study: How Low Do Cool Guys Go?

Warning: Explicit Content

COOL! INOT COOL (**)







TEACHING INTERACTIONS

- Identify/Label
- Rationale
- Demonstration/Description
- Practice (e.g., Role Play)
- Feedback

Systematic Procedures



Consider For a Moment...

- How We Know/Decide To...
 - Hit The Break Vs Gun It On Yellow?
 - Eat From Our Own Plate Vs Others'?
 - Undress After <u>Vs</u> Before The Door Is Closed?
 - Order Now <u>Vs</u> Wait Until Person Ahead is Done?
 - Continue <u>Vs</u> Stop Wiping After A BM?
- Or How Do...
 - Females Know: To Change Vs Not A Menstrual Pad?
 - Expert Divers Know: A Manta Vs a Mobula?
- Answers Lie In... Stimulus Control



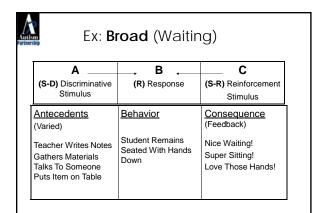
Stimulus Control: Key Points

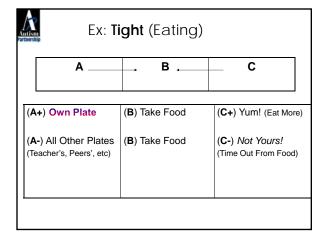
- <u>Defined</u>: Behavior Emitted By Particular Antecedents
- Acquired Thru Contingency
 - If A1 \rightarrow B1 \leftarrow C+ $\underline{\text{VS}}$ If A1 \rightarrow B (Other) \leftarrow C-
- · Understand/Explain Process of Learning
 - Prior: How Current Patterns Came About
 - Future: How To Teach New And/or Change Old/Past
- Basic Requirements To Establish Stimulus Control
 - B or Components Exist within Repertoire
 - A Discriminative Features Must Be Detectable
 - A→ B Must be C+ (Reinforced Sufficiently)

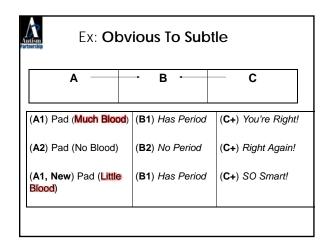


Applying Stimulus Control: Variations

- Controlling Conditions: Consider Past & Ultimate Goal
- History Working Against Your Efforts?
- (Ex) Stand Vs Sit: Toilet Seat (Years) Vs Urinal (Novel)
- Clarity: A_Vs Prompt (to be faded)
 - (Ex) Person Ahead Exits Vs Your Turn To Order
- Broad Stimulus Control (Generalization)
 - (Ex) Waiting: Variety Of A's
- Tight Stimulus Control
 - (Ex) Eating: From Your Plate ONLY
- Obvious/Salient → Subtle Distinctions
 - (Ex) Walking: Remain With 1 Person Vs A Group









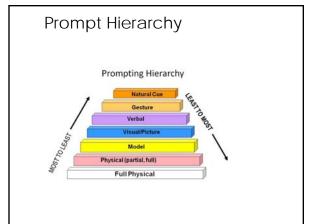
(P) Prompt

- Defined: Auxiliary Cue To Facilitate Correct Response
- · Reasons/Benefits:
 - Helps Connect A → Response
 - Build Momentum, Rate Of Success
 - Reduce Frustration, Avoidance/Escape Behaviors
- Prompt Dimensions
 - Timeframe: Indirect Or Direct
 - Specific → Non-Specific (Vague): Thinking Man Prompts
 - Modality: Visual, Physical, Auditory
 - Within Vs Extra-Stimulus: Easier To Fade
 - Draws Attention To Relevant A Features



Prompt Strategies

- Guidelines To Determine:
 - When To Provide, Fade & Type of Prompt To Use
- Commonly Used Strategies For Students With ASD, Include:
 - NNP, CTD, PTD, SimP, MTL, LTM
- Schools Of Thought:
 - Error Correction OR Errorless
 - Assessment OR Protocol/Criterion Driven
 - (Ex) The Prompt Hierarchy...





