




## Communication Supports for Problem Behavior

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CIRCA  
 CENTER FOR INTERDISCIPLINARY RESEARCH  
 AND COLLABORATION IN ACTION

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## Problem Behavior and ASD

- Problem behavior is not uncommon in individuals with ASD because:
  - They have difficulty processing social, language-based, and transient information
  - They are more comfortable in situations that are highly predictable and/or unchanging
  - They may have co-occurring anxiety, affective/mood, and/or attention disorders
  - They learn exactly what they are taught, including how to get what they want/need by engaging in problem behavior

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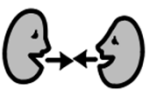


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## AAC and Problem Behavior

- There is a clear relationship between problem behavior and communication
  - people communicate in the most efficient and effective manner available to them at any given point in time

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## AAC and Problem Behavior

- Many types of AAC supports are possible; today, we will focus on three
- Augmented input supports to aid comprehension
  - Visual and digital schedules
  - Visual contingency maps
- Augmented output supports to aid expression
  - Functional communication training (FCT)

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## Visual Schedules

- Used to organize sequences of time or steps in a task
- Real objects, photographs, picture symbols (like Picture Communication Symbols, PCS), or written words can be used to represent the activities or environments
- VERY useful for transitions between environments and/or activities for many individuals (Bopp, Brown, & Mirenda, 2004)




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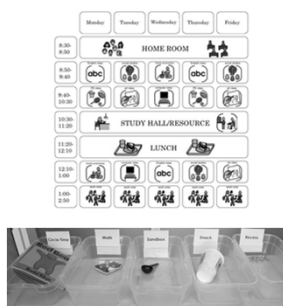
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## Between-Activity Schedules



Choiceworks for iPad




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## Within-Activity Schedules



First-Then for iPad

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## Visual Schedule Research (Lequia et al., 2012)

- Reviewed 18 methodologically strong studies in which VAS were used to treat problem behavior
- 43 participants with ASD, ages 3-18
- Calculated Non-overlap of All Pairs (NAP) to evaluate strength of the evidence
- Target behaviors addressed:
  - Self-regulation: 4 studies; NAP  $M$  .96
  - Independence: 3 studies; NAP  $M$  .94
  - Transitions: 7 studies; NAP;  $M$  .95
  - Play: 4 studies; NAP  $M$  .97

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## Lequia et al. (2012)

- Positive outcomes were reported for 90% of participants in school settings and for 100% at home
  - All participants described as “nonverbal” or with severe communication deficits had positive outcomes
- No trends regarding the type of symbol
  - Photographs
  - Line drawing symbols
  - Video-based

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## Conclusion

- “Regardless of ASD severity and comorbid diagnoses, the majority of participants (95%) demonstrated decreased challenging behavior...” (Lequia et al. 2012, p. 487)



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## FCT/AAC



- Functional communication training (FCT) involves “both the assessment of the function of the challenging behavior and the teaching of a more appropriate form that serves the same function . . .” (Durand, 1990, p. 23)
- FCT/AAC interventions are those in which the “more appropriate form” involves AAC (Mirenda, 1997)

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## Ron (Durand, 1999)

- Age 9 1/2, had autism and “severe mental retardation”
- Spoke a few words, out-of-context
- Very aggressive; hit teachers, other students, family members
- Variety of other interventions had failed (DRO, DRI, time-out, restraint, etc.)

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## Assessment

- Functional assessment conducted to identify function of problem behaviors
- Appeared to be attention-motivated -- Ron engaged in the behaviour to get attention from his teacher or other adults



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## Intervention

- Provided with an SGD that was programmed to make a request that would result in attention:



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## Instruction

- Instruction provided during regular classroom routines that were appropriate to the message being taught
  - graduated guidance prompts and fading used to teach
  - brief attention (in the form of "help") was provided when communication device was activated

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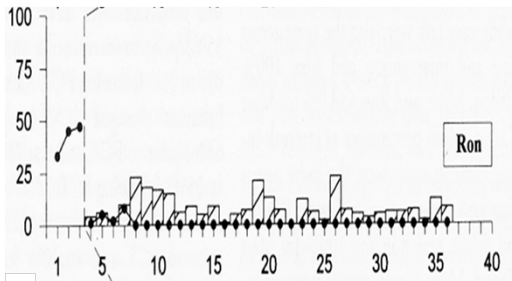
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## Results



## Key Requirements for FCT/AAC

- Identify the specific function of the problem behavior
  - Tangible: “I want item/activity”
  - Attention: “I want social interaction”
  - Escape: “I don’t want item/activity/person”
- How? Functional behavior assessment (e.g., O’Neill et al., 2015)

