

Teaching Functional Skills in a Classroom Setting



Teaching Functional Skills Rationale



Toileting Rationale



- Competent toileting is a critical skill (Cocchiola, p. 608)
- May not be able to attend certain programs if not toilet trained (Leaf & McEachin, p. 87)
- life changing when achieved (Cicero, p. 1)
- Increase in Independent living (Cicero, p. 1)
- Increased opportunities in community activities (Cicero p. 1)
- Complex operant and social learning process (Azrin and Foxx p. 89)



Toilet Training Participants



- 5 year old male
- Kindergarten student in Life Skills Support classroom
- Came into school setting using diapers/pull ups
- No initiations for toileting needs
- Diagnosed with ID
- School: Title I in a Pittsburgh Suburb
- Nonverbal
- Response form: Sign language with vocal approximations



Toilet Training Participant



Toileting Readiness



- Sit appropriately on toilet for at least 3 minutes
- Can independently lower pants
- Understands general contingencies between behavior and rewards
- no severe problem behavior that may interfere with training
- Pairing environment

Referenced from Cicero



Toileting Preparation



- Reinforce independently entering bathroom
- Can independently lower pants
- Understands general contingencies between behavior and rewards
- no severe problem behavior that may interfere with training
- Pairing environment

Referenced from Cicero



Toileting Procedures

By Azrin and



1. ~~Remove~~ Remove diapers/pull ups
 - Only to be worn at night
2. Bladder full and no salty food
3. Go to the bathroom every ____ min and sit for ____ min.
 - boys sit
 - if no void, child puts back on clothes with minimal prompts
 - If void: Praise immediately with tangible



Toileting Procedures

By Azrin and



4. ~~Dry~~ checks every 5 minutes

- if dry, provide reinforcement and praise

5. Wet during dry check:

- instruct where one urinates
- take to bathroom, sit on toilet, pull back up wet garments, go back to spot urination occurred. Repeat 5 times
- Change clothes
- have student clean the spot
- no attention during this portion



Toileting Procedures

By Azrin and



6. ~~After~~ After second self-initiation, stop the scheduled bathroom times.

7. No mands required

8. Stop forcing fluids after 20 consecutive self-initiations

*Resist temptation for diapers

* After 1 month of accident free self-initiations, may start mand training for bathroom.



Toileting Procedures

In the



~~Classroom~~ ~~time~~ can sit appropriately on toilet

2. Assess time student stays dry for several trials
3. Use the average length of time for starting scheduled bathroom breaks
4. Have student drink a lot of fluids
5. Sit child on the toilet every _____ min for _____ min



Toileting Procedures

In the



6. If student voids, provide immediate reinforcement and praise
7. If student does not void, have the student pull up pants and go back to instruction.
8. Record on data collection sheet.
9. When an accident occurs, student must change own clothes with minimal prompts/help
10. After initiation is made, stop the scheduled time



Toileting Procedures



In the

- Classrooms began a 30 min schedule
- increased to 40 minutes after 3 consecutive days of no accidents
- increased to 60 min
- highly preferred edibles were kept up high in a basket in the bathroom
- highly preferred edibles were only given when voids occurred