Flexible Prompt Fading (Lesser Known Option)

- Maintains ~80% Success Or Higher
- Incorporates Error Correction & Probe Trials
- Allows Teacher Discretion In Provision & Fading
 - Timing: Placement Of Prompt In Relation to A
 - Prior, Simultaneous, After (Immediate OR Brief Delay)
 - Manner: Intensity, Frequency, Position, Type, etc
- Decisions Based on In the Moment Assessment



Assessment: To Prompt or Not To...

- Is It Warranted & Why?
 - What Occurred Prior Trial?
 - What's Happening now (Between Trials)?
 - What Do You Predict Next trial?
- Students' Part
 - Degree of Effort?
 - Behavior, Attention?
 - · Signs Of Frustration?
- Instructor's Part
 - Expectation/Presentation: Clear? Confusing?
 - · Skill: Novelty, Difficulty?
 - Requiring Too Much: Break The Skill Down?



TASK ANALYSIS

- <u>Define</u>: Break Down A Task/Skill Into Component Parts Or Subskills
- <u>Utility</u>: Refine Objectives, Guide Curriculum & Measure Progress
- Development (Initial Draft)
 - Don't Reinvent the Wheel: Consult colleagues, Experts, Literature (e.g., Curriculum)
 - Record: Observe Models OR Perform Yourself
- Efficiency Vs Perfection: Devoted to Developing?
 - Reasonably Complete Draft, Must Be Probed With Student
 - Ex: Displays Preference Or Deficit You Didn't Account For



TASK ANALYSIS: Things to Think About...

- Subcomponents: Size, Number & Temporal Sequence Of Steps (Teaching & Performance)
- Social & Developmental Validity/"Fit": Language, Materials, Contextual Arrangement, etc.
- <u>Individualize</u>: Current Repertoire, Strengths & *Preferences
- *Assuming Functional, Not Counterproductive (e.g., Rigidity)
- Completeness: All REQ'D Skills/Concepts?
 - Features Overlooked Or Needed?
 - Extensions/Variation: In Response Or Conditions?
- BUT Refinement Is Always Necessary



How Did We Become So Effortlessly Proficient...

- Daily Activities
 - Driving Home
 - Washing Our Hands
 - Preparing A Favorite Meal
 - Using An ATM
 - Purchasing Groceries
- Like Stimulus Control, Behavioral Chaining Is:
 - A Phenomena That Occurs Naturally
 - A Tactical Tool/Procedure For Teaching ...



Behavior Chaining

 $A \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A) \rightarrow$

- <u>Defined</u>: Specific Sequential Steps (Links) Performed As A Cohesive Unit (Chain) Is Reinforced.
- How It Works:
- Each Link serves a Dual-Function...as an A & C
- Completing 1 Step Serves As The A For The Next Step
 - (Ex) Vending Machine: Deposit Coins → Select Item→ Item Drops→ Open Bin & Retrieve
 - More Complex Example....



CHAINING Application

EX: Analysis Of Stuffing

 $A \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A) \rightarrow Etc...$

FOOD Pick Up Fork & Load

What's the Problem?

EX: Chaining to Regulate Pace

 $A \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A) \rightarrow B \leftarrow C(A)$ Etc...



Chain Composition:

Elements To Consider

- Impacts Rate & Accuracy: Learning & Performance
- Length: (Ex) Wash 1 Cup VS 20 Cups
- Difficulty/Effort: (Ex) Shore VS Boat Entry
- Complexity: Uniform VS Diverse Links
 - (Ex) Shredding VS Filing Documents
- Organization: Dependence & Sequence Of Links (Ex)
 - E-mail (Open → Read → Reply) <u>VS</u> Internet (Surfing For Info)
- Intrinsic Feedback/S-R+ (Within A Chain)
 - (EX) Shower Gifts: Opening VS Wrapping



Forging A Chain: Considerations

- Ideally Take Advantage of Already Established Links
- Variations: Direction & Starting Point
 - · Serial: Forward, Backward
 - Simultaneous: Entire or Subsections Taught Concurrently
- Combine With Other Procedures
 - Reinforcement, Prompting, Shaping
- · Chain Integrity: Building & Testing
 - (Exs) Interruption, distractions, "problems", etc