## Key Requirements

- Identify a related “message” that will be acceptable to the people and in the contexts where it will be used
  - e.g., “Pay attention to me” vs “Would you help me with this?” vs. “Can I help you?” vs. “Am I doing good work?” for attention-motivated behavior
- How? Input from and negotiation with parents, teachers, etc. in the settings where the behavior occurs

## Key Requirements

- Identify an AAC technique that will enable the person to communicate the “message” to both familiar and unfamiliar partners
  - Manual sign/gesture
  - Object/picture symbol
  - Written word
- How? Symbol assessment, input from speech-language pathologist

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## Key Requirements

- Teach use of the new communicative behavior in context
  - Look for “whispers” of the problem behavior
  - Provide “clean” instruction *before* the problem behavior occurs
  - **Be sure the new behavior results in the same (desired) consequence!**

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## FCT: Matt (Mirenda, 2004)

- 19 years old, lived at home at beginning of intervention, integrated in regular high school classes with support
- Some speech (1-2 word phrases) but not when stressed
- Behavior: severe aggressive outbursts toward family, support staff over several years
  - at least one episode per week serious enough to cause bruising

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## Assessment

- Functional assessment to determine the functions of the behavior
  - tangibles: "I want ----": Matt wanted something (food, activity) and had no way to ask for it; aggression led to "20 questions"
  - escape: "I don't want ----": Matt was offered a food or activity and did *not* want it
  - escape: "I don't understand": the schedule of activities was unpredictable

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## Intervention



- Picture Communication Symbols were provided to
  - clarify what choices were available
  - enable Matt to initiate and make choices, and thereby reduce the frequency of having to tell him what would happen next
- Within- and between-task visual schedules were also provided to increase predictability




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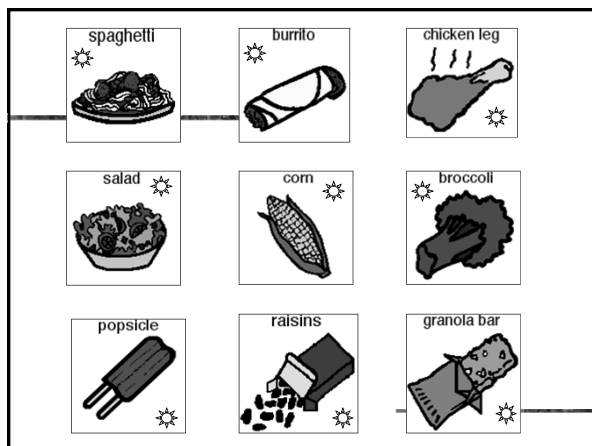
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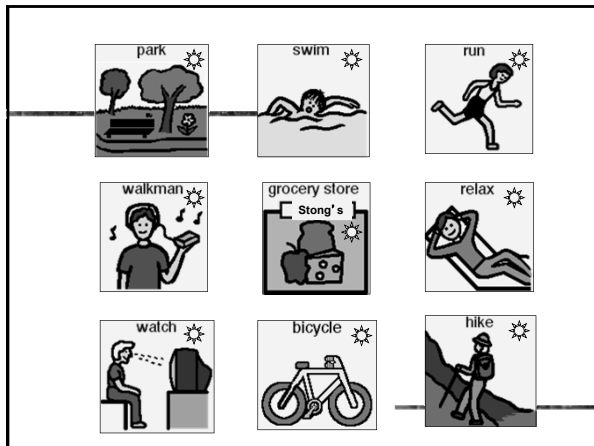
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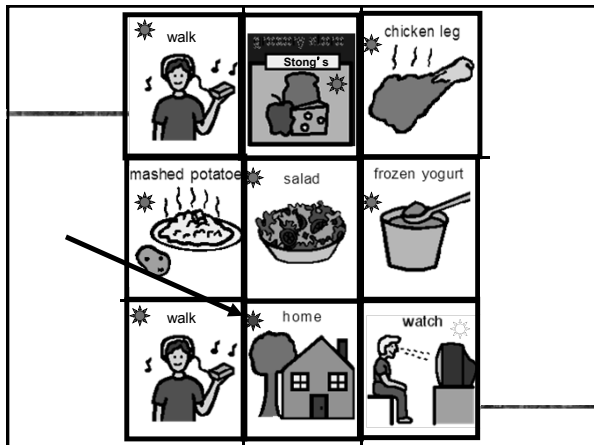
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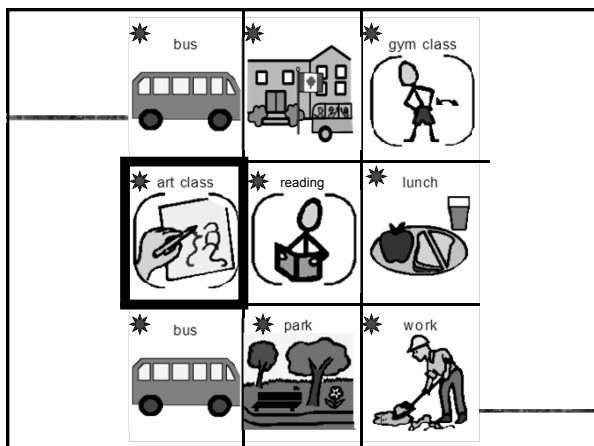
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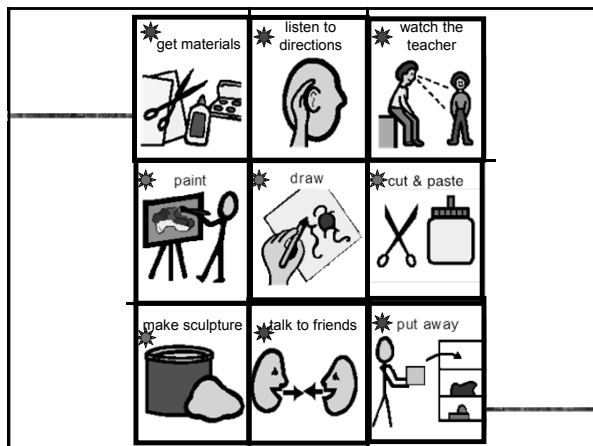
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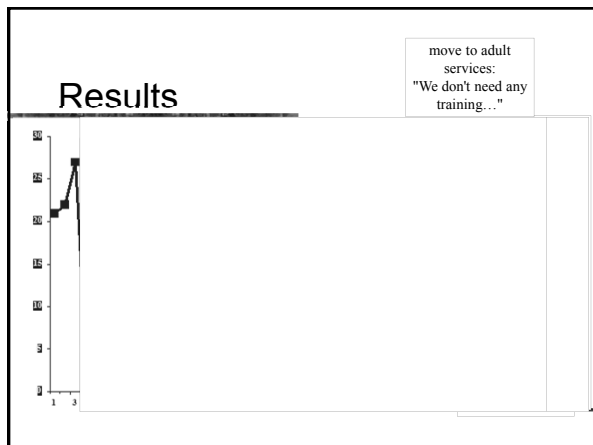
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### Contingency Maps