Data Collection Forms



Name _____

Scoring Key: U= Urinate B= Bowel Movement N = Nothing

Record Scoring Key in One of these Three Boxes

Date	Teacher	Time	Accident	Schedule	Self Initiation



Graph for Accidents

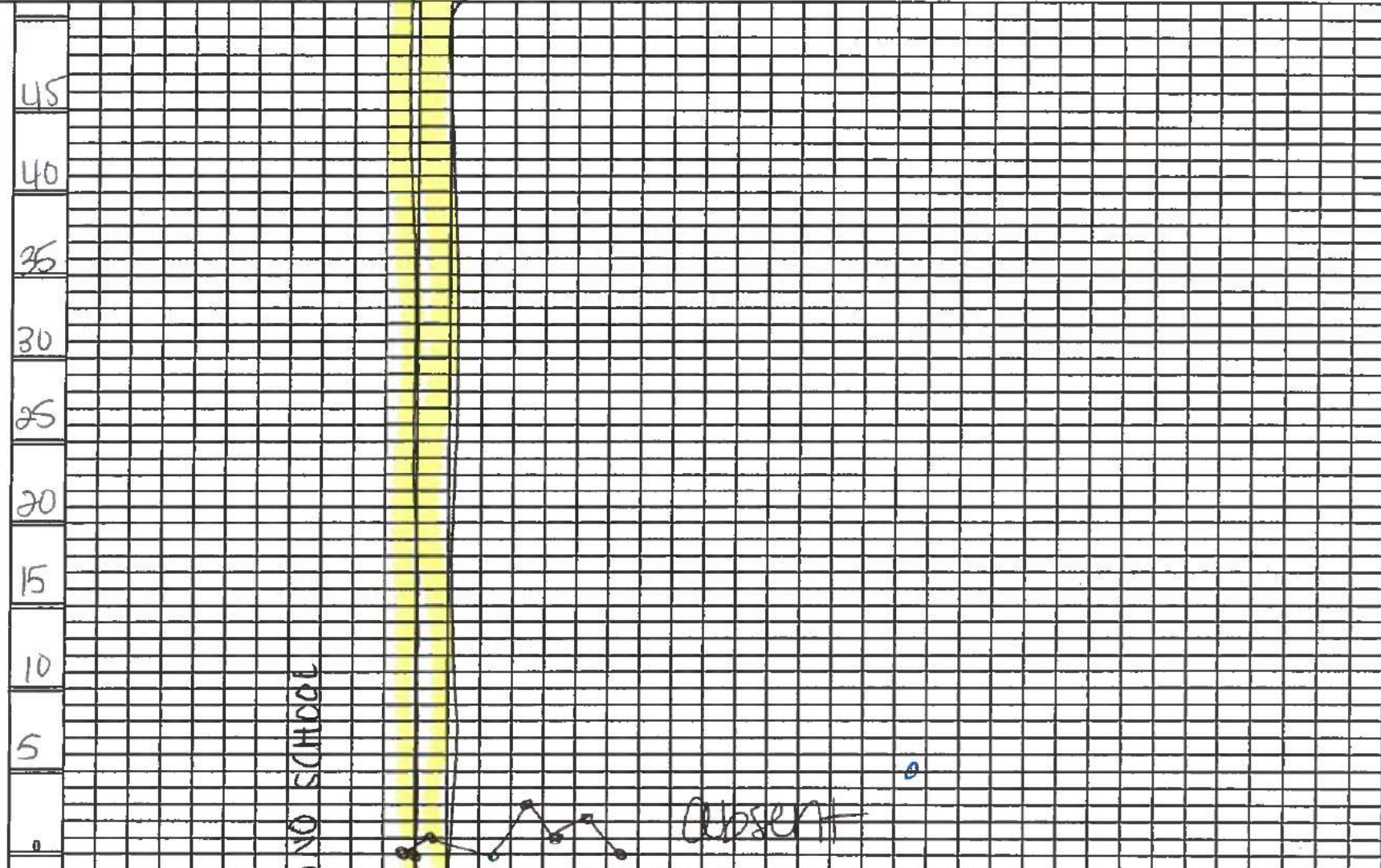
Pull up 30min
 Under 30min

of accidents in a day

45
40
35
30
25
20
15
10
5
0

Date

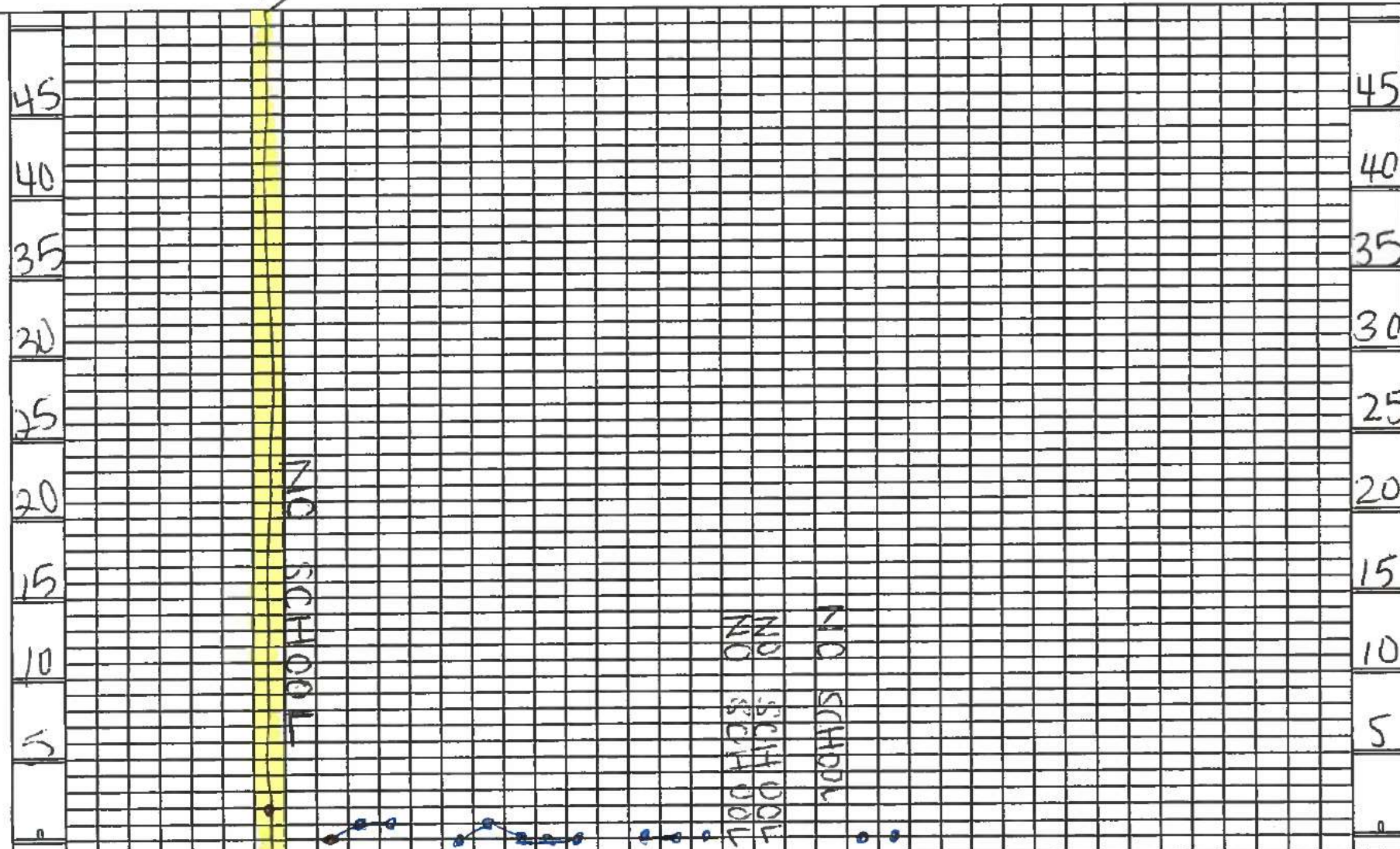
10/3
10/4
10/5
10/6
10/7
10/10 NO SCHOOL
10/11
10/12
10/13
10/14
10/17
10/18
10/19
10/20
10/21
10/24
10/25
10/26
10/27
10/28
10/31



