VSM: Video Self-Modeling

for Children with Autism/PDD

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Definitions

Self-Modeling ó Allowing people to view themselves performing a skill or task that is slightly beyond their present ability. = **All positive**

Self-Observation ó Viewing oneself performing at present levels ó **good, bad, ugly** ó e.g. watching game films.

Two Forms of Self-Modeling

Dowrick, 1977

Positive Self-Review ó Reinforcing already known skills to improve performance/ fluency ó sports applications - reviewing interview videos

Feedforward ó Video of skills not yet learned. Introducing a new skill or behavior. In developmental sequences it would be one step beyond present functioning.

Also applies to õreplacement behaviorsö for maladaptive behaviors.

Two Prerequisites
Maybe

Self-Recognition

- When: Most children between 15 mos. & 2 years. Children with cognitive or social impairments??

- Smiling & Hamming it up ó the indicator

Attention to video

How to Capture Footage for Feedforward Videos

Imitation ó Great for language. Have children imitate advance language skills ó increased utterance length, new morphemes, etc.

Role Play ó Fun! Act out behaviors in full Hollywood fashion. Great for social skills for children who can follow directions.

Capture Rare Behaviors ó Can be time intensive. Lots of footage. Used with children who are not responsive.

Planning - storyboarding

ID the target/replacement behavior.
Determine best method for capturing the behavior

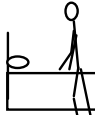Determining video scenes - task-analyze the target or replacement behavior. - each step becomes a scene.
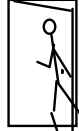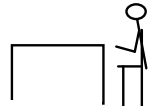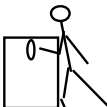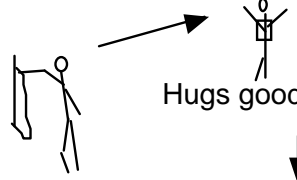
Sample Storyboard - Morning Routine

Scene 1 - bedroom	Scene 2 - bathroom	Scene 3 - bedroom
Wake up Make bed	bathroom time %Time to go to the bathroom+ %I have to get dressed now+	Dressing = pull shirt down %There. Now downstairs.+
Scene 4 - kitchen	**Scene 5 - bathroom**	**Scene 6 - kitchen**
Eat breakfast Put dishes in dishwasher Feed dog Back upstairs	Brush teeth Back downstairs	Hugs goodbye Get books, backpack and jacket Out to catch the bus

EDITING:

VCR - Camcorder Arrangement

˝ Make a copy of the original tape and save it. Do all editing from the copy.
Edit out all occurrences of children̓s errors. Use best examples.

1. Plug camcorder into VCR - push %record+then *%pause+on VCR. (Leave 5-10 seconds on the front end if you want to record a lead-in: See below. 2. Push %play+on the camcorder and watch the video. When you see a behavior you want to capture, rewind to just before the part you want to record. Press %play+ on the camcorder and release %pause+on the VCR. When the scene is complete, press %pause+on the VCR once more and search for the next scene on the camera. Keep repeating this process until you have the desired 2-3 minute tape.

3. If you want to add an intro and ending (recommended), you can just state the behavior (+Let̓s listen to John talking nicely!+) while covering the lens. Add this to the front of the tape as above. You can also prepare a poster stating the behavior and/or praising the observer, e.g. %John is a Super Star!+Here̓s John talking nicely!!+Just talk while taping the poster.

*It is very important to **use "pause" instead of "stop".** This will give you smooth transitions. If you press stop, it creates a second or so of static between segments.
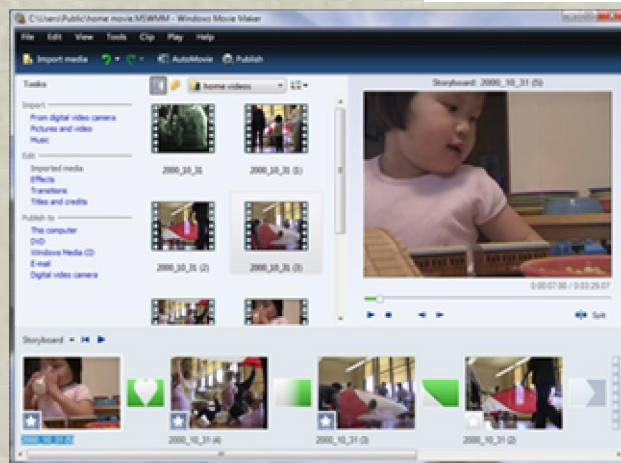
Camcorder - Computer