- Goal: to provide information about the "current" (i.e., problem) and "desired" pathways related to problem behavior
  - The aim is to help the individual understand what will happen if he/she engages in the behaviors associated with the "desired" pathway!

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## Contingency Map

- A contingency map depicts
  - The antecedent that typically triggers a problem behavior 
  - The problem behavior 
  - The consequences that will follow if it occurs 
  - A functionally-related (desired) alternative behavior 
  - The consequences that will follow if it occurs 

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## Marco

- 5-year-old boy with autism, in kindergarten
- Communicated primarily with gestures (and problem behavior)
- PBs: tantrums (crying, running away, screaming, hitting)
  - One day, ran away from his aide at school, was hit by a car and broke his leg
- Trigger: loud, sudden noises (crying children, sirens, alarms, motorcycles, etc.)
- Function: escape from unpleasant noise

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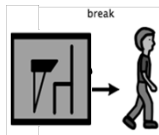
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## Intervention

- FCT: Teach Marco to
  - cover his ears with his hands if he hears a loud noise, and
  - ask to leave the environment by signing or pointing to a “break” symbol
- Aide provided verbal, physical prompts to teach
- No change in Marco’s behavior after 2 weeks




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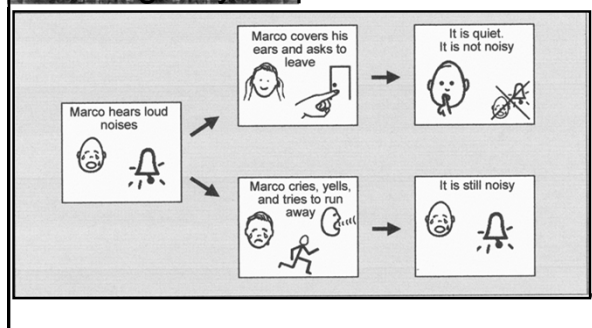
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## Contingency Map




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## Result

- Shown to him at the beginning of the day and every 1-1.5 hours thereafter
- Immediate, dramatic increase in desired behavior and decrease in problem behavior
- Lasted into the next school year




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## Punchline

- AAC interventions play a key role in interventions for problem behavior
- Need to base communication supports on information from functional behavior assessment
- Need to individualize for easy access and minimal learning

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