reinitiated 30min
schedule

Graph for Toilet training accidents

of accidents in a day



Date

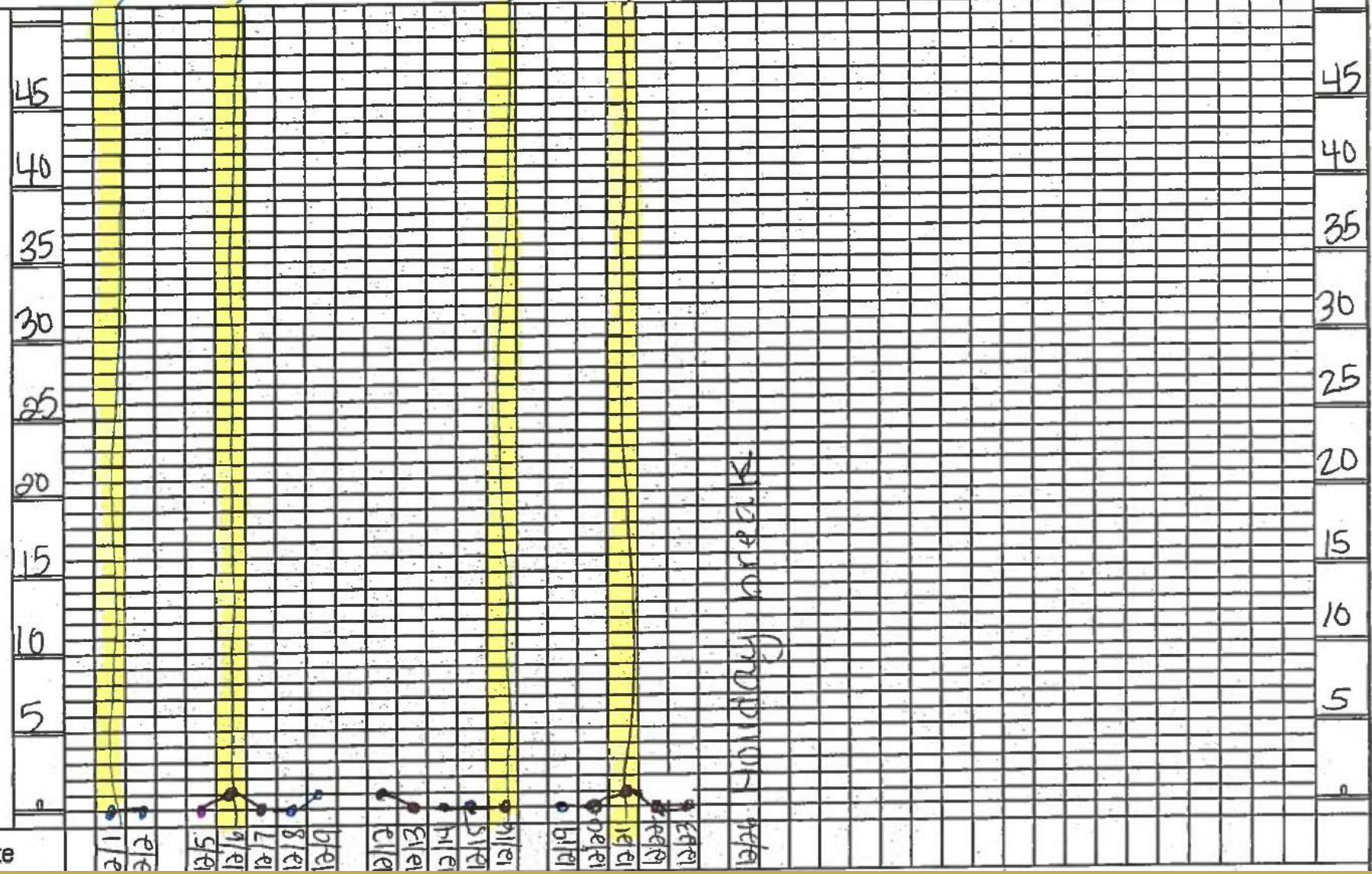
11/1 11/2 11/3 11/4 11/7 11/8 11/9 11/10 11/11 11/14 11/15 11/16 11/17 11/18 11/21 11/22 11/23 11/24 11/25 11/28 11/29

of accidents in a day

Graph for toilet training accidents

40 min schedule
1 hour sched

Sign toilet for
B2
1 hour 10 min



Breaks (midday break)

of accidents per day

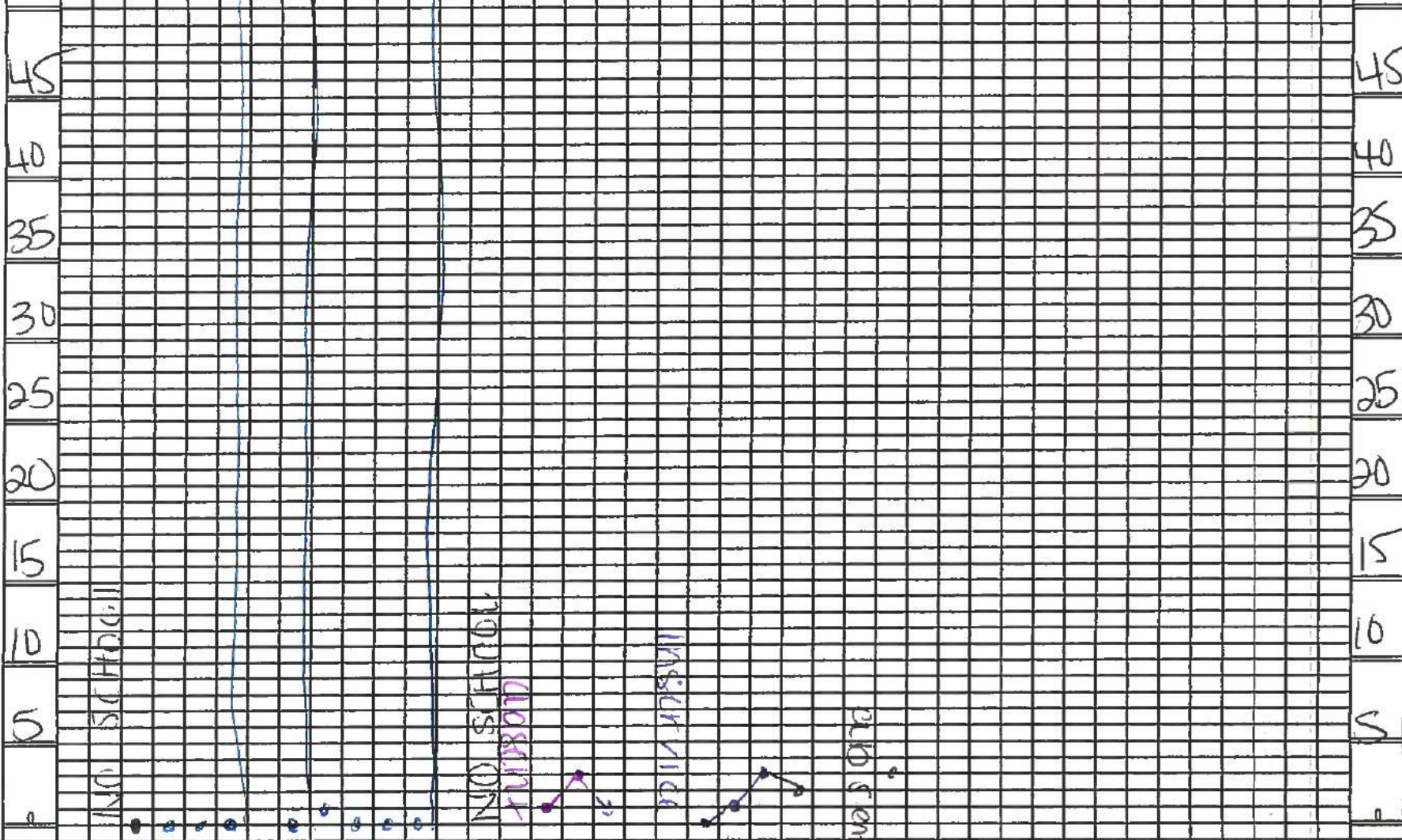
Graph for toilet training

1 Hour 10 min

1 hour 20 min

Self Initiated

Self Initiator



Date

NO SCHOOL

NO SCHOOL

FLURRY

NO SCHOOL

PAID OFF

Parent Training



- Explained procedures prior to implementation
- Kept parents informed of time schedules to keep consistent at home
- Implemented schedules once mastered in school
- Parent Communication folders/emails
- Weekly conversations
- Sent home data sheets

Future Implementation

- Send home form to continue data collection
- Train parents in meeting vs. over phone
- Continue consistent communication





Hand Washing



Task Analysis



Task Analysis: Complex skills are broken into smaller, teachable units creating a series of sequentially ordered steps.

