AN EVALUATION OF THE EFFECTS OF IMMEDIATE PROMPTING AFTER CHALLENGING BEHAVIOR OCCURS DURING FUNCTIONAL COMMUNICATION TRAINING

by

AMANI SHUKUKANI

(Under the Direction of Joel Ringdahl)

ABSTRACT

Functional communication training (FCT) is an effective function-based intervention that reduces challenging behavior by teaching individuals more appropriate ways of communicating their needs and wants. Various prompting methods have been used to reduce challenging behavior during FCT. These prompting methods include prompting the functional communication response (FCR) immediately after challenging behavior occurs, implementing a time-out before prompting the FCR, or prompting immediately after disrupting access to reinforcers. The current study evaluated the effects of immediate prompting following challenging behavior during FCT. The results of this study indicated that immediate prompting reduced tangible-maintained challenging behavior to low levels and was shown to increase the acquisition of FCRs.

INDEX WORDS: challenging behavior, self-injury, tangible maintained, FCT, prompt.

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DEDICATION

As I am writing my thesis, I realized many things. I realize that I am currently living in one of my answered prayers. I realize that I am one step closer to my dream of becoming a BCBA, one step closer to helping individuals and children become the best independent version of themselves. I realize that while I am living my "dream", there are others currently living in a "nightmare". I often ask myself "how and when did we lose our humanity?" Was it when we started reporting deaths as merely just numbers and statistics? Was it when we stopped sharing their names and stories? Or was it when we became too politically involved that we stopped having empathy for the opposing side? Innocent Palestinian civilians killed are not "collateral damage" nor are they a "misfortunate" side effect of the war. They were people with names, dreams, and hopes just like everybody else.

- Besan, 19-year-old, was in her 2nd year of pre-med.
- Dr. Omar Firwana - was the dean of the medical faculty at the IUG university.
- Roshdi Sarraj- 31-year-old journalist and reporter.
- Yousef- 7-year-old boy. He just graduated from elementary school.
- Awni al Dous – 12-year-old, had a YouTube channel "Gaming". His dream was to reach 10M subscribers.
- Mahmoud Abu Salima – 15-years-old, played at the soccer football academy in Rafah, his dream was to be the goalkeeper of the Palestine National Team.
- Heba Zagout, talented artist. She used to sell some of her beautiful paintings. People are remembering her through her beautiful vibrant artwork shared on social media.

And many other dreams, names, and aspirations. I grieve for all the lives lost and I hope one day we are better able to empathize and feel for other sufferings and tragedies. I want to conclude this section by this quote by Khadija Dajani. “There is no English equivalent to the Arabic word قَهْر (Qaher). The dictionary says “anger” but it’s not. It is when you take anger, place it on a low fire, add injustice, oppression, racism, and dehumanization to it. You try to say it, but no one hears you. So, it sits in your heart… and moves through generations. And one day you, you find yourself unable to breathe. It washes over you and demands to break out of you. You weep and weep... and the cycle repeats”.

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Dr. Cagliani, I am incredibly grateful to you. Your kindness and support have meant a lot to me. Thank you for believing in me and encouraging me to be the best version of myself. Thank you for always reminding us of the importance of what we do and why we do it. Truly, your knowledge and compassion has impacted me in so many ways.

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support. Your feedback have helped me become the person I am today. Thank you for creating that safe nonhostile environment. Lastly, thank you to all my friends and supervisors who helped me with everything including data collection. This thesis would not be possible without you.

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CHAPTER 1

INTRODUCTION

Individuals diagnosed with autism spectrum disorder or other developmental disabilities are more likely to engage in a wide range of challenging behaviors than their typical developing peers (Minshawi et al., 2014). Engaging in such challenging behaviors can hinder and impact some important areas of the individual's life, such as their educational and social opportunities. For example, the display of challenging behaviors can restrict instructional time at school, inhibiting social and learning opportunities. The prevalence and onset of challenging behaviors can begin at a young age and can continue to manifest throughout an individual's life (Fodstad et al., 2012). Severe challenging behaviors, such as self-injurious behaviors (SIB) can pose many barriers to an individual's life. Self-injurious behavior is defined as behavior that an individual engages in that may inflict injury to themself (Minshawi et al., 2014). Examples of SIB include head banging, skin pinching, and self-biting. Individuals who engage in SIB were also found to display other forms of challenging behaviors, such as aggression (Waters & Healy, 2012). Given the impact of challenging behavior such as SIB and aggression on individual functioning, early interventions may be important in the treatment of those challenging behaviors.

