



Implementing the Practical Functional Assessment in a School Classroom

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Introduction

Problem behaviour in public school classrooms, particularly that exhibited from students diagnosed with autism spectrum disorder (ASD), continues to be a growing concern for many educators.

Research in the area of behaviour analysis continues to demonstrate the effectiveness of evidence-based treatments to reduce problem behaviour and increase independent skills within controlled settings. However, there is limited research on the sustainability and efficacy of implementing evidence-based behavioural interventions within a natural environment; such as a classroom setting (Taylor et al, 2018).

To further explore the efficacy and sustainability of implementing evidence-based treatments within a classroom setting, our school-based team and supervising behaviour analysts researched, trained, and implemented the Practical Functional Assessment (PFA) and Skill Based Treatment (SBT) process. We examined its effectiveness of reducing problem behaviour during the presentation of denial, while building tolerance and compliance in relation to skill building in a natural setting (Hanley, Jin, Vanselow, Hanratty, 2014).

Goals of the PFA and SBT in the classroom setting:

- During assessment, determine establishing operations (EO) that will evoke non-dangerous problem behaviour
- Develop a functional communication response (the mand) to replace problem behaviour
- Tolerating denial
- Providing consistent and reliable access to synthesized reinforcement (SR)
- Relinquishing preferred stimuli
- Establishing contextually appropriate behaviour (CAB)
- Increasing tolerance to presentation of work tasks and demands
- Build capacity by training on-site school staff

Participants

Participant 1 – Male diagnosed with ASD; age 12, in grade 7, English as a second language

- Pre-listener and Pre-speaker levels of verbal behaviour
- Required partial manual guidance for all daily skills

Participant 2 – Male diagnosed with ASD; age 12, in grade 7

- Established Listener and Speaker repertoires
- Consistently demonstrated a lack of fluent instructional control when work tasks were presented

Participant 3 – Female diagnosed with ASD; age 11, in grade 6, English as a second language

- Pre-listener and Pre-speaker levels of verbal behaviour
- Consistently demonstrated a lack of fluent instructional control when work tasks were presented

All Participants

- Learning history included significant problem behaviour, including, but not limited to, self-injury, aggression, property destruction, and refusal
- Were not successful in a general inclusive classroom setting
- Supported by 2:1 support staff in the school setting
- Supervised by a classroom teacher (Junior Behaviour Consultant), two Board Certified Behaviour Analysts (BCBA) and an additional Junior Behaviour Consultant

Setting

Special Education Classroom

- Located in a BC Public School District
 - Self-contained, Intensive Intervention Program (IIP)
 - Four classrooms spaces and a sensory room
 - Sessions took place at a desk, a designated floor mat or hallway area
- Residential Resource Facility*
- One participant required implementation within a staffed residential resource facility
 - Sessions took place on a couch or table in the living room area

Methods

Practical Functional Assessment Process

- Open-Ended Functional Assessment interview completed by classroom teacher, support staff, and supervising BCBA
- Baseline data collected from the interview-informed synthesized contingency analysis (ISSCA) by Dr. Jessel, BCBA-D (FTF Behavioral Consulting, Inc.)
- Analysis of the EO, dangerous (R1), and non-dangerous (R2) problem behaviour (present during IISCA or previous history)
- Based on the open-ended interview and data collected during the ISSCA, a personalized analysis was completed for each individual student in consultation with Dr. Jessel, BCBA-D

Participant	Dangerous Problem Behaviour	Non-Dangerous Problem Behaviour
	R1	R2
1	<ul style="list-style-type: none"> • Aggress towards staff (hit, push, pull, hair pull) • Self-injury (hit head with fist, hit head to wall) • Throw stimuli 	<ul style="list-style-type: none"> • Scratch others • Pinch others • Grab others • Swipe stimuli off table
2	<ul style="list-style-type: none"> • Aggress towards staff (hit, punch, kick) • Issue verbal threats • Property destruction (kick or punch walls, throw stimuli into walls, break windows) 	<ul style="list-style-type: none"> • Demand refusal (ignore staff, vocal protest) • Avoidance (tasks or staff members) • Questioning • Swipe stimuli
3	<ul style="list-style-type: none"> • Push others • Hit staff • Self-injury (biting hand more than 2-3 seconds) 	<ul style="list-style-type: none"> • Avoidance • Flopping and dropping to the floor • Refusal (vocal protest) • Self-injury (biting hand < 2 seconds)