Imovie

Imovie HD

MovieMaker

THE LOGIC OF VSM

1) ADULT MODELING IS A MAINSTAY OF INSTRUCTION

2) RESEARCH INDICATES THAT PEER MODELING TO BE AN EFFECTIVE INTERVENTION.

3) MOST EFFECTIVE PEERS ARE THOSE CLOSEST TO ATTRIBUTES AND ABILITIES OF OBSERVER (Bandura).

4) A LOGICAL NEXT STEP WOULD BE TO USE THE CHILDREN THEMSELVES MODELING BEHAVIORS THAT ARE SLIGHTLY MORE COMPLEX, MORE APPROPRIATE, OR AT AN INCREASED RATE.

= The next step in modeling instruction???

"I THINK IN PICTURES. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures. Language-based thinkers often find this phenomenon difficult to understand, but in my job as an equipment designer for the livestock industry, visual thinking is a tremendous advantage. Visual thinking has enabled me to build entire systems in my imagination."
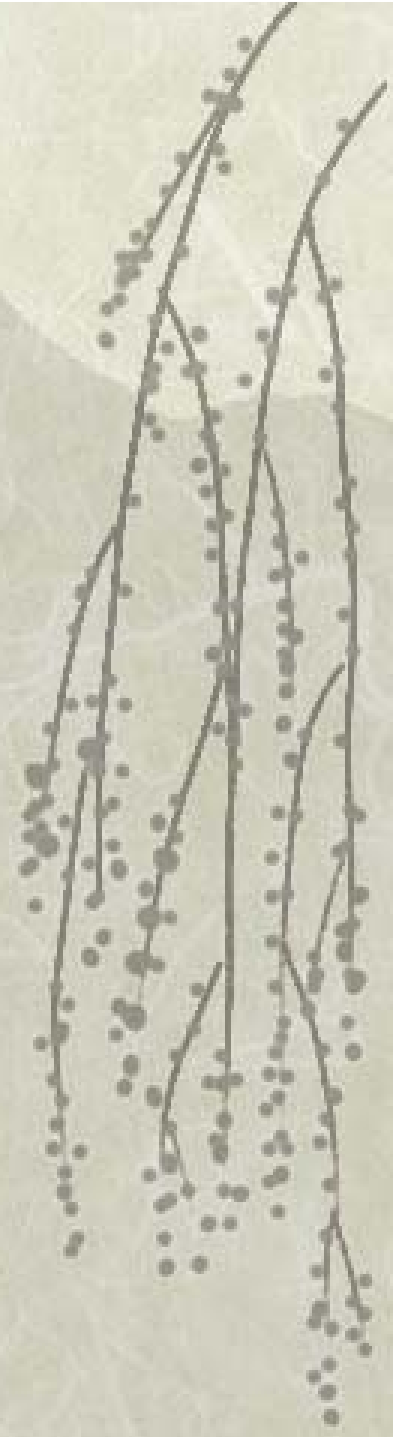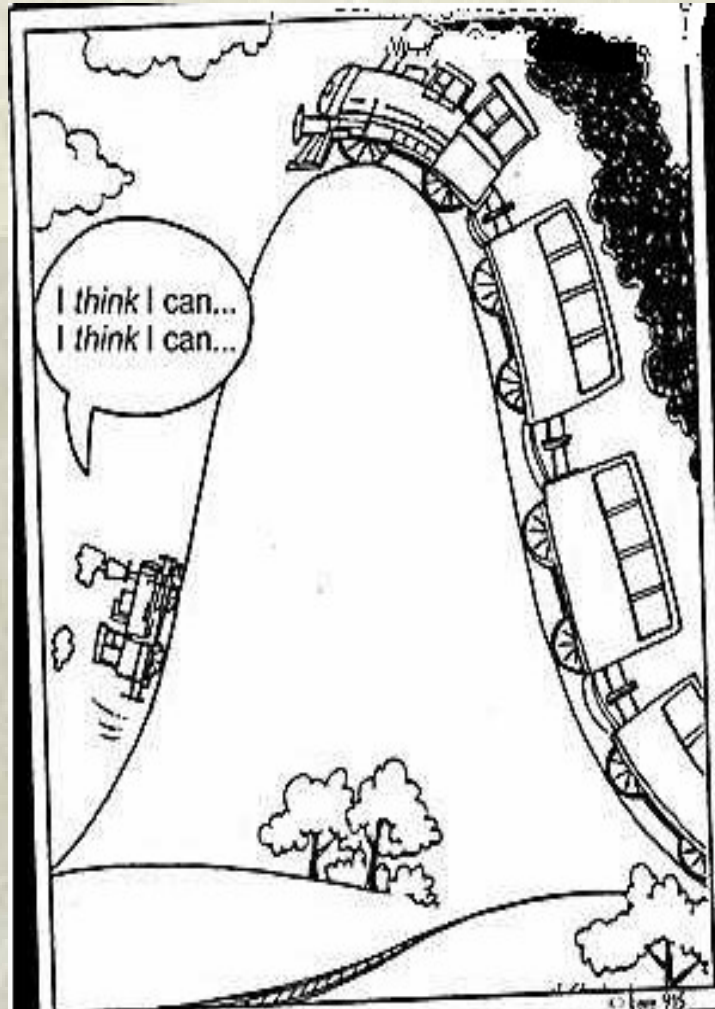

