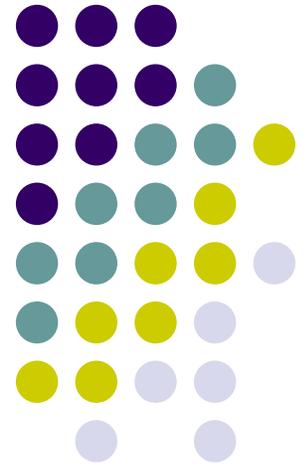


# The Use of TAG for Children with Autism

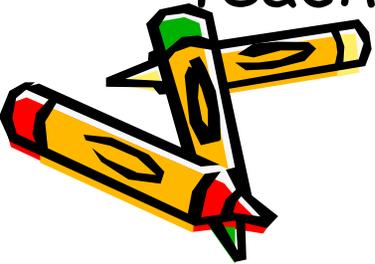
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# ABC School

- ABC School uses reinforcement strategies to teach children with Autism specific behaviors. For example, the behavior of touching an object "cup" is reinforced when performed in response to the cue "Touch Cup."
- Behavior is reinforced with edibles, tangibles (toys), activities, and/or social praise.
- Reinforcement must be immediate, contingent, consistent, and appropriate to be effective in teaching behavior.



# TAG as a Marker

- The use of TAG (teaching with acoustical guidance) allows for a specific behavior to be marked consistently, and immediately.
- This type of acoustical marker is more immediate feedback than other types of edibles or tangibles given to reinforce behaviors at ABC.

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# TAG is a Language Free Marker

TAG Teaching does not rely on language to mark when a behavior is correct. There is no need for descriptive praise or verbal feedback of any kind.

Teaching children with Autism receptive and expressive communication can be challenging.

The teacher relies on their speed and consistency in reinforcement delivery to train behaviors. This is often paired with descriptive praise; “Nice job touching cup,” or corrective feedback; “No, try again.”

TAG simplifies this process by eliminating the need for language use of any kind.

When you hear a TAG “click” the behavior being performed is acoustically identified, sending a “Yes” message to the brain which speeds up the muscle learning process.

The end result is that a child who has Autism does not have to understand receptive communication to know that the behavior is right.

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# The TAG Point

- The TAG Point is the behavior that will be acoustically marked.
- It is important to select a single element of a behavior to mark acoustically as the behavior is being performed.
- The TAG point is always a behavior, it is never a response you do not want to occur.



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# The Use of TAG Phraseology

In teaching specific behaviors it is critical to ask for the behavior in the positive.

Ask for the behavior you want, not the behavior you don't want. If the behavior I wanted out of a child was good eye contact my TAG Point might be "The TAG point is, "Look at Me", not "The TAG point is Don't look down"

When training behavior using TAG the trainer will state the desired behavior as "The TAG point is..."

For children with Autism who have significant communication impairments, it may be necessary to simplify the TAG Phraseology to one word, or even the presentation of a physical object to evoke a specific behavior.

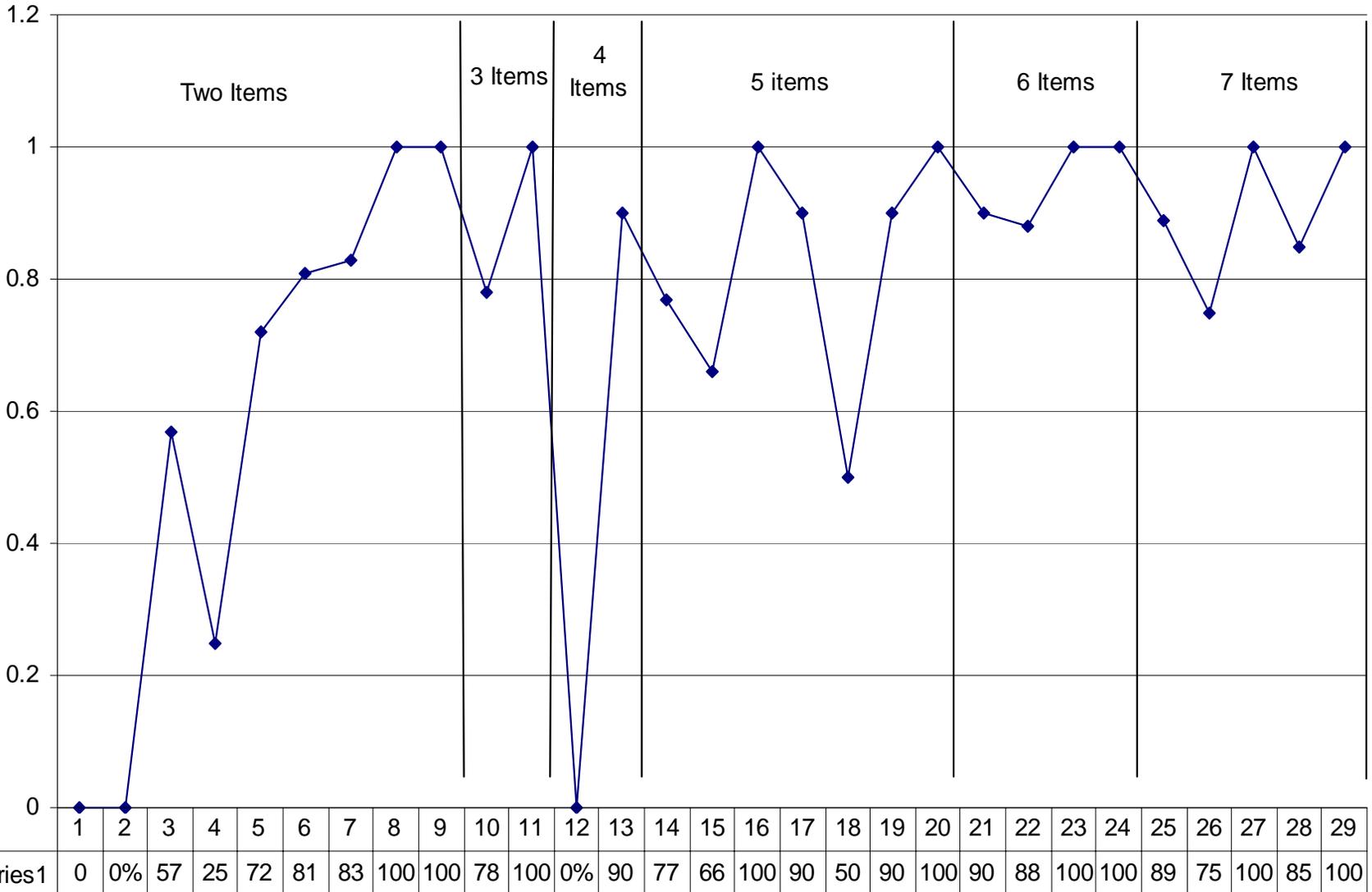
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# Sammy: The use of TAG in Matching