Hanley et al., 2014

Skill-Based Treatment Process

- Followed the systematic procedure of the Skill-Based Treatment workbook (FTF Behavioral Consulting Inc., 2019) during weekly consultation with Dr. Jessel
- Established simple (sFCR) and then complex functional communication response (cFCR)
- Established tolerance response (TR) to teach denial and delay to SR

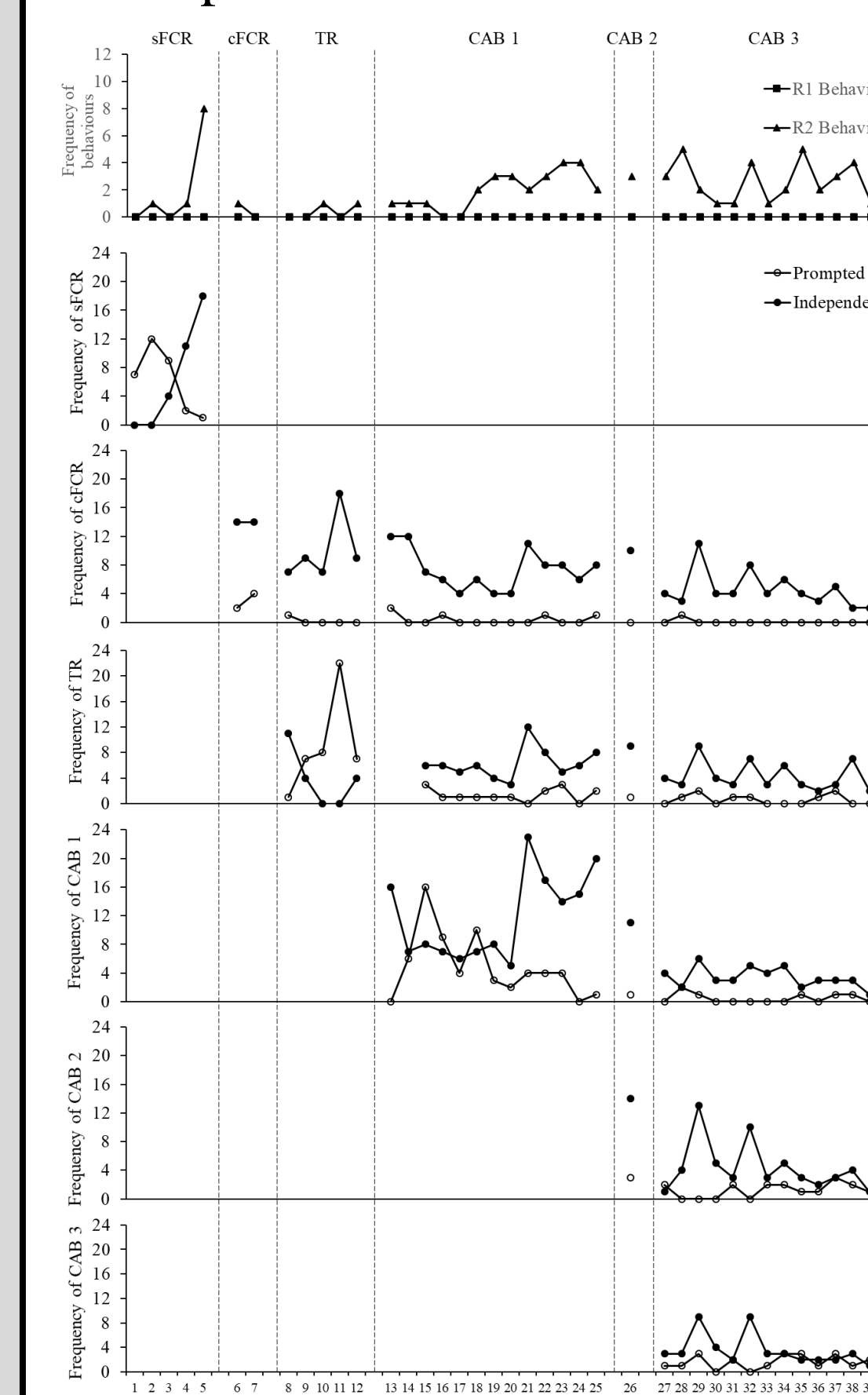
Participant	Functional Communication Response Training		Tolerance Response Training
	sFCR	cFCR	TR
1	2D icon exchange	2D icon exchange moved around the learning environment	Hands folded or flat on the desk not touching stimuli
2	“Sheriff’s way”	“Excuse me?” (wait for instructor response), “Can I have Sheriff’s way, please?”	Hands folded on desk (not touching any stimuli) paired with vocal response “OK”
3	“My way”	“My way, please”	Hands folded on desk (not touching any stimuli) paired with vocal response “OK”