Conducting a Task Analysis: Determine the sequence of behaviors that are necessary to complete the given task efficiently. It should be individualized based on the age, skill level, and prior experience of the participant. The components of the analysis can be identified by observing, consulting with experts, or by performing the behavior.



Prompting



Most to Least Prompting: participant is physically guided through the entire performance sequence, then the amount is gradually reduced from trial to trial. Physical prompting is then moved to visual and verbal prompts, and finally to natural stimulus without prompts.

Least to Most Prompting: participant is given the opportunity to perform the response with the least amount of prompting. Greater prompting is used with each successful trial without a correct response.



Hand Washing Participant



- 10 year old boy in Autistic Support Classroom
- Diagnosed with Autism, ID, and Cystic Fibrosis
- Low Income family, Dependency Struggles



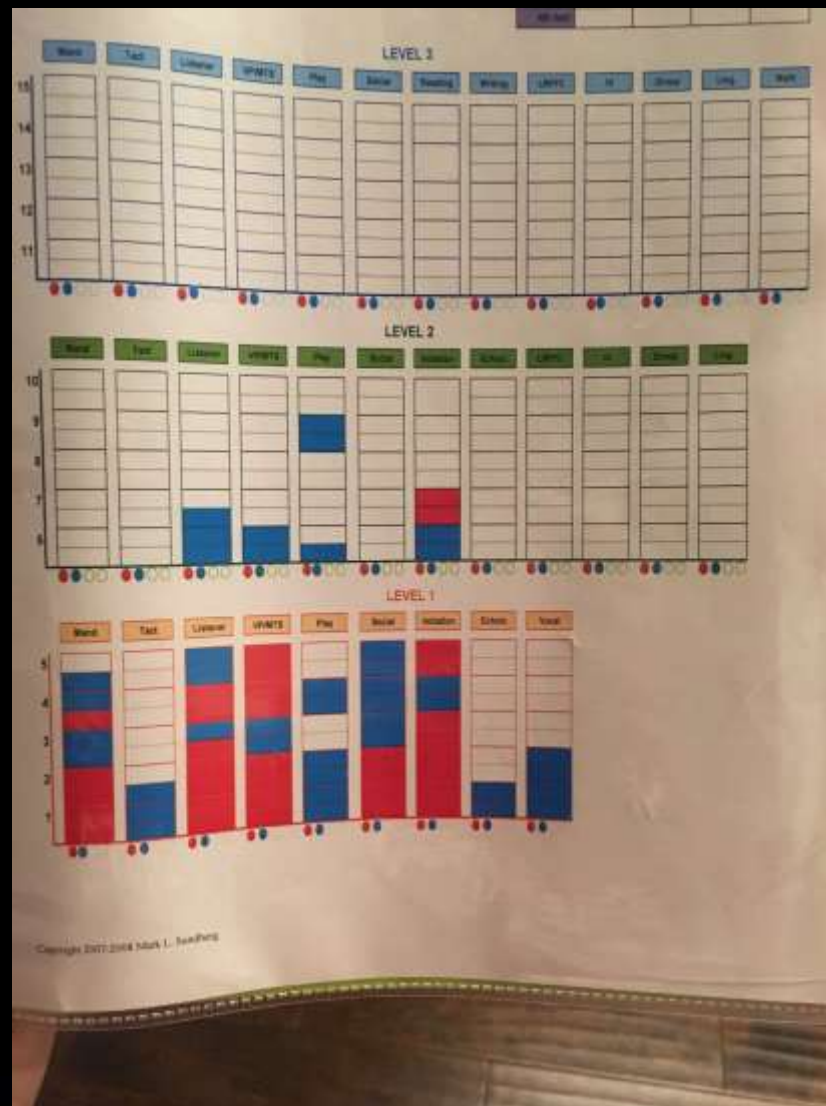
Hand Washing Participant



- Non-verbal
- Response Form: Device and Sign
- Problem Behavior
- Lack of Instructional Control
- Early Learner



Participant VB-MAPP



Hand Washing Rationale



- Necessary to maintain student's health and cleanliness
- Maintain community's health and cleanliness
- Gain independence
- Likely to become part of the student's everyday routine if started early (Regan, T.)





Hand Washing Procedures

- Create Task-Analysis for specific environment
 - Forward/Backwards Chaining
 - Forward was used for this particular child
- Baseline Data- determine which step will be targeted
- “Go wash your hands.”
- Run intervention for 3 days with prompting on target step and following steps
- On day 3, probe for mastery of targeted step (no prompting)
- Based on probe, continue with targeted step for 3 additional days or being targeting next step
- Generalize across different stimuli (sinks, soap dispensers, forms of hand drying)