Temple Grandin - from *Thinking in Pictures*
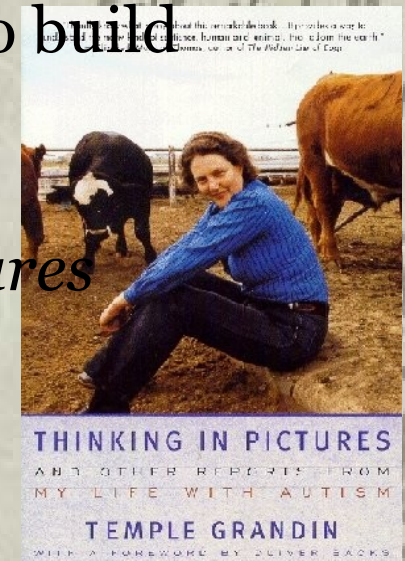
THINKING IN PICTURES
AND OTHER REPORTS FROM
MY LIFE WITH AUTISM

TEMPLE GRANDIN
WITH A FOREWORD BY OLIVER SACKS

Bandura - self-efficacy

I know I can: I saw myself do it.
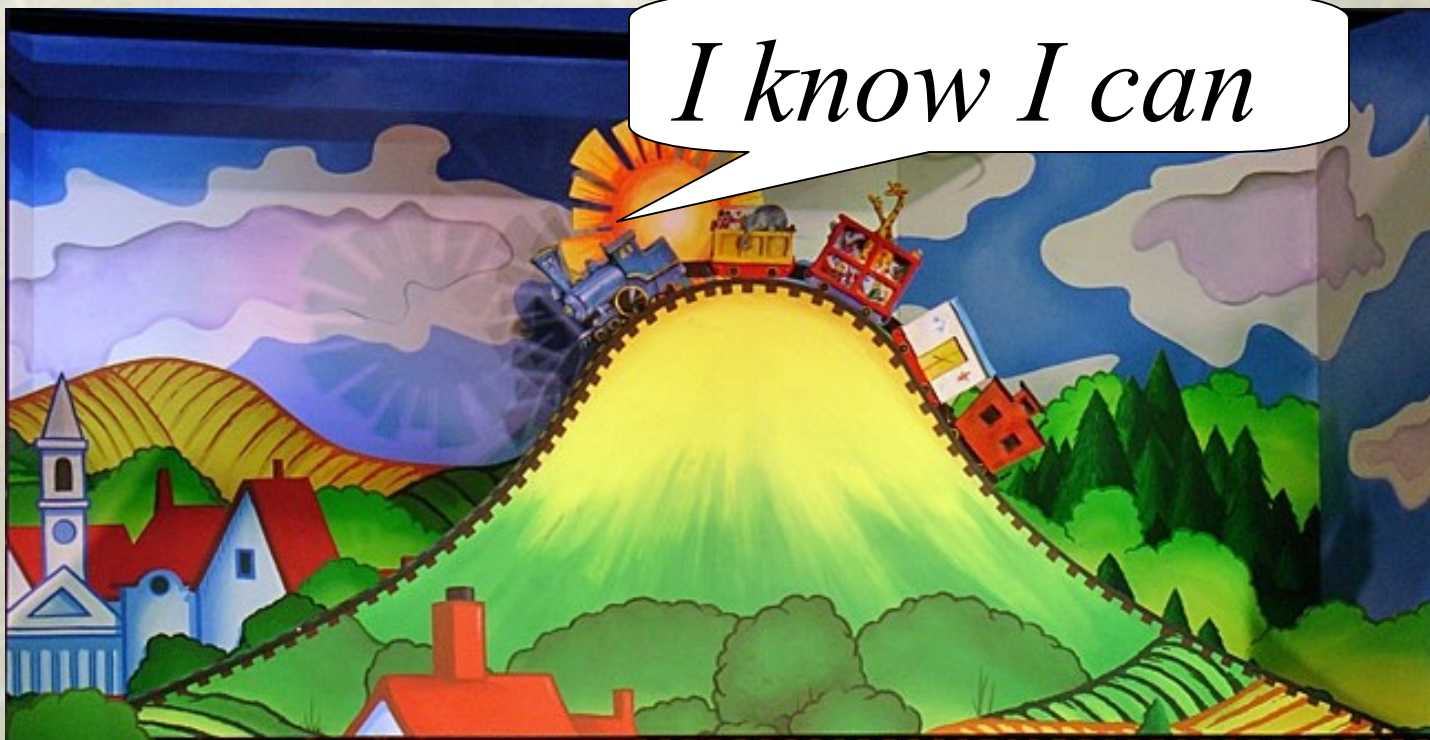
I know I can

Why so effective with children with PDD??

Bandura - Self-Efficacy = I know I can.

Bandura - The best models are those most similar to the viewer in all attributes

No Social Obligations

Limits distractions

Grandin - õWhen people talk to me I convert their words to pictures.ö

Kehle ó Not only does VSM supply new memories, it also seems to supplant old ones.