Several variables have been identified that contribute to the maintenance of challenging behaviors. Carr (1977) suggested that SIB is likely shaped and maintained by operant reinforcement. Examples of operant mechanisms suggested by Carr (1977) include positive reinforcement, negative reinforcement, and sensory stimulation. These operant mechanisms are often referred to as the operant functions of the behavior. Identifying the function, or purpose of

the behavior, can provide insight into treatment design for challenging behavior. For instance, an individual might engage in SIB in an effort to access toys (positive reinforcement), escape from demands (negative reinforcement), gain attention from people in the environment (positive reinforcement), or due to a non-social reinforcement source (sensory stimulation). Due to the severity of SIB, stakeholders might inadvertently strengthen and reinforce the challenging behavior by providing the individual with their desired toy or a break from a demand as a means of "calming" the individual. In many cases, the function of challenging behavior can serve a social and communicative function. For example, several studies have concluded that there might be an association between deficits in communication and the display of challenging behaviors in this population (Minshawi et al., 2014; Pattison & Robertson, 2015). Because of the difficulty in communication, individuals might engage in those challenging behaviors as an alternative to access their needs and wants.

Given that challenging behavior can be communicative, it is important in such cases to teach the individual an appropriate way of communicating their needs and wants to others in the environment. Functional communication training (FCT) has been found to reduce challenging behavior in numerous studies (Carr & Durand, 1985; Tiger et al., 2008). In particular, FCT is mostly used to replace challenging behaviors maintained by socially mediated reinforcers such as tangible, escape, and attention (Derosa et al., 2014). The premise behind the success of FCT is that the functional communicative response (FCR) emitted by the individual produces access to the same type of reinforcer maintaining the challenging behavior (Fisher et al., 1993). For example, if the individual's challenging behavior is maintained by access to stimuli, the implementer can teach the individual an appropriate alternative communicative method to ask for toys. Different modalities of communicative responses found to be successful in FCT-based

interventions include the use of vocal responses, card communication (PECS or card touch), manual sign, microswitch activation, and the use of speech generating devices (Randall et al., 2021).

Because FCT is a function-based intervention (Carr & Durand, 1985), it is important to first identify the variable(s) maintaining an individual's challenging behavior. A functional analysis of challenging behavior per Iwata et al. (1982/1994) is the standard assessment for identifying the maintaining variables of challenging behavior. This approach to assessment often includes the systematic manipulation of antecedent and consequent events. Since the initial publication of the assessment methods described by Iwata et al., various functional analysis formats have emerged. These include trial-based-functional analysis (Sigafoos &Saggers,1995) and latency based-functional analysis (FA; Thomason-Sassi et al., 2011). Regardless of the format used to assess the function of challenging behavior, the results of the functional analysis are used to inform what reinforcer(s) should be arranged for appropriate communication. A socially acceptable communicative response can be taught to gain access to the reinforcer(s) maintaining the challenging behavior. In this way, challenging behaviors and appropriate communication are then considered to be from the same response class because they both provide the same reinforcer maintaining the behavior (Carr, 1998; Horner & Day, 1991).

The general efficacy of FCT (Tiger et al., 2008) has led researchers to further investigate various implementation strategies (Hagopian et al., 1998). First, contingency arrangements vary and include FCT with extinction and FCT without extinction (Hagopian et al., 1998; Shirley et al., 1997). FCT without extinction can include concurrent reinforcement schedule components in which identical reinforcers are programmed for both challenging behavior and communicative responses, or schedule components in which communicative behavior produces (a)

reinforcement on a denser schedule, (b) greater magnitude reinforcement, or (c) higher quality reinforcement. Second, response selection varies. Some studies utilize response efforts (Buckley & Newchok, 2005). Other studies have utilized preferred communication modalities (Ringdahl et al., 2018). Third, prompting strategies, such as the frequency of prompting (Ringdahl et al., 2023) and timing of prompting (Landa et al., 2021) to bring about the functional communicative response (FCR) have been evaluated.