Hand Washing Task Analysis



Hand Washing Task Analysis

I=Independent V=Vocal Prompt P=Physical Prompt

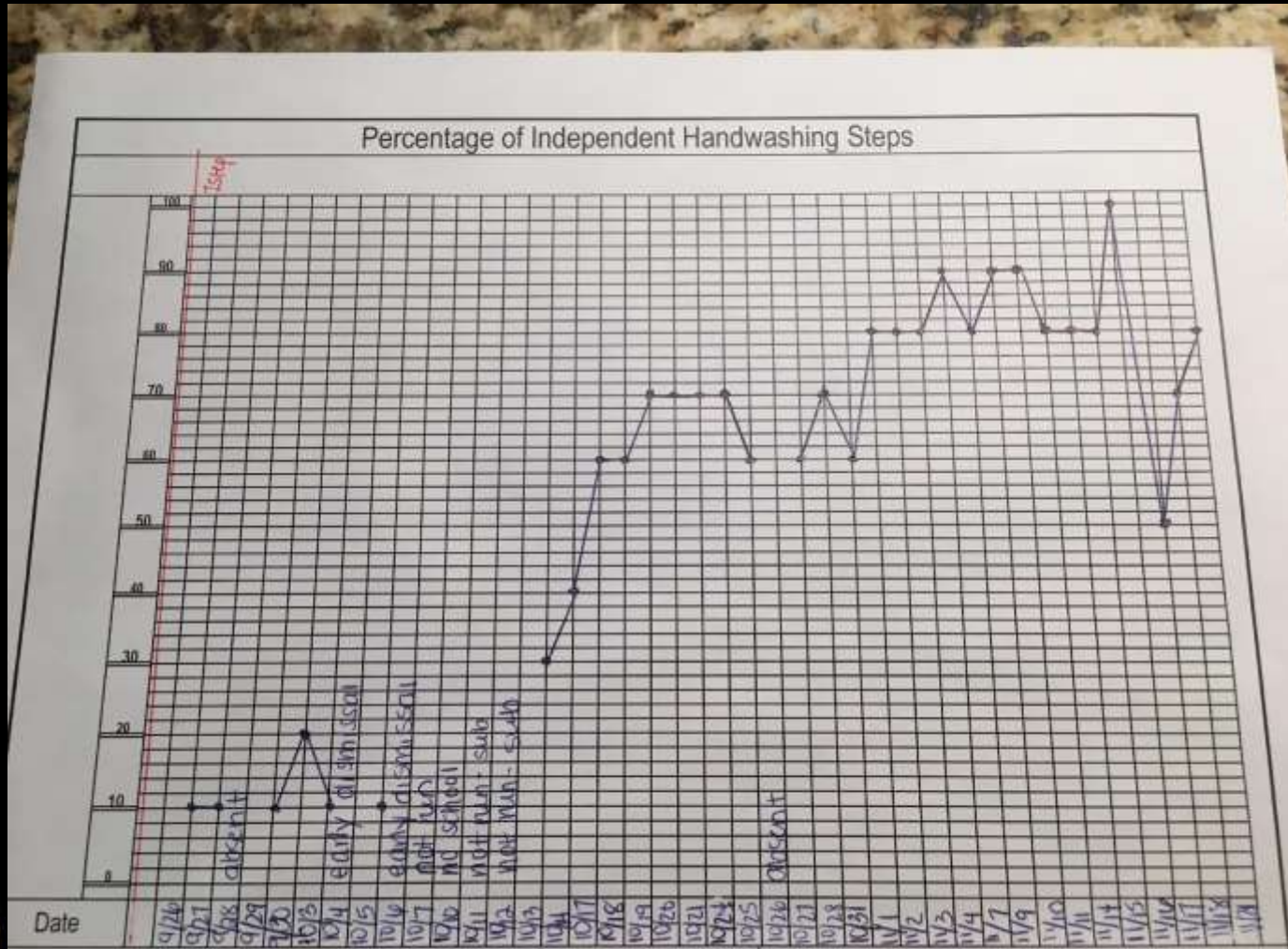
- I "Go wash your hands" → Goes to sink
- I Turn on water
- I Wet hands
- I Put hands under soap dispenser
- I Rub hands together for 10 seconds
- I Rinse hands
- I Turn water off
- I Get paper towel
- I Dry hands
- I Throw away paper towel

10/10

100 % of Steps Completed Independently



Hand Washing Graph



Hand Washing Video



<https://youtu.be/ZXyPF6AnruA>



Hand Washing Complications



- Lack of consistent staff
- Student's health throughout the school year
- Differences in sinks around the school building
- Lack of participation at home



Chaining



Forward Chaining: The behaviors are taught in their naturally occurring order.

Total Task Chaining: A variation of forward chaining in which the learner receives training on every step in every session.

Backwards Chaining: All behaviors are initially completed by the trainer, except for the final behavior in the chain.

Which chain to use? Comparisons proving one to be more effective have not been established.
(Cooper, Heron, Heward)



Chaining Rationale



Rationale for Using Chaining:

Chaining links specific sequences of stimuli and responses to form new performances. Teaching behavior chains is important to increase independent skills. Chains can also be linked together to form more complex repertoires. (Cooper, Heron, Heward)



Independent Work



Forward Chain

- Task analysis was created
- Student was assessed on which steps can be completed independently

Backward Chain

- Task analysis was created
- assessed on independent steps
- instructor completed with prompting until the teaching step/independent



Independent Work Participants



BACKWARD CHAIN

- 2 students in Life Skills Support Classroom
- 1 diagnosed with Autism and 1 diagnosed with ID
- 1 student in Autistic Support Classroom diagnosed with Autism
- Title I School
- Nonverbal

FORWARD CHAIN

- 1 Student in Autistic Support Classroom
- Diagnosed with Autism, ID, and Cystic Fibrosis
- Nonverbal, Respose form device and sign
- Title I School

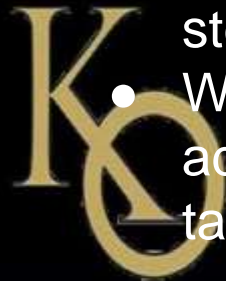


Forward Chain Procedures



Independent Work

- Task oriented
- Collect Baseline- Find easy tasks for the learner to gain instructional control
- Use unknowns as future targets taught errorlessly
- 3 drawer system- tasks in drawers 1 and 2 and reinforcer in drawer 3
- Began with 3 easy tasks, and large reinforcer- full prompting for each step
- Run intervention for 3 days with prompting on target step and following steps
- Probe for mastery of targeted step (no prompting)
- Based on probe, continue with targeted step or being targeting next step
- When student is able to complete 3 tasks independently, add additional tasks until student is completing the targeted number of tasks.



Forward Chain Procedures



Academic Independent Work

- Academic oriented
- Collect Baseline- Find easy tasks for the learner to gain instructional control
- Use unknowns as future targets taught errorlessly
- Folder system- task in each folder, with reinforcer in last folder. Begin with 3 easy folders.
- Run intervention for 3 days with prompting on target step and following steps
- Probe for mastery of targeted step (no prompting)
- Based on probe, continue with targeted step or being targeting next step
- When student is able to complete 3 tasks independently, add additional tasks until student is completing the targeted number of tasks.