TAGGER: Kerry Madden

- ❖ Originally my TAG point was going to be eye contact with the speaker. However this all changed when I was watching Sammy do a lesson on matching.
- ❖ Sammy has been working on 3D-3D matching since February of 2006
- ❖ Four months into training he has mastered 7 targets.
- ❖ My goal was to see how I could speed this learning process up.

# Sammy Matching Baseline



Series1

1	0	0%	57	25	72	81	83	100	100	78	100	0%	90	77	66	100	90	50	90	100	90	88	100	100	89	75	100	85	100
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Sessions

# Baseline Observations for Sammy

- Sammy seemed to be a strong matcher.
- When trying to master off targets, Sammy had a hard time attending to the task, and often did not look at the matching materials.
- Sammy was often out of his seat, or grabbing at the materials.
- I decided to TAG Sammy's eye contact with the presented item he needed to match.

Note: Before taking this baseline video I had jumped the gun, and tagged Sammy's eye contact for 5 trials with 100% accuracy in matching.

# Baseline Observations

- What I found was that the effect of the TAG had been immediate and Sammy's eye contact with the presented materials had already changed after five TAGs!
- What Now?!

I had no usable data demonstrating Sammy's poor eye contact before TAG.

- Perhaps this was a value added TAG point!
- Could I show improvements in Sammy's acquisition rate?
- Or in his latency of response?
- Did he attend better to the task?

# TAG Session 1 Observations

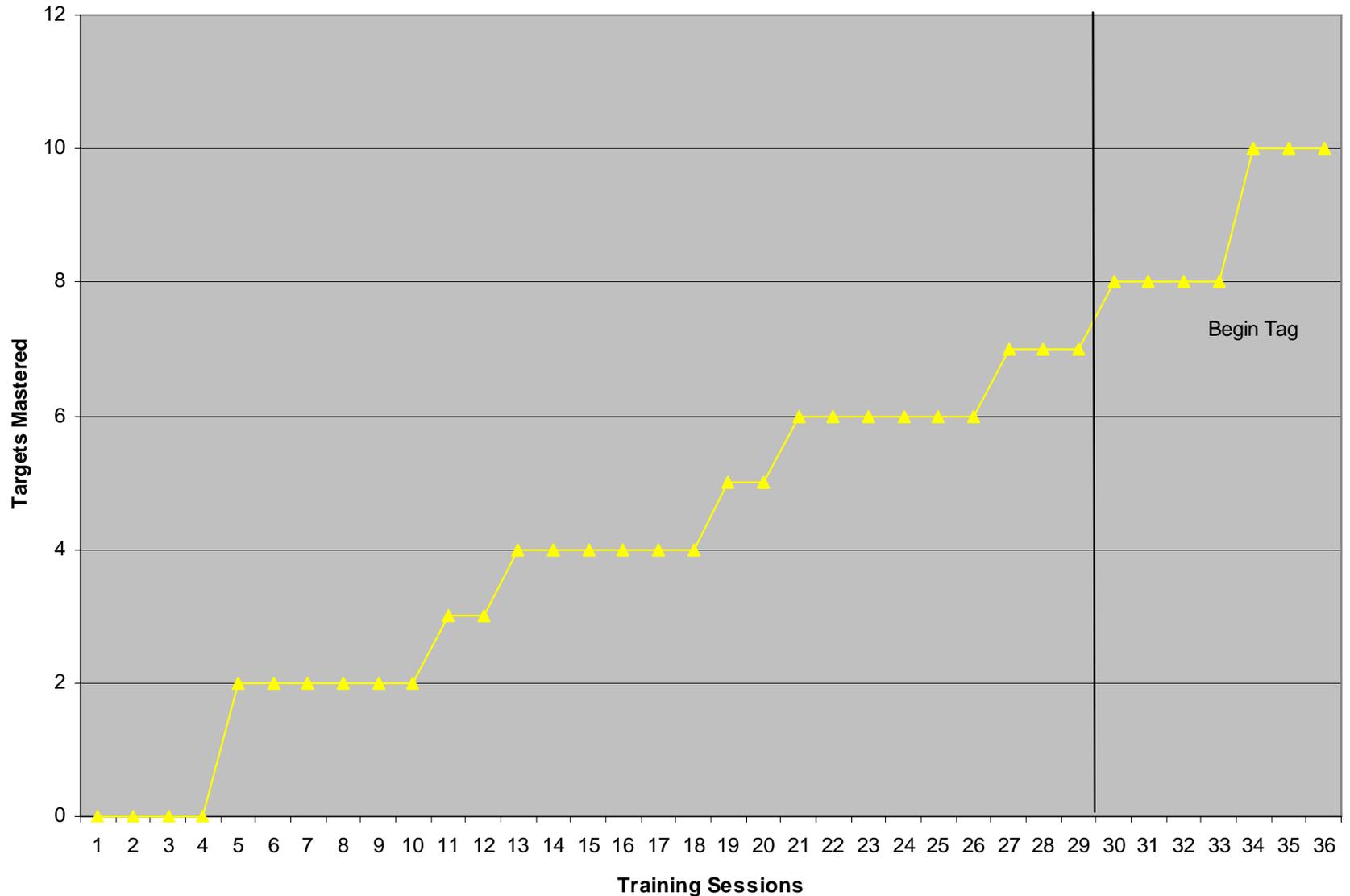
- Already TAG had an effect on Sammy's Latency in responding.
- Once Sammy heard the TAG for good eye contact with his matching material, his matching time sped up considerably.
- He still was showing much improvement in sitting for a longer period of time.