Hanley et al., 2014

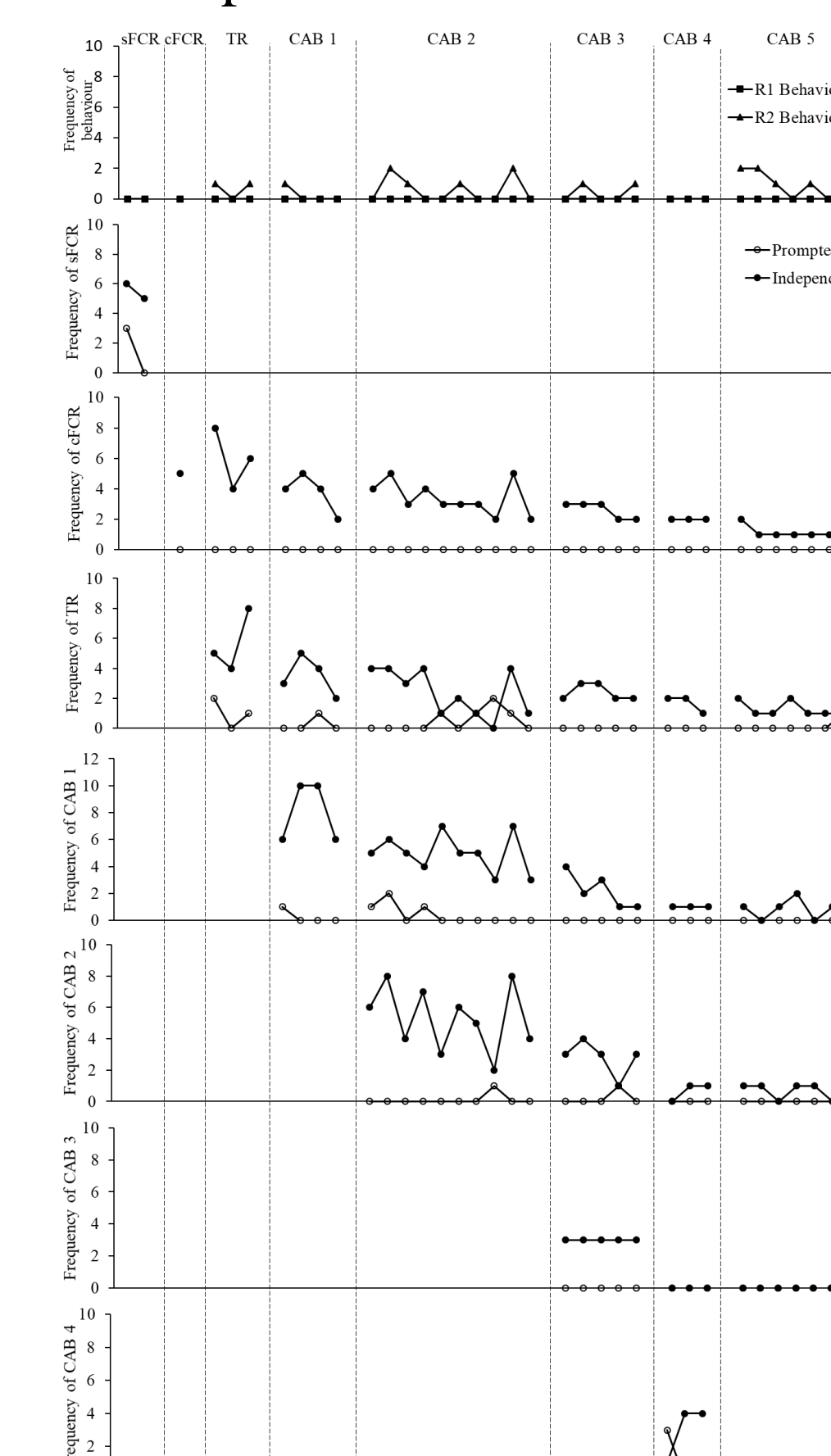
- Adapted mastery criterion to be personalized to each individual learner
- Introduced CAB targets to each learner after the presentation of the TR