One prompting approach that has recently been evaluated involves immediately prompting the FCR following the occurrence of challenging behavior (Landa et al., 2021; Najdowski et al., 2008; Shukla & Albin, 1996). According to Landa et al. (2021), immediately prompting FCR after challenging behavior occurs can result in an increase in the rate of FCRs and a decrease in challenging behavior due to the FCR receiving reinforcement. For instance, researchers Shukla and Albin (1996) compared the effects of extinction alone and extinction plus FCT on the rate of challenging behavior. In FCT plus extinction, the therapist prompted the FCR immediately after challenging behavior occurred and then provided reinforcement for 30 s following the prompt response. Compared to other conditions, they found that FCT plus extinction decreased challenging behavior to almost zero levels. Therapists conducted a follow-up study in which challenging behavior continued to remain at near zero levels. These results were also evident in Najdowski et al. (2008) study in which immediate prompting happened after the occurrence of precursor behavior. Precursor responses that occur prior to challenging behavior may be functionally related to the challenging behavior as it provides the same consequence on the environment. Results of the study show that challenging behavior remained low and FCRs continued to increase during FCT.

These three studies suggest benefits to prompting the FCR immediately after challenging behavior occurs. However, that approach has also been reported to have opposite effects. Wacker et al. (1990) found that immediate prompting directly after challenging behavior occurs resulted in an increase in challenging behavior compared to implementing a time-out procedure. Similarly, Shirley et al. (1997) and Hagopian et al. (1998) found a decrease in challenging behavior only when FCT occurred with punishment (Hagopian et al.,1998). Both studies suggested that immediate prompting inadvertently created this inappropriate response chaining between the occurrence of challenging behavior and the communication response. For example, the individual would engage in a challenging behavior and then immediately engage in a communicative response thereby receiving reinforcement.

Due to these varying results, other reactive strategies have been evaluated, as well. Such a strategy has been reported by (Brown et al., 2000; Wacker et al., 1990) where a brief time-out was implemented following occurrences of challenging behavior. After that time-out period is done, the FCR was prompted. This response strategy allowed for temporal distance between the challenging behavior and the prompt, thereby weakening the response chain evident in the reactive response. However, this approach could have also resulted in other challenges. For instance, researcher Kuhn et al. (2006) found that appropriate responses might be extinguished if other behaviors in that same response chain were placed on extinction. This outcome could be a potential problem if the individual emits FCR during the time-out following challenging behavior and does not receive a reinforcer following the response. The two behaviors (appropriate and inappropriate) might concurrently be placed on extinction. In addition, Horner and Day (1991) found that delaying the reinforcer resulted in a higher rate of challenging behavior than if it was to be delivered immediately after FCR. This finding

suggested that an extinction burst (Lerman et al., 1999) might occur during this approach, especially if the time-out interval was long.

Another approach that might prevent the occurrence of undesirable response chain and extinction burst is preemptive prompting as defined by (Landa et al., 2021). This strategy involves prompting the response immediately after the disruption of the reinforcer. After low levels of challenging behavior, a progressive prompt delay is introduced allowing the occurrence of an independent FCR. This approach was reported by Axe et al. (2021), in which the therapist immediately prompted an FCR following the academic task demand. The results of the study show low levels of challenging behavior. However, the participant emitted more prompted responses during the MTL phase than in the FCT phase. This could indicate potential challenges in prompting the FCR immediately when establishing FCRs in an individual.

Landa et al. (2021) evaluated the effect of the three different prompting strategies described above on challenging behavior during FCT. Researchers found that immediate reactive prompting reduced challenging behavior to two out of four participants. For the third participant, researchers incorporated a delayed prompt to decrease challenging behavior before reinstating the immediate reactive prompt. For the last participant, an immediate/immediate prompt resulted in a decrease in challenging behavior. The purpose of this study is to further evaluate the effects of immediate reactive prompting on challenging behavior during functional communication training. Specifically, this study is a systematic replication of Landa et al. (2021) and extends the literature by a) providing more insight on whether FCT that includes immediate reactive prompting can reduce challenging behavior and b) extending the results of Landa et al. (2021) by replicating it with a different communicative response topography.

CHAPTER 2

METHOD

Participant and Setting

One child with an educational eligibility for special education and speech or language impairment participated in this study. The participant was selected for the study based on direct observation of challenging behaviors that hindered the student's progress during instructional time. The participant was also included in the study based on the results of functional analysis that showed challenging behavior sensitive to social reinforcers. Luke, a five-year-old Black male, engaged in SIB in the form of head to surface and aggression in the form of scratching and biting. On the Preschool Language skill (Zimmerman et al., 2011), Luke scored 52 for expressive communication and 50 for total language (85 to 115 is average) which suggests severe receptive and expressive language delay. Luke was nonverbal and primarily just vocalized certain vowel sounds. Sometimes, he would gesture or point to things he wanted. Prior to the study, the participant had mastered phase I of PECS. However, Luke did not exchange any picture cards with his teachers. The researcher conducted a free operant preference assessment (Roane et al., 1998) to identify highly preferred tangibles. Luke's highly preferred toy was legos.