# Effects of TAG for Sammy

- Increase in correct matching response from 72% without TAG to 94% with TAG.
- Latency of response time decreased from 3 seconds per trial to 1.57 seconds per trial.
- Leaving his seat went from 5 times without TAG to two times with TAG
- Session time went from an average of 48 seconds before needing to leave his seat to 88 seconds.

# The Effect of TAG on Sammy's Acquisition Rate.

Sammy's Acquisition Rate

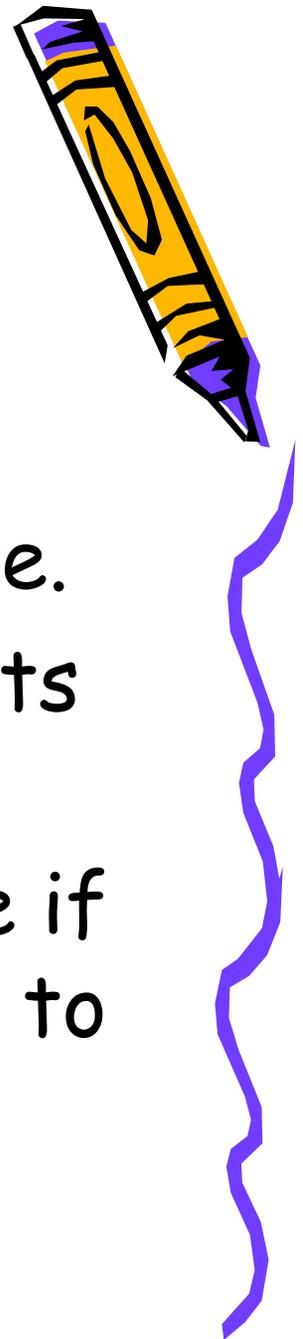
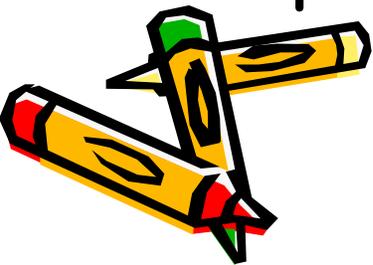


# TAG and Acquisition

It appears that TAG made a slight increase in Sammy's Acquisition rate.

Increased from .24 to .42 targets per session.

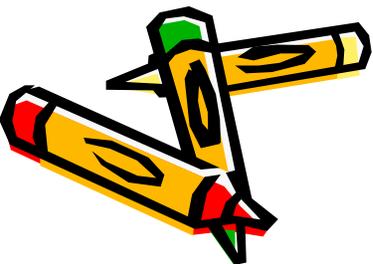
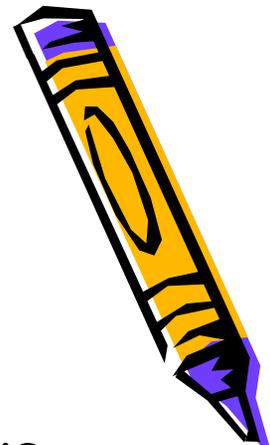
More data needs to be taken to see if Sammy's Acquisition rate continues to improve.