Forward Chain Data- Independent Work Task Analysis



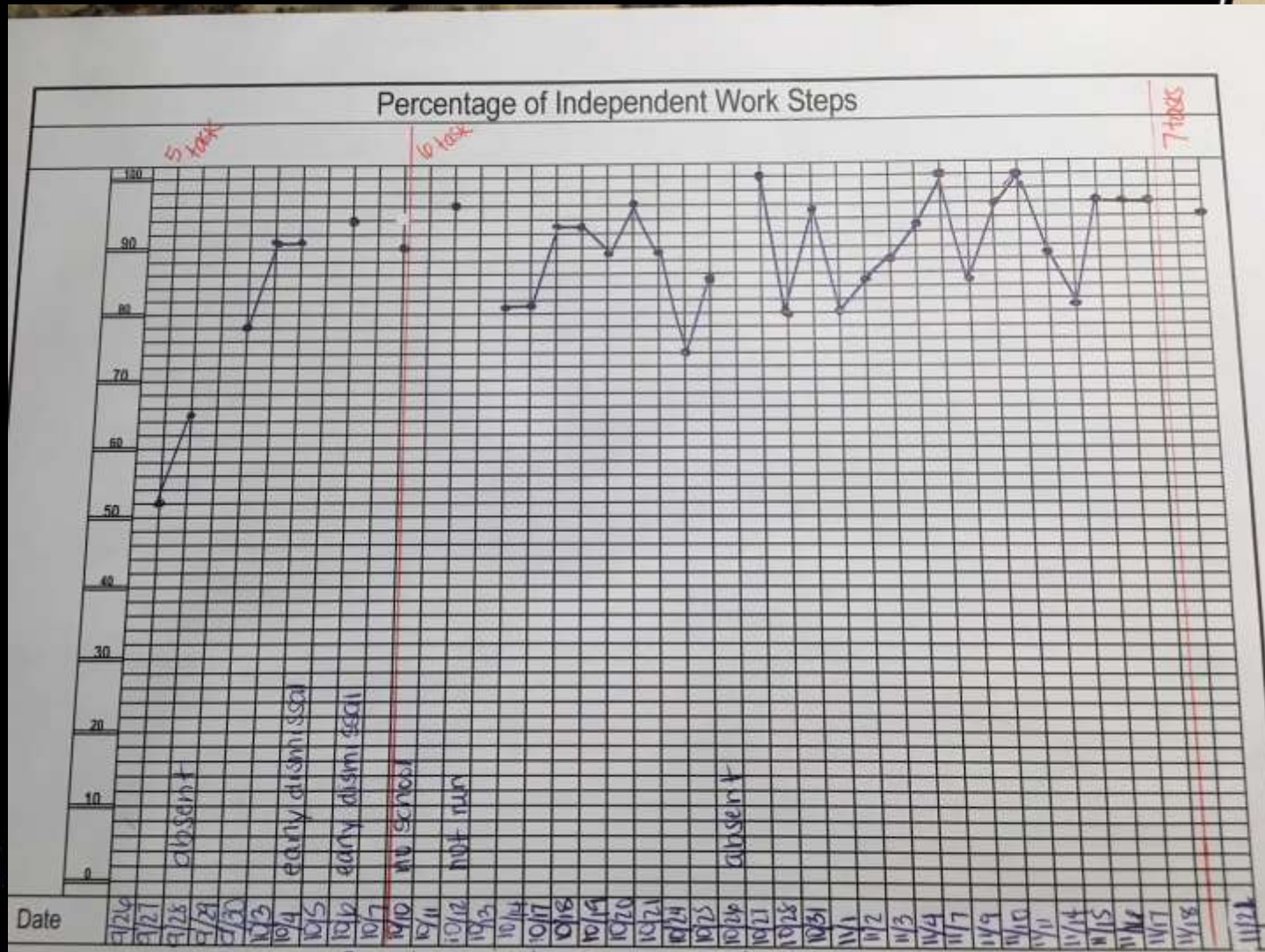
Independent Work Task Analysis

Independent V=Vocal Prompt P=Physical Prompt

<u>I</u> Opens Drawer 1	<u>I</u> Get task 7
<u>I</u> Gets Task 1	<u>I</u> Completes task 7
<u>I</u> Completes Task 1	<u>I</u> Puts task 7 in completion bin
<u>I</u> Puts task 1 in completion bin	<u>I</u> Opens Drawer 7
<u>I</u> Opens Drawer 1	<u>I</u> Gets task 8
<u>I</u> Gets Task 2	<u>I</u> Completes task 8
<u>I</u> Completes task 2	<u>I</u> Puts task 8 in completion bin
<u>I</u> Puts task 2 in completion bin	<u>I</u> Opens Drawer 1
<u>I</u> Opens Drawer 1	<u>I</u> Takes reinforcement
<u>I</u> Gets Task 3	<u>I</u> Raises hand, V in finished
<u>I</u> Completes 3	
<u>I</u> Puts task 3 completion bin	<u>I</u> % of Steps Completed Independently
<u>I</u> Opens Drawer 1	
<u>I</u> Gets Task 4	
<u>I</u> Completes 4	
<u>I</u> Puts task 4 in completion bin	
<u>I</u> Opens Drawer 2	
<u>I</u> Get task 5	
<u>I</u> Completes task 5	
<u>I</u> Puts task 5 in completion bin	
<u>I</u> Opens Drawer 2	
<u>I</u> Get task 6	
<u>I</u> Completes task 6	
<u>I</u> Puts task 6 in completion bin	
<u>I</u> Opens Drawer 2	