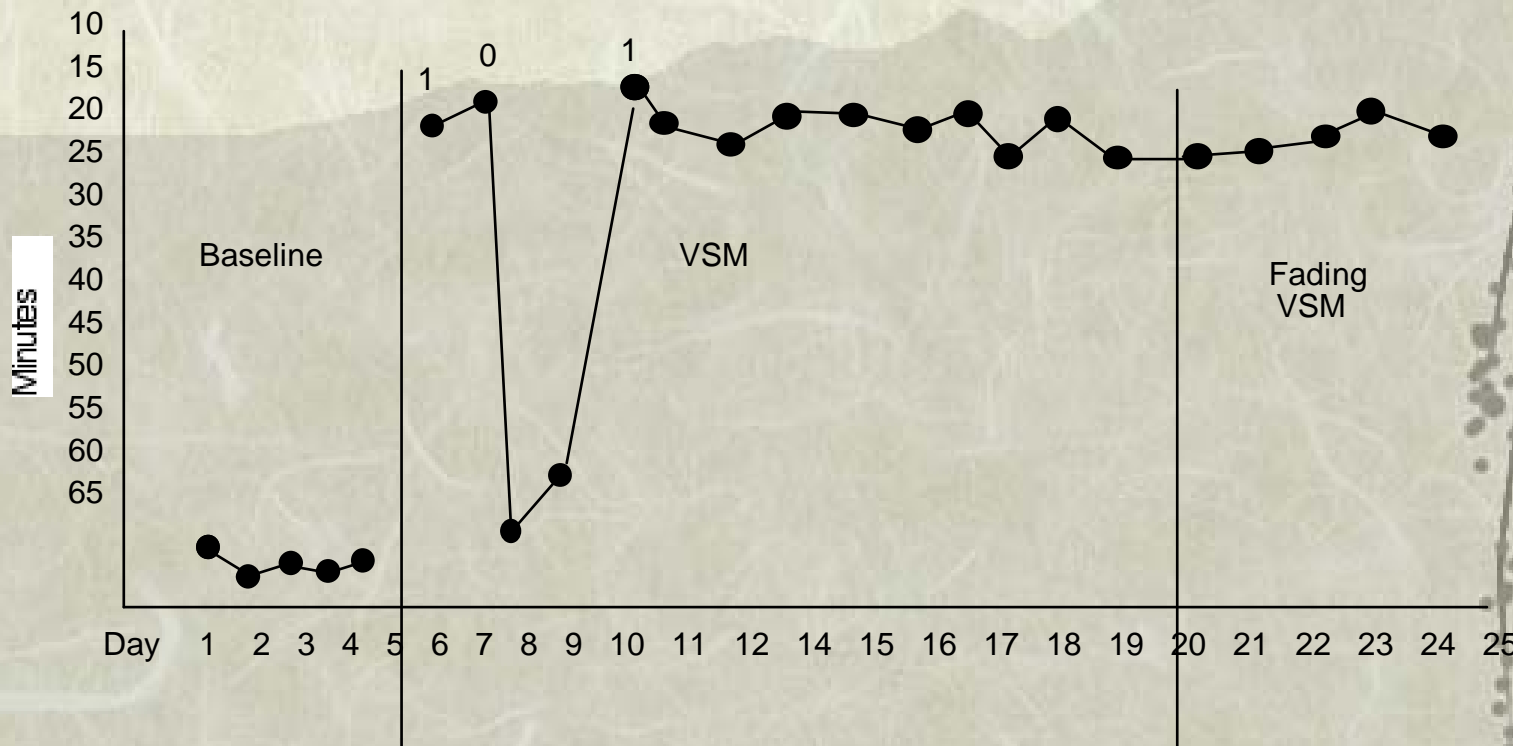Sometimes: a bit of "magic"