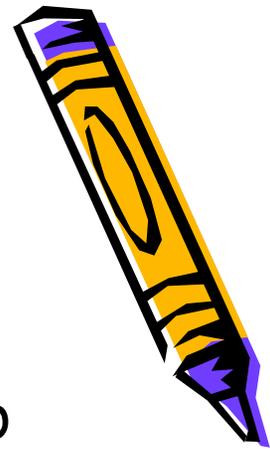
# Darrell's Expressive Object Labels

TAGGER: Kerry Madden

- With Darrell I used TAG to teach expressive object labels.
- The TAG Point was the presentation of the specific item for Darrell to Tact.
- The lesson began by teaching Darrell to tact two items, a hat and a ball.
- So far Darrell's performance was inconsistent. When attempting to master the lesson, Darrell would not perform at 80% to meet the mastery criteria.



# TAG Session Observations



- After TAG sessions began, Darrell was able to master four targets.
- It is unclear if the increase in acquisition rate was due to the use of TAG or if it was dependent on having a powerful reinforcer to create the motivation to perform the task at the level required for mastery.
- Observational data showed that the topography of the response improved when TAG was used.
- Another effect was that TAG was a useful marker to indicate the precise correct response in the natural training environment.



# TAG and Amanda

TAGGER: Kerry Madden

- I used TAG with Amanda to shape two separate behaviors: vocal imitation, and conversation questions; a lesson she was having trouble mastering.
- When shaping vocal imitation it is very similar to playing a TAG game where the player does not know the TAG point they are striving for.
  - Amanda showed big improvement in her pronunciation, and was able to generalize this to her lessons.
  - The first time I used TAG with Amanda was to shape the way she said my name.
  - We had been trying to shape her to say “Kerry” since 3/30/06.
  - Her starting approximation was “Kay-Kay”

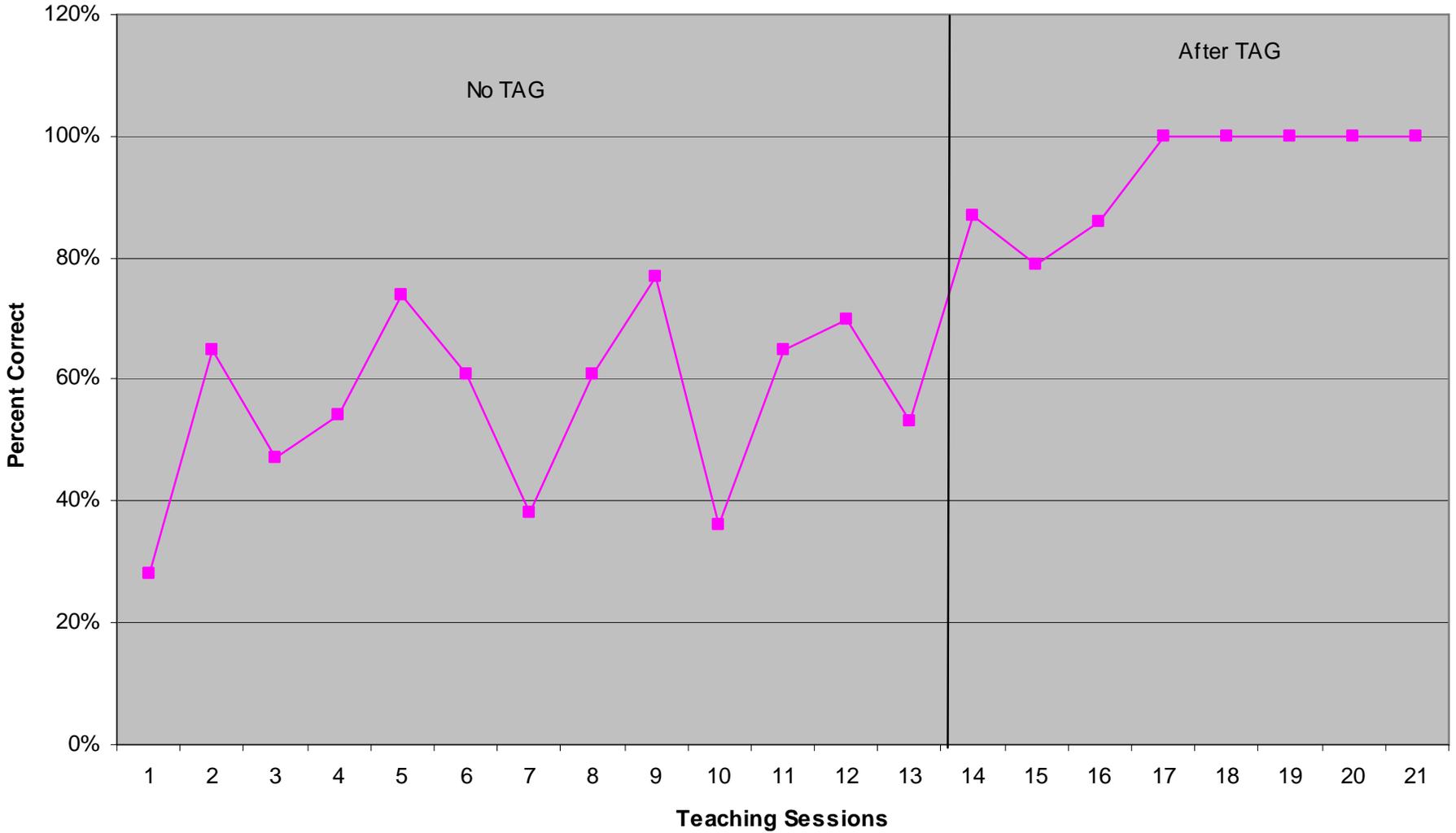
## **Skill Breakdown and Shaping Plans: Shaping Kerry**