Forward Chain Data- Independent Tasks



Forward Chain Data- Academic Independent Work Task Analysis



Date: January 6, 2017

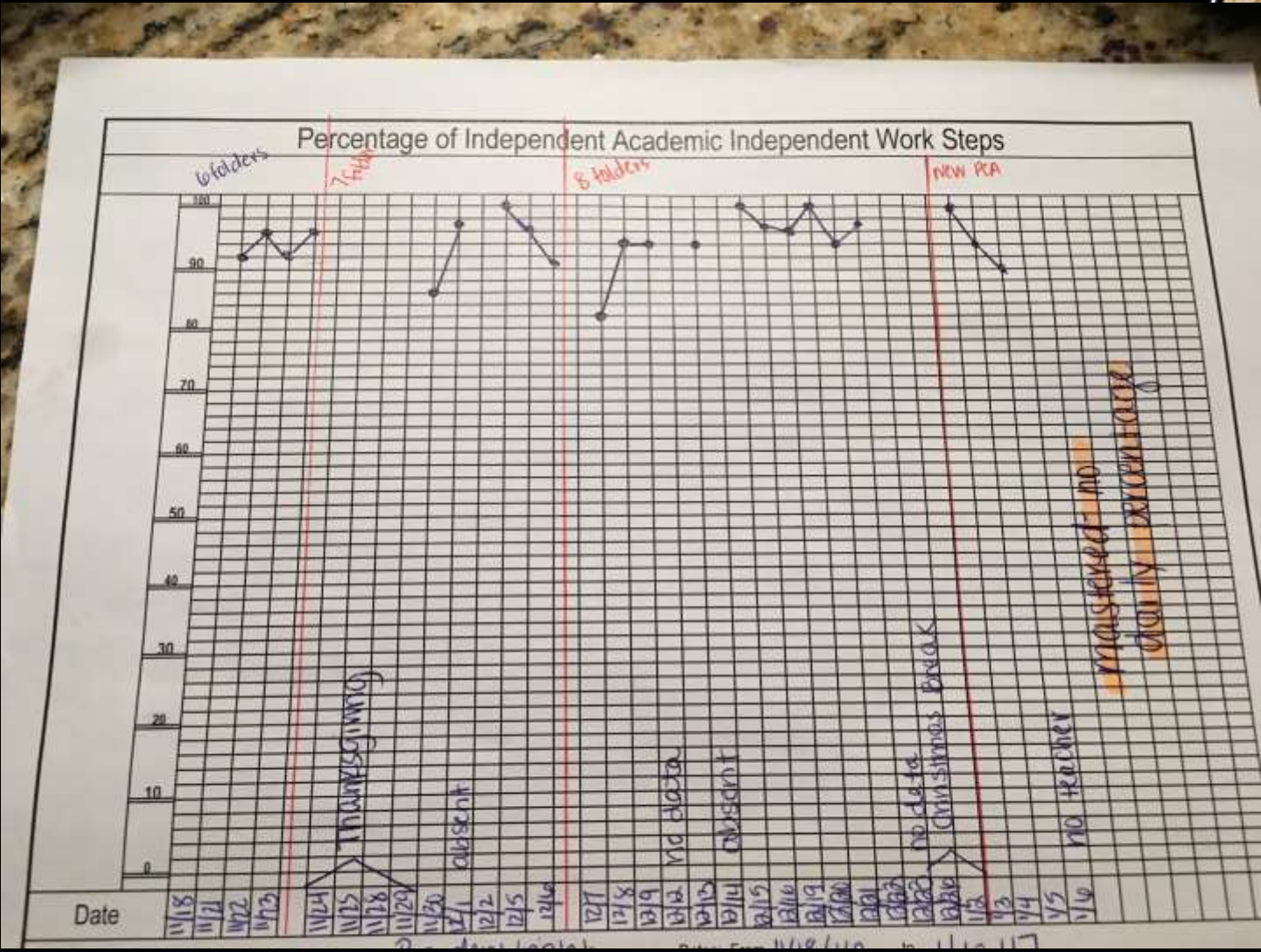
Academic Independent Work Task Analysis

I=Independent V=Vocal Prompt P=Physical Prompt

- | | |
|--|---|
| <u>I</u> Pulls out folder #1 | <u>I</u> Pulls out folder #7 |
| <u>I</u> Opens folder #1 | <u>I</u> Opens folder #7 |
| <u>P</u> Completes task in folder #1 | <u>I</u> Completes task in folder #7 |
| <u>I</u> Puts folder #1 in completion bin. | <u>I</u> Puts folder #7 in completion bin. |
| <u>I</u> Pulls out folder #2 | <u>I</u> Pulls out folder #8 |
| <u>I</u> Opens folder #2 | <u>I</u> Opens folder #8 |
| <u>I</u> Completes task in folder #2 | <u>I</u> Completes task in folder #8 |
| <u>I</u> Puts folder #2 in completion bin. | <u>I</u> Puts folder #8 in completion bin. |
| <u>I</u> Pulls out folder #3 | <u>I</u> Raises hand, I'm finished. |
| <u>I</u> Opens folder #3 | |
| <u>I</u> Completes task in folder #3 | <u>100</u> % of Steps Completed Independently |
| <u>I</u> Puts folder #3 in completion bin. | |
| <u>I</u> Pulls out folder #4 | |
| <u>I</u> Opens folder #4 | |
| <u>I</u> Completes task in folder #4 | |
| <u>I</u> Puts folder #4 in completion bin. | |
| <u>I</u> Pulls out folder #5 | |
| <u>I</u> Opens folder #5 | |
| <u>I</u> Completes task in folder #5 | |
| <u>I</u> Puts folder #5 in completion bin. | |
| <u>I</u> Pulls out folder #6 | |
| <u>I</u> Opens folder #6 | |
| <u>I</u> Completes task in folder #6 | |
| <u>I</u> Puts folder #6 in completion bin. | |



Forward Chain Data- Academic Independent Work



Data After Skills are Mastered



Monday 24 Tuesday 25 Wednesday 26 Thursday 27 Friday 28

	Monday 24	Tuesday 25	Wednesday 26	Thursday 27	Friday 28
Academic Work	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt
Independent Work	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt
Play Schedule	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt
Handwashing	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt	Independent Minimal Prompting Full Prompt



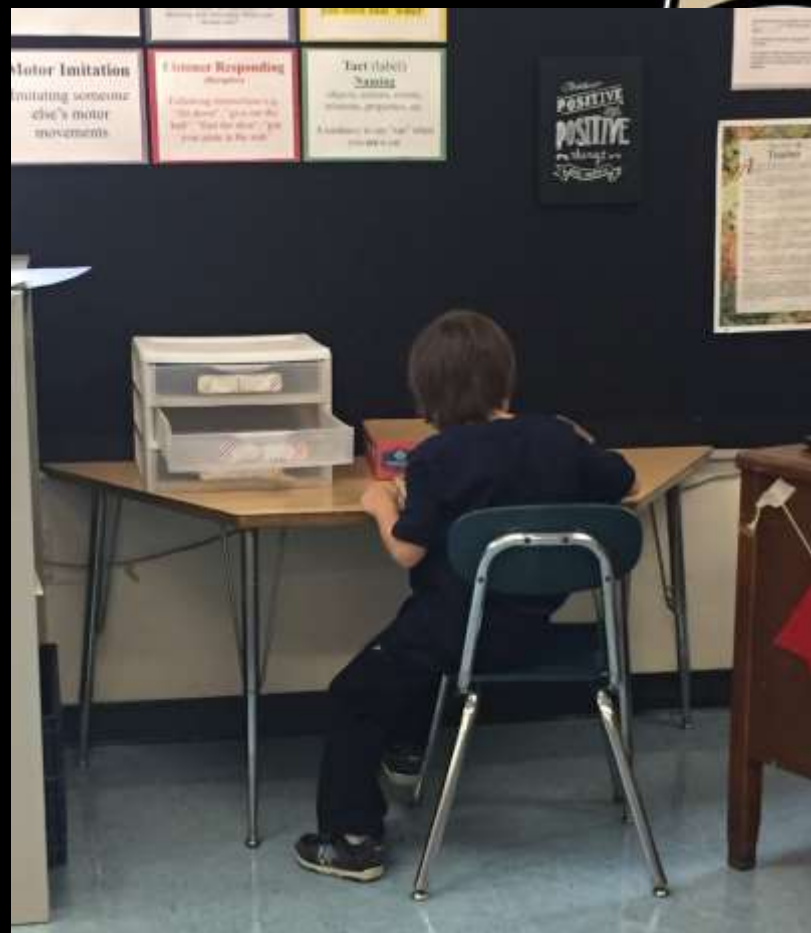
Backward Chain Procedures



- Assessment was conducted
- Student had zero skills
- Began teaching in a backward fashion
 - “Time to do your work”
 - Hand over hand to raise hand
 - reinforcement delivered
- As student mastered skills, steps were considered independent
- 3 Bins with mastered tasks
- Label bins 1, 2, 3
- Can also be done with drawers