Time: getting ready for school

Tantrums: 8 yr olds. Asperger's
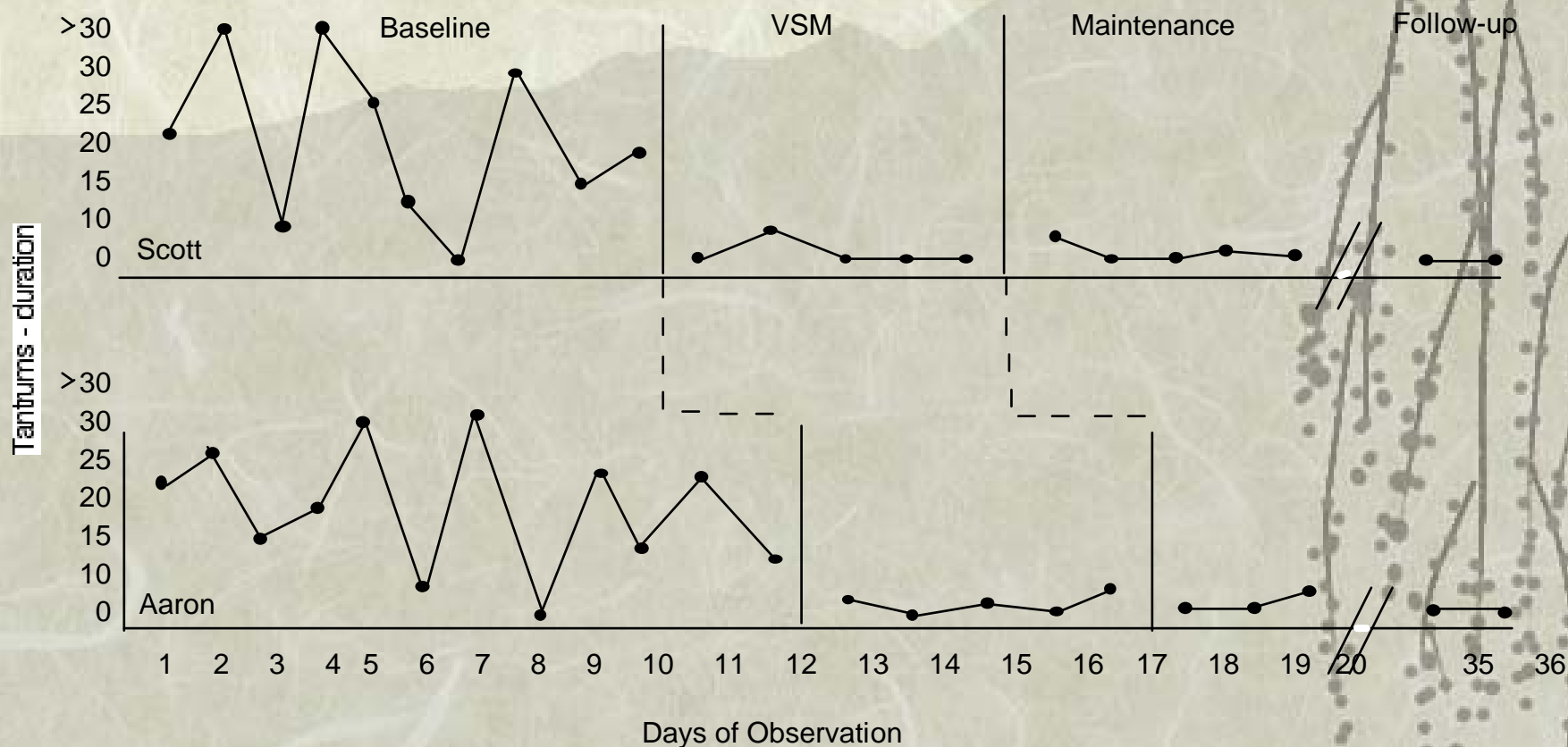
Eating lunch: 6 yr. old – w/ Asperger's