- **Baseline-** I attempted to shape Amanda's vocal approximation using edibles and social praise.
- On three separate occasions I worked with Amanda intensely for 5-10 minutes in addition to the shaping she was getting at her daily station lessons.
- Her best approximation after each session was KeKay. Amanda also would revert back to her starting approximation of Kay-Kay, at the beginning of each training session.
- **After one 5 minute session with TAG on April 24<sup>th</sup>, Amanda was able to say Kerry.**
- The TAG points I choose to use were the same I had tried to use when shaping without TAG; "r", "ree", "er", "erry", "Kerry"
- I immediately noticed an improvement in Amanda's focus. She would stare at my mouth and I could tell she was working so hard to get the muscles in her mouth to just the right position. Once she heard the "click" she was able to put her mouth in the same position every time.
- The end result of just one 5 minute session with TAG was that Amanda was able to say "Kerry" every time someone would ask her my name.

## Using TAG to Teach Conversation Questions

- In thirteen training sessions, Amanda had not performed above 77% accuracy in discrimination between her two target questions:  
“What’s your name?” vs. “How old are you?”
- The first time TAG was used in session 14 Amanda performed at 87%, she then performed at 79% at station without the use of TAG (session 15).
- Amanda’s vocal approximation of her name had also improved with TAG from Nanda to Ah-nanda.
- TAG was used from session 16-21: Amanda had 100% accuracy with all her target questions.

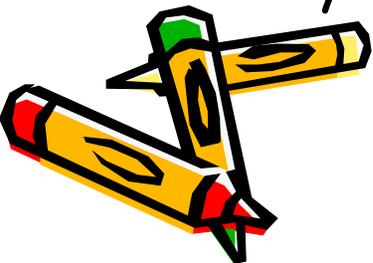
# Amanda's Conversation Questions

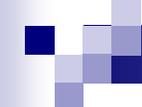


# Shaping a New Target



- On the 17<sup>th</sup> training session I spent the first two minutes using TAG to shape Amanda's next target; "Where do you go to school?"
- Amanda's first approximation was "c-scoo", Amanda's last approximation was "ABC School"
- I then prompted Amanda's next TAG point:  
Kerry-"Where do you go to school- ABC school"  
Amanda repeated "ABC School," which I Tagged.
- She then went on to have 100% accuracy with all three questions including her new target after only one prompted response!





# Other Positive Effects for Amanda

TAG proved to be a useful tool in teaching difficult targets.

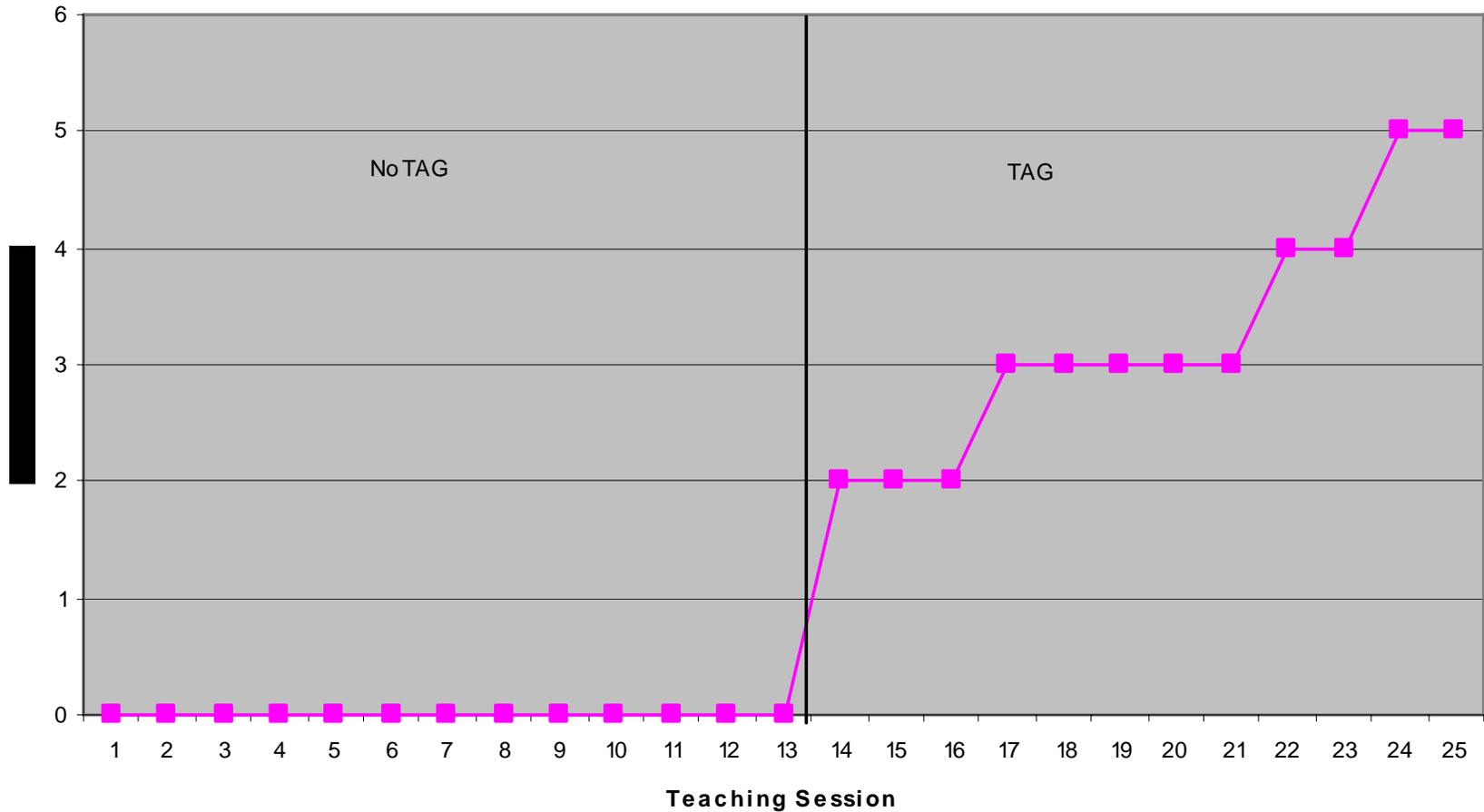
Amanda had mastered her Dad's name and her school after only one prompted response.