Results

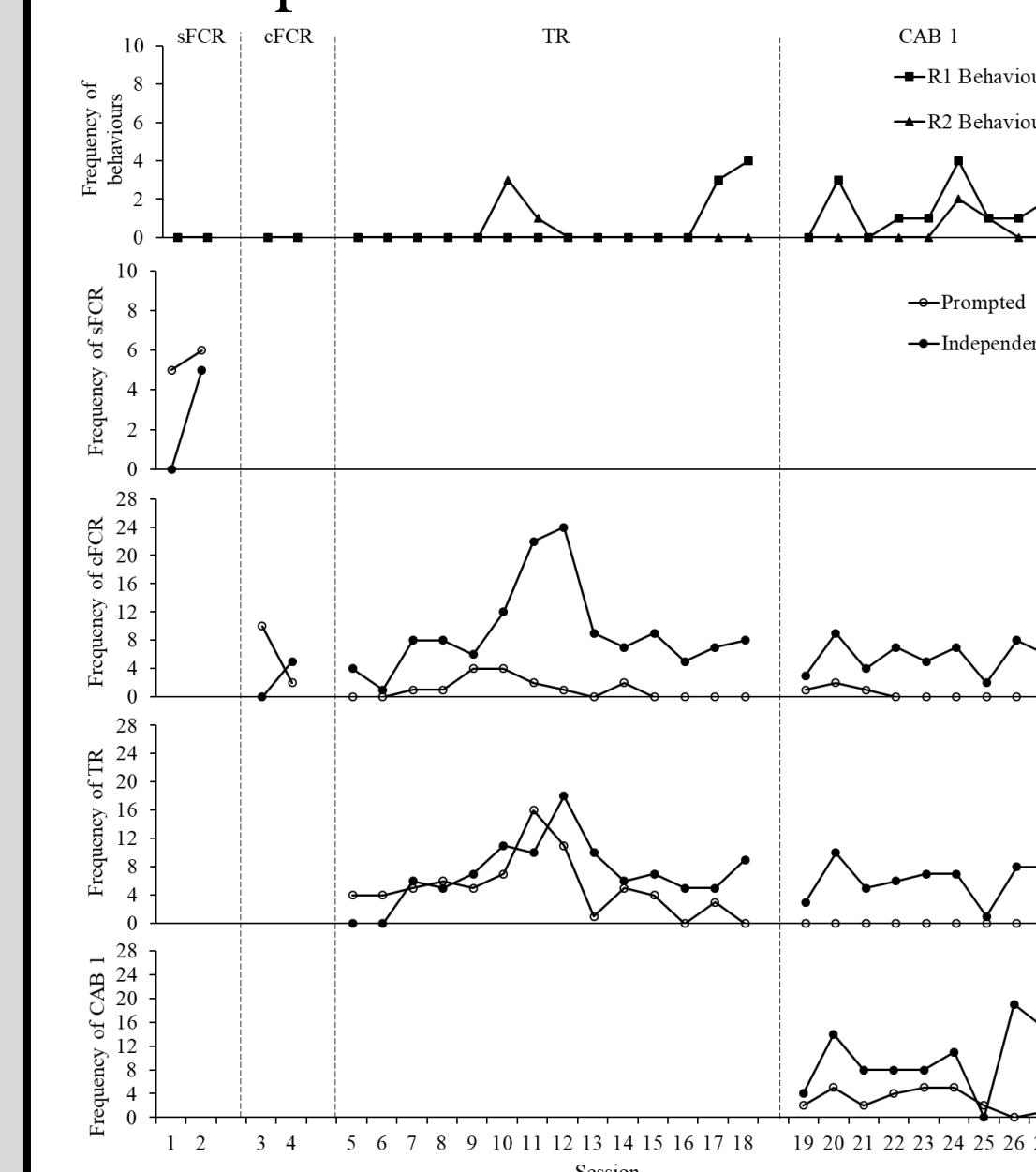
Participant 1:



Participant 2:



Participant 3:



*Participant 2 graph – CAB 3 and 4 are included in CAB 5 so there was no implementation of CAB 3 and 4 reported individually.

* Note: A limitation was that an equal number of trials per session was not run so there is fluctuation in the frequency of trials per session.