Backward Chain Procedures



Step#	S ^D /Consequence	Response			
1	S ^D : Go do your work → C: In front bins ←	Orient to bins	FP PP IND	FP PP IND	FP PP IND
2	S ^D : Facing bin, C: touch bin 1	Reach bin 1	FP PP IND	FP PP IND	FP PP IND
3	S ^D : touching bin 1, C: bin 1 on table	take bin 1 to table	FP PP IND	FP PP IND	FP PP IND
4	S ^D : bin 1 on table C: in chair with bin in front of learner	Sit in chair	FP PP IND	FP PP IND	FP PP IND
5	S ^D : in chair w/ bin, see materials C: Materials on table	Put materials on table	FP PP IND	FP PP IND	FP PP IND
6	S ^D : in Chair, materials on table C: Materials set up	Set up materials to complete task 1	FP PP IND	FP PP IND	FP PP IND
7	S ^D : Materials set up C: Task 1 completed	Complete task 1	FP PP IND	FP PP IND	FP PP IND
8	S ^D : Task 1 completed, materials on table C: Materials in hand	Pick up materials	FP PP IND	FP PP IND	FP PP IND
9	S ^D : Materials in hand, C: in done bin, empty container on table	put in done bin	FP PP IND	FP PP IND	FP PP IND
10	S ^D : empty container on table C: oriented towards bins	Face bins	FP PP IND	FP PP IND	FP PP IND
11	S ^D : orienting towards bin C: oriented towards bin	Put empty bin back	FP PP IND	FP PP IND	FP PP IND





Step #	S ^D /Consequence	Response			
12	S ^D : Facing bin, C: touch bin 2	Reach bin 2	FP PP IND	FP PP IND	FP PP IND
13	S ^D : touching bin 2, C: bin 2 on table	take bin 2 to table	FP PP IND	FP PP IND	FP PP IND
14	S ^D : bin 2 on table C: in chair with bin in front of learner	Sit in chair	FP PP IND	FP PP IND	FP PP IND
15	S ^D : in chair w/ bin, see materials C: Materials on table	Put materials on table	FP PP IND	FP PP IND	FP PP IND
16	S ^D : in Chair, materials on table C: Materials set up	Set up materials to complete task 2	FP PP IND	FP PP IND	FP PP IND
17	S ^D : Materials set up C: Task 2 completed	Complete task 2	FP PP IND	FP PP IND	FP PP IND
18	S ^D : Task 2 completed, materials on table C: Materials in hand	Pick up materials	FP PP IND	FP PP IND	FP PP IND
19	S ^D : Materials in hand, C: in done bin, empty container on table	put in done bin	FP PP IND	FP PP IND	FP PP IND
20	S ^D : empty container on table C: oriented towards bins	Face bins	FP PP IND	FP PP IND	FP PP IND
21	S ^D : orienting towards bin C: oriented towards bin	Put empty bin back	FP PP IND	FP PP IND	FP PP IND
22	S ^D : Facing bin, C: touch bin 3	Reach bin 3	FP PP IND	FP PP IND	FP PP IND
23	S ^D : touching bin 3, C: bin 3 on table	take bin 3 to table	FP PP IND	FP PP IND	FP PP IND
24	S ^D : bin 3 on table C: in chair with bin in front of learner	Sit in chair	FP PP IND	FP PP IND	FP PP IND
25	S ^D : in chair w/ bin, see materials C: Materials on table	Put materials on table	FP PP IND	FP PP IND	FP PP IND
26	S ^D : in Chair, materials on table C: Materials set up	Set up materials to complete task 3	FP PP IND	FP PP IND	FP PP IND



Step #	S^D/Consequence	Response			
27	S ^D : Materials set up C: Task 3 completed	Complete task 3	FP PP IND	FP PP IND	FP PP IND
28	S ^D : Task 3 completed, materials on table C: Materials in hand	Pick up materials	FP PP IND	FP PP IND	FP PP IND
29	S ^D : Materials in hand, C: in done bin, empty container on table	put in done bin	FP PP IND	FP PP IND	FP PP IND
30	S ^D : empty container on table C: oriented towards bins	Face bins	FP PP IND	FP PP IND	FP PP IND
31	S ^D : orienting towards bin C: oriented towards bin	Put empty bin back	FP PP IND	FP PP IND	FP PP IND
32	S ^D : orienting towards bin C: sitting in chair	Sit back in chair	FP PP IND	FP PP IND	FP PP IND
33	S ^D : sitting in chair C: hand raised, teacher approaches	Raise hand	FP PP IND	FP PP IND	FP PP IND
Percent Prompted Steps: total prompted=					
Percent Independent Steps: total independent=					



Independent Work Training Video



Academic Independent Work

<https://youtu.be/0Vpe86jJah8>

Independent Work

<https://youtu.be/MG0hXKa3Wdc>



Independent Work...Whats next?



- Transfer to functional skills (sorting socks, sorting silverware)
- Transfer skills to inclusion in the general education classroom
- Mands for missing items



Inclusion Data



Student: Brayden W. Week of: 10/15-17

Monday 8	Independent	Prompted	PB Exhibited?
Enters classroom appropriately	✓		
Locates seat, sits down	✓		
Organizes materials appropriately	✓	✓	
Completes tasks 1-4	✓		
Completes tasks 5-8	✓		
Cleans up/gathers materials appropriately	✓		
Leaves classroom appropriately	✓		

4/7

80 % of classroom routines completed independently

Tuesday 9	Independent	Prompted	PB Exhibited?
Enters classroom appropriately	✓		
Locates seat, sits down	✓		
Organizes materials appropriately	✓		
Completes tasks 1-4	✓		
Completes tasks 5-8	✓		
Cleans up/gathers materials appropriately	✓		
Leaves classroom appropriately	✓		

7/7

100 % of classroom routines completed independently

Wednesday 10	Independent	Prompted	PB Exhibited?
Enters classroom appropriately	✓		
Locates seat, sits down	✓		
Organizes materials appropriately	✓		
Completes tasks 1-4	✓		
Completes tasks 5-8	✓		
Cleans up/gathers materials appropriately	✓		
Leaves classroom appropriately	✓		

7/7

100 % of classroom routines completed independently



References



- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis*, 2nd ed. Upper Saddle River, N.J.: Pearson Prentice Hall.
- Regan, T. (2015, July). Hygiene in adolescents with ASD (Autism at-a-Glance Brief). Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, CSEA Development Team.
- Cocchiola, M. A., Martino, G. M., Dwyer, L. J., & Demezzo, K. (2012). Toilet Training Children With Autism and Developmental Delays: An Effective Program for School Settings. *Behavior Analysis in Practice*, 5(2), 60–64.