Amanda's new target "Miraya" (Her mother's name.) Was proving difficult to teach.

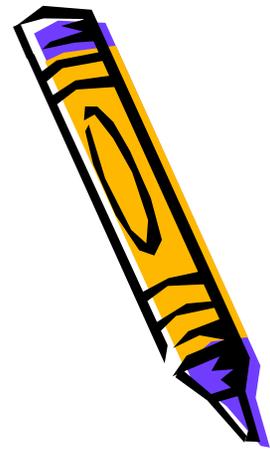
Without TAG the trainer had been using tactile cues to get her to say "Miraya"

# Amanda's Acquisition Rate

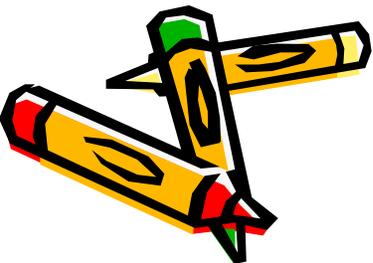
Aquisition Rate



# Acquisition Rate Improvements



- The use of TAG clearly increased Amanda's Acquisition Rate.
- TAG also demonstrated a slight increase in Sammy and Darrell's Acquisition rate but not enough to claim that this was the effect of TAG and not repeated exposure to the lesson using typical reinforcement strategies.



# Nathan: Reason for sample

TAGGER: Robert Hanson

- ❖ Nathan has had little success with vocal/functional communication having only recently showing improvement in discrimination for communication modality (PECS).
- ❖ Nathan has a history with singing and or humming small phrases of songs although the vocalizations have decreased substantially and are seldom produced. Due to lack of consistent vocal ability, vocal communication is no longer current target.
- ❖ Nathan's acquisition rate is slow and maintenance of new targets must be systematic or the skill quickly falls out of repertoire.

# Nathan: The use of TAG in Vocal Imitation

TAGGER: Robert Hanson

- ❖ I chose imitation of the word “No” as a target due to the past experience Nathan had with vocal communication and the wide range of sounds he spontaneously produces.
- ❖ Vocal target of “No” is complex in having two sounds (consonant/vowel combination) but simple enough to TAG approximation.
- ❖ GOAL: To see if through the use of TAG, consistent speech production with one specific word, can be accomplished.
- NOTE: Nathan had previously been exposed to TAG during Non-vocal Imitation lesson.

# Baseline Observations

- During baseline, due to little or no mouth movements when SD was delivered (“No”) I had little success with imitation of any mouth movements or vocal approximations that were specific enough that reinforcement led to discrimination of target behavior.
- Troubleshooting solution
  - Identify smaller attempts at vocalization (any mouth movements/breathy sounds/utterances) and shape to final articulation goal through the use of TAG.