Contextually Appropriate Behaviours

Participant	CAB 1	CAB 2	CAB 3
	Instructional control of stopping on-going activity & relinquishing reinforcers	Instructional control of transitioning to alternative area and readying to listen/learn	Instructional control of (1-3) responses/time units of cooperation within a single, relevant activity
1	Relinquishing ball or edibles, tolerating physical prompts (lifting up hand, touching forearm)	Adapted – touching novel stimuli (touching a puzzle piece, putting a shape in the shape sorter, open/closing book)	Adapted – stand up/sit down, transition from one desk and chair to another desk and chair
2	Relinquishing board game pieces, engaging in simple listener behaviour responses, single-step gross motor imitation	Transition around learning environment to locate target items, engage with alternative staff	Tolerate presentation of academic literacy tasks, complete mastered learning task
3	Pausing song or videos, relinquishing iPad, books, paper, and fabric, engaging in single-step gross motor imitation	Adapted – transition from desk to rolling chair or to designated floor mat	Not yet implemented

Hanley et al., 2014

Participant	CAB 4	CAB 5
	Instructional control of a few (1-3) responses/time units of cooperation within multiple relevant activities	Instructional control of 1-12+ responses/time units of cooperation w/in multiple activities
2	Tolerate presentation of multiple academic literacy tasks (language arts and math), and complete 1 – 3 responses	Tolerate presentation of multiple academic literacy tasks (language arts and math), and complete 1-12 responses

Hanley et al., 2014

Modifications

To meet the individual needs of each participant, the criterion used by FTF Behavioural Consulting, Inc. was adapted from five consecutive correct target responses to the following:

- Participants 1 & 3 had a mastery criterion of 2 x’s 10 consecutive correct responses and the absence of R1/R2 behaviours
- Participant 2 had a mastery criterion of 1 x’s 10 consecutive correct responses and the absence of R1/R2 behaviours

Participant 2 initial assessment and treatment conducted in a staffed residential resource facility:

- During CAB 2 the student returned to the school setting
- Significant problem behaviour occurred outside the procedure compromising treatment fidelity
- Participant 3 returned to residential resource facility
- School staff attended the residential resource facility to continue with school sessions and treatment

Synthesized reinforcement (SR) condition:

- Participants 1 & 3 required increased duration from 30 – 45 seconds to 1 to 2 minutes per SR condition
- Adaptation of the duration of the SR condition was implemented to reduce problem behaviour and increase the likelihood to engage in cFCR (the mand) after the EO was presented

CAB 1 was modified for all participants:

- Re-assessment and additional consultation with Dr. Jessel to re-design CAB 1 for participants 1 & 3
- Participant 2 had consistent access to non-contingent reinforcement (NCR) throughout each trial
- Participant 3 required edibles to be added in CAB 1’s SR condition due to high frequency absenteeism and limited expanded community of reinforcers

Dangerous problem behaviour (R2) re-evaluated:

- Extinction was implemented for participant 3’s hand biting behaviour during CAB 1
- If hand biting occurred for < 2 seconds, planned ignore and redirection were implemented, and the staff continued to run the responses as scripted

Limitations

- Sessions limited to only trained staff – challenging in a classroom setting with staff unfamiliar with data collection and procedure.
- Generalization was attempted with other staff, but they were unable to maintain procedural fidelity, and independent responding for the target CAB was compromised
- Participant 3 had high frequency absences from school, which limited learning opportunities and progression in school setting

References

- FTF Behavioral Consulting Inc. (2019). Skill-based treatment workbook.
- Hanley, G. P., Jin, S. C., Vanselow, N. R., & Hanratty, L. A. (2014). Producing meaningful improvements in problem behaviour of children with autism via synthesized analyses and treatments. *Journal of Applied Behavior Analysis* 47 (1), 16-36. <https://doi.org/10.1002/jaba.106>
- Hanley, G. P., & Gover, H. (2020, January) *Understanding problem behavior prior to its treatment*. Practical functional assessment. <https://practicalfunctionalassessment.com/>
- Jessel, J., Ingvarsson, E. T., Metras, R., Kirk, H., & Whipple, R. (2018). Achieving socially significant reductions in problem behavior following the interview-informed synthesized contingency analysis: A summary of 25 outpatient applications. *JABA*, 51, 130–157.
- Taylor, S. A., Phillips, K. J., & Gertzog, M. G., (2018). Use of synthesized analysis and informed treatment to promote school reintegration. *Behavioral Interventions* 33 (4), 364-379. <https://doi.org/10.1002/bin.1640>