David

Baseline

VSM

Maintenance

% Lunch

100
90
80
70
60
50
40
30

Days

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
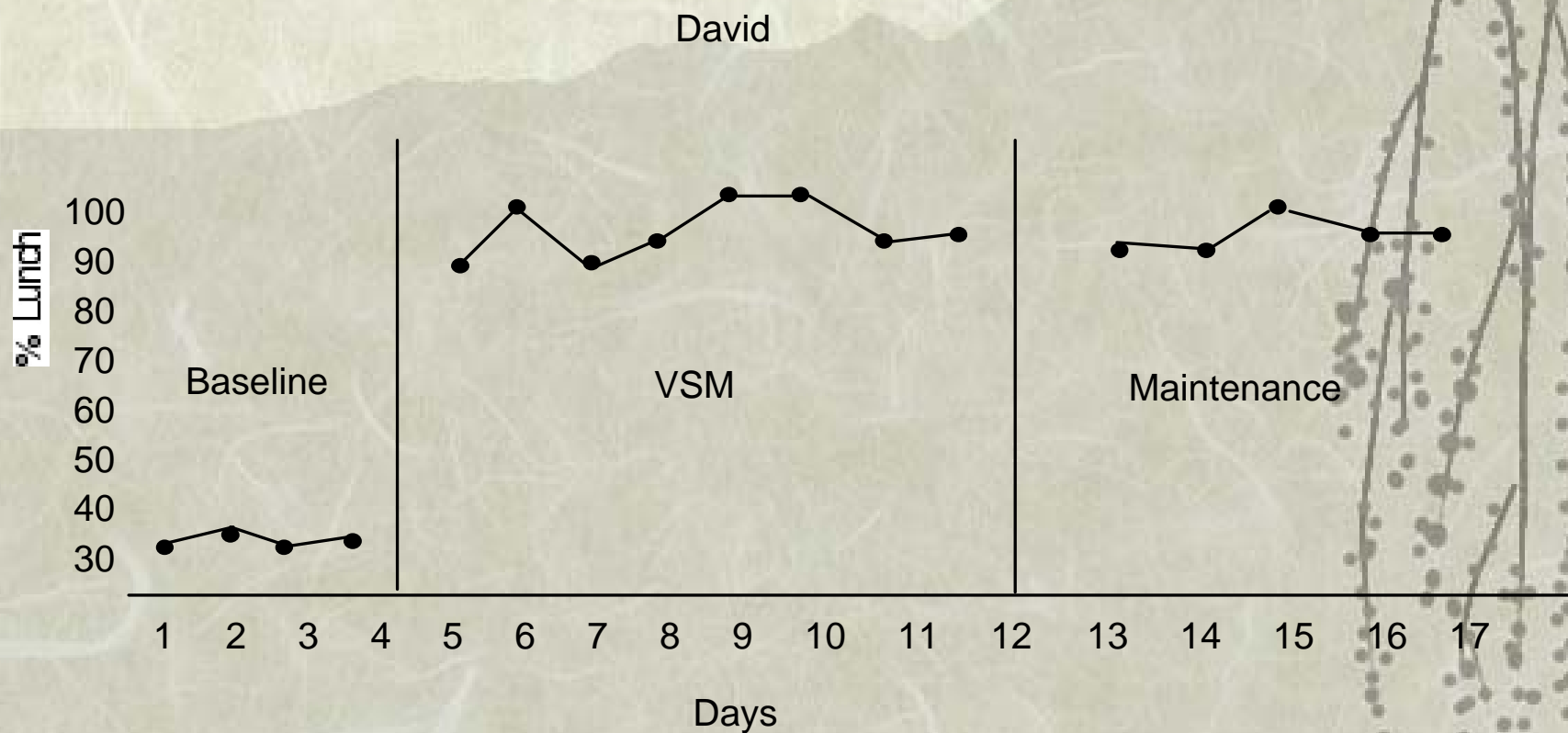
2008 Studies

Participants: Four, 4-yr.-olds on the Autism Spectrum who did not respond to õbuddy systemö and Social Stories interventions the previous semester.

Target behaviors (dependent variables)

Study 1 = Social Interaction with peers

Study 2 = Same, plus Mean Length of Utterance, responding, and initiations

Method

Setting

Siskin Children's Institute – Chattanooga, TN

Study 1:

Playground (data collection - videotaping)

Teachersø offices (showing videos)

Study 2:

Living room style room set up as play area.

Design

- Study 1 – Multiple-baseline across 4 children.

- Study 2 – Multiple-baseline across 3 behaviors.

Videotaping

Peers were used in both movies as "co-stars".

Study 1: One or two peers were coached and prompted to interact. Footage was taken during transitions to the playground and in arranged sessions when others were not using the playground.

Study 2: Participant was asked many questions and asked to imitate words and phrases. All of this caught on film.

Editing

Editing of videos for both studies done with iMovie®

Results – Study 1

Good gains for Lucy and Timmy along with parallel changes in other social behaviors (e.g. interacting with adults, verbalizing, increased range on the playground, abandoning his automobile)

Imitation of video scenes

What about John?????????????