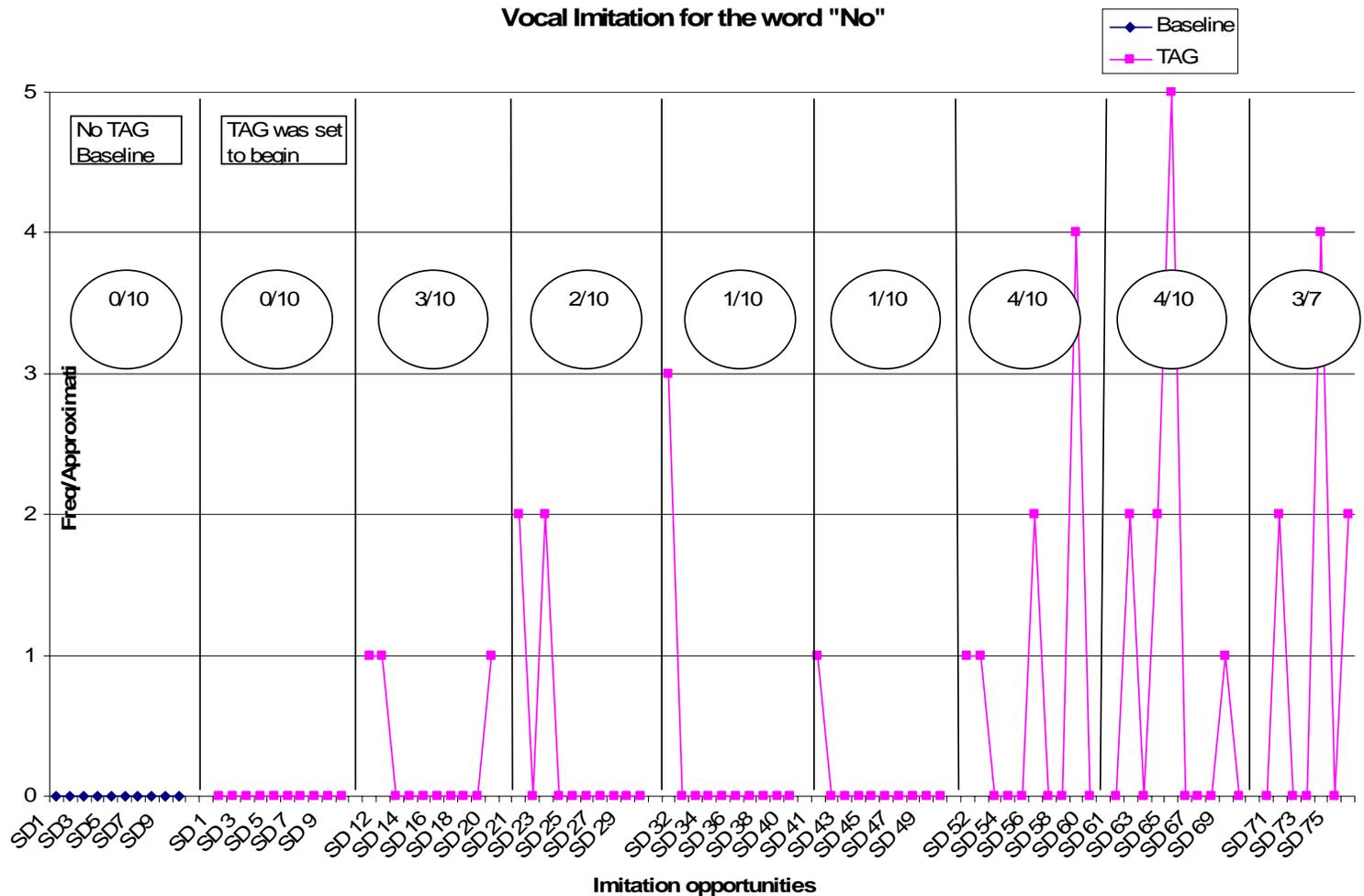
# DATA Review

- After review of video there were a number of initial TAG points that were missed early on in the training that may have proved useful in shaping closer approximations.
- Sessions lasted from 3-6 minutes dependent upon rate of successes.
- The data was broken into 9 sessions to assist in classifying attempts. Vocal approximations were evaluated using a Likert Scale between 1 and 5 (with 5 being the closest) to the end goal of “No”.

## Findings

- When TAG was implemented Nathan’s rate of responding was 0% responding within the first 10 trials. The first TAG occurred on the 11<sup>th</sup> trial, with a latency period of 5 seconds before responding.
- At the end of the last 10 trials the rate of responding had increased to 40% with a latency period of 1.5 seconds (a 30% decrease in latency).

# Nathan's acquisition rate with the use of TAG



# Shane: Reason for sample

TAGGER: Robert Hanson

- ❖ Shane gravitates toward novelty within his control and will commonly seek out new interactions/relationships.
- ❖ Shane has a large vocabulary but very little functional communication. Swearing/yelling/tantrum behavior are common modalities to obtain access or to escape/avoid non-preferred activities.
- ❖ Although Shane possesses a large vocabulary the comprehension and discrimination of instructions commonly leads to behavior excesses.
- ❖ When exposed to TAG in the classroom setting Shane began engaging in opposing behaviors then what he and his peers were being tagged for.
- ❖ Shane has a limited amount of interests that he engages in appropriately, possibly do to his inability to get specific wants and needs met.

# Shane: The use of TAG to increase compliance

TAGGER: Robert Hanson

- ❖ Initial TAG point was eye contact (a deficit during communication), but during baseline as the TAG point was identified to Shane, it quickly became clear that this was a non-preferred instruction. Due to this the TAG point was switched to the responding of simple instructions as a means of gaining compliance for smaller units of behaviors before re-establishing the original TAG point.
- NOTE: Shane had previously been exposed to TAG over a year ago and during classroom activities before TAG point was identified.

# Baseline Observations

- During baseline, compliance was dependent upon Shane's motivational state. Simple SDs/questions such as "Come here", "My turn", "Hand me/Give me item", "Do you want a turn?", etc. was met with a repeat in the instruction, continuation in current activity, profanity, or immediate escalation to tantrum/aggression behaviors. Repeating of the initial SD (Discriminative Stimulus/Instruction) 2-4 times was required to obtain compliance.
- Troubleshooting solution
- Due to the inability to establish instructional control with simple instructions TAG was presented to Shane as a game activity. With the initial tagging of preferred activities as a way to draw him in to TAG session.

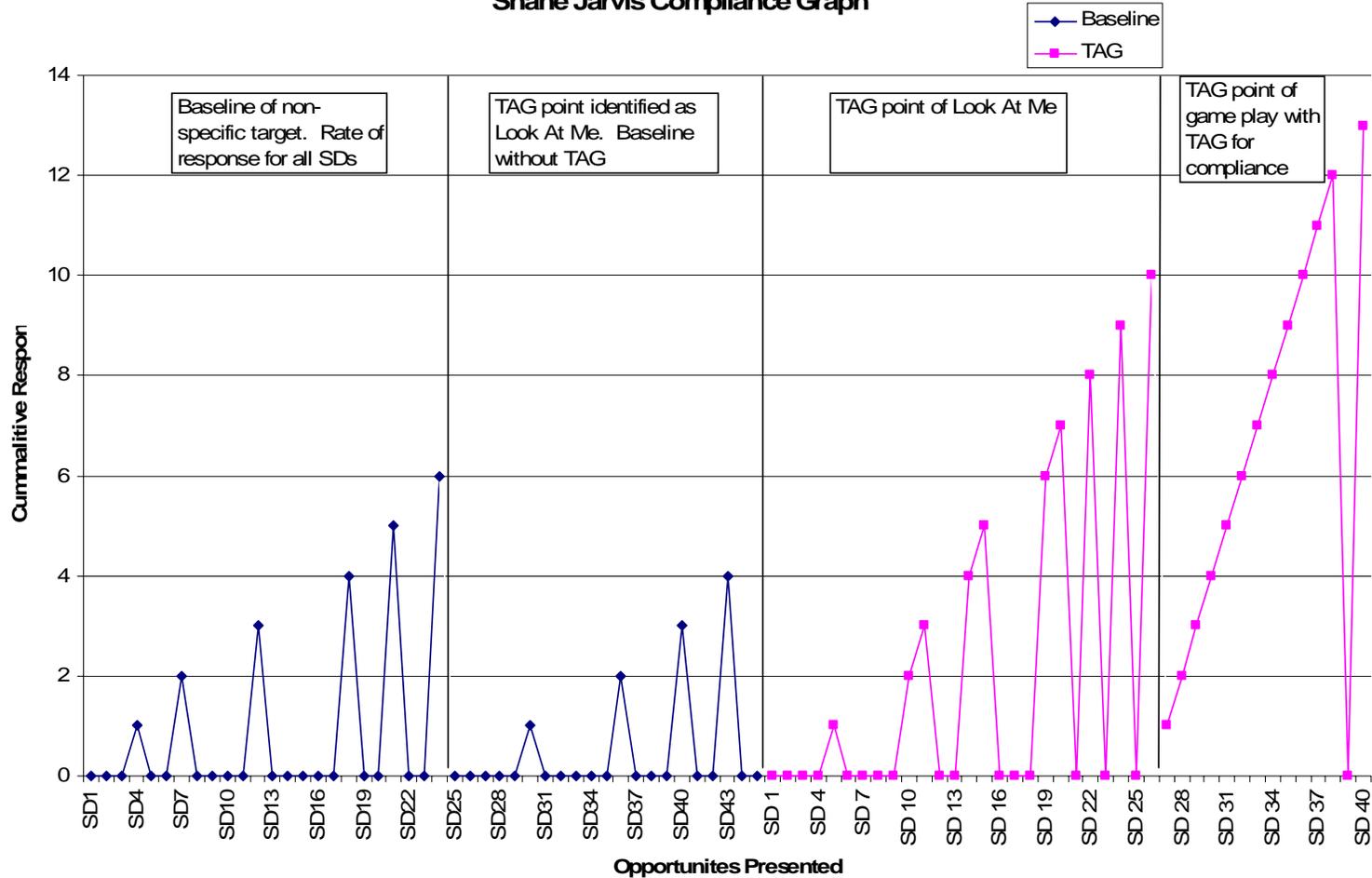
# DATA Review



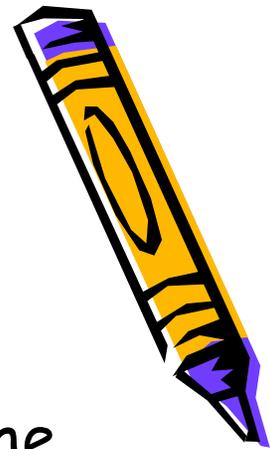
- Compliance for Shane increased with the TAG point look at me. When the TAG point was for any compliance there was a dramatic increase.
- Observation of TAG implementation (through game play) resulted in an increase in attending and responding.
- Shane frequently will request to play with the tagger when insight.

# Shane's compliance rate with the use of TAG (Cumulative)

Shane Jarvis Compliance Graph



# Implications for the Use of TAG at ABC School



Overall, observation of TAG implementation in the school environment proved to have many positive effects.

- ✓ Student Focus Increased- Amanda, Sammy, Shane, Nathan
- ✓ Behaviors were more easily and accurately reinforced in the natural training environment- Darrell, Amanda, Shane
- ✓ Response Latency Decrease- Sammy
- ✓ Session Length Increase- Sammy, Darrell, Nathan