Results – Study 1

Increases in social behavior
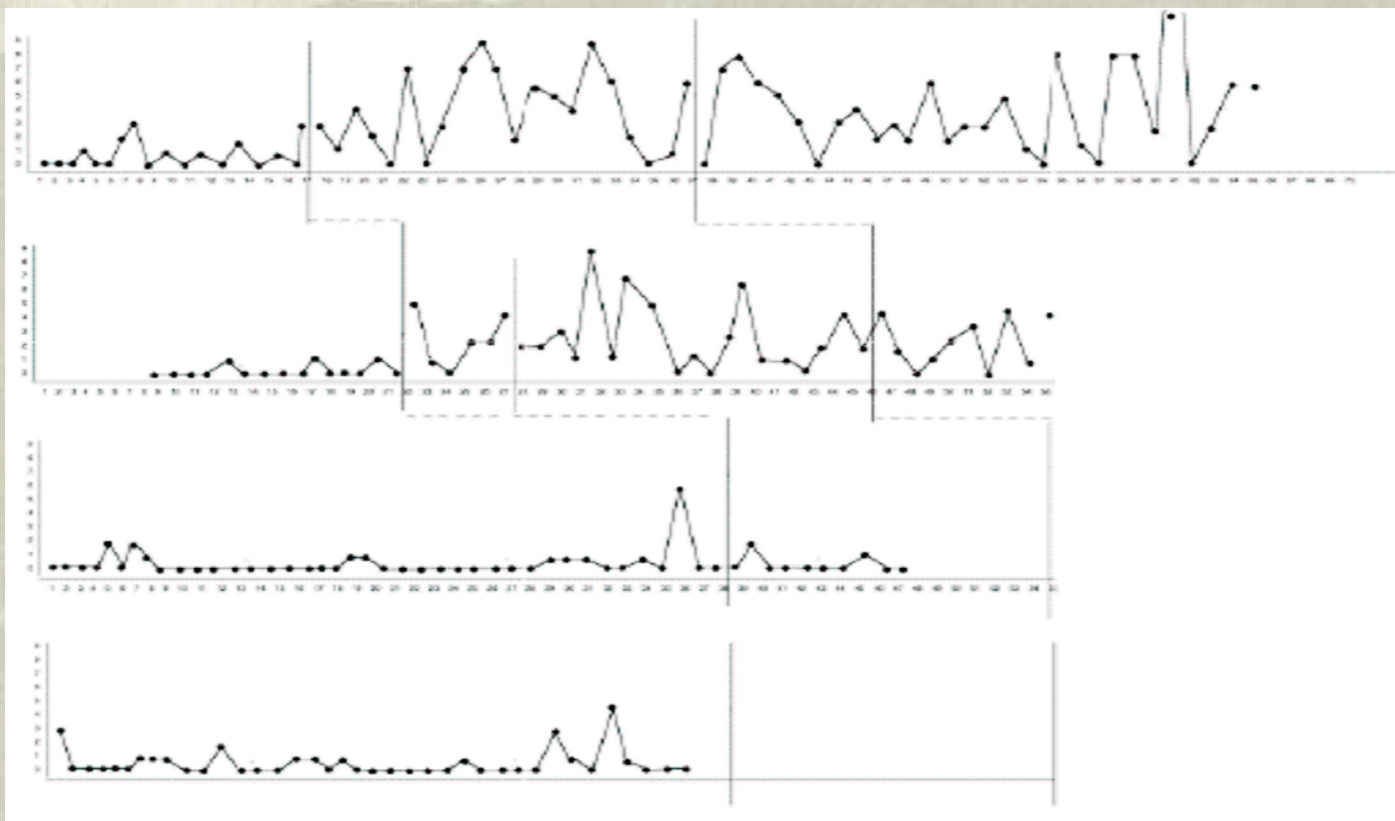
Results – Study 2

Threats to validity

4 yr olds. = maturation (although baseline consistent for one year)

New teachers

Parents knowledge of study

Halo effect - wanting to please researchers

Effects did not repeat across all

Unanswered questions and next steps

How young can we go?

How does the spectrum of autism influence results?

Can VSM have greater impact when paired with other methods? Or, can VSM enhance other methods?

Why not John?

Possible Applications

Attention Disorders

Depression

Aggressive / disruptive behaviors

Stuttering

Elective Mutism

Responding behaviors - Students w/ autism

Motor Problems - "Shirley"

Language development

Social Interaction - Initiations

Cognitive skill training

Parenting skills

Literacy - phonemic awareness/letter rec

into a Positive Behavior Support Plan

Isolate undesirable behaviors or skill that need taught from authentic assessments.

Establish baseline rates

If a social behavior, define positive representation of behavior or a replacement behavior.

If an academic behavior, define a reasonable attainment point in the developmental sequence or a fluency rate beyond present ability.

Videotape best or scripted performances.

Edit

Student views tape

Monitor classroom/home changes in baseline performance.

Adjust

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