The researcher conducted sessions at an elementary public school in a self-contained special education pre-K classroom. FCT sessions and functional analysis conditions of free play, tangible and attention conditions were all conducted in the play area of the classroom. The demand condition of the functional analysis was conducted at the table where discrete trial training (DTT) usually takes place.

Material

Materials used in this study included preferred tangibles (farmhouse and Legos) identified during the free operant preference assessment, instructional materials for the demand condition of the FA, a corresponding picture card (10 x 15 cm) on a pecs book, an iPad for video recording, and a pad to block instances of SIB.

Response Definitions and Measurement

Initially, the researcher used direct observation in the classroom to determine the target behaviors for the FA and FCT conditions. Luke's challenging behaviors included different topographies of aggression (scratching, biting, and grabbing) and SIB (head to surface). Head-to-surface SIB was defined as any instance in which the student's head comes into contact with a surface at a distance of ten centimeters or more. Scratching was defined as any instance or attempt in which the student's fingernails drag down or across on another person (each hand counts as one instance). Biting was defined as any instance or attempt in which the student's mouth opens and closes onto a person's body. Grabbing was defined as any instance in which the student's hand or fingers opens and closes around another person's body or clothing on their person.

Occurrences of FCRs were also monitored as a dependent variable. The researcher wanted to assess whether immediate prompting during FCT increases independent FCRs. Functional communication response was defined as the student independently (without any prompting) exchanges a corresponding picture card (Lego) with the therapist.

Measurement System and Data Collection

Two dependent variables measured in this study include occurrences of challenging behavior and FCRs. Researchers used total frequency of challenging behavior and FCRs to

report rate in baseline and treatment sessions. Using the Countee app, researchers counted each instance of aggression, SIB, and FCRs in a 5-min session.

Interobserver Agreement and Procedural Fidelity

The researcher trained graduate students prior to the start of the study by explaining the procedure of the study, behavior definitions, and how to use Countee. Interobserver agreement (IOA) data was collected for at least 37% of sessions in all conditions. A secondary independent observer collected IOA in person or by watching a video recording. If the IOA agreement was less than 85%, the researcher clarified topographies of challenging behavior. IOA for the latency-based FAs was derived by comparing the latency to response time within a 3 second interval between the first instance of target behavior. The researcher divided the shorter latency in seconds by the larger number of latency and multiplied it by 100 (Thomason-Sassi et al., 2011). The average percentage of IOA across FA conditions was 98%. To compute agreement between observers in FCT sessions, the researcher compared responses within 10-s intervals. Specifically, the researcher calculated IOA by dividing the smaller number of responses by the larger number of responses in that interval. Mean agreement for challenging behavior was 97% and 100% for FCRs.

Procedural fidelity was collected for 33% of the sessions in each condition. The procedural fidelity was in the form of a checklist where a secondary observer recorded whether each step was performed correctly. The average procedural fidelity was 100%.

Experimental Design

A multielement design was used during the latency-based FA in which test and control conditions were alternated. Intervention effects were evaluated within an ABAB (A= baseline; B = treatment) design. The researcher utilized a reversal design to assess whether immediate

prompting decreased challenging behavior and increased FCRs. Using this design, the researcher is able to assess the effects of the intervention on the behavior. A phase change occurred when the data was stable or depicted an upward trend for challenging behavior during baseline sessions. A return to baseline was determined when the data was stable or depicted a downward trend for challenging behavior and upward trend for FCRs.

Procedures

The researcher conducted a latency-based FA based on the procedures described by Thomason-Sassi et al. (2011). Each FA alternated between four conditions, including tangible, attention, demand, and control (free play). These conditions were alternated and based on the outcomes of a randomizing generator (List Randomizer; Haahr).

Free play conditions served as the control condition. During free play sessions, the participant had ongoing access to their preferred toys and attention. The teacher did not prompt the participant to play and did not place any demands. The session was terminated contingent on challenging behavior or after 5 min. A calm criterion of 2 min was required before moving to the next condition. The test conditions included demand, tangible, and attention. During the demand condition, the therapist began the session by saying, “It’s time to do some work,” and instructed the participant to complete specific academic tasks that were in his IEP box. Contingent on the occurrence of challenging behavior, the therapist gave the student a break and said, “You don’t have to do it,” and removed all materials from the table and ended the session. If challenging behavior did not occur, the therapist ended the session after 5 min. A calm criterion of 2 min was required before moving to the next condition. During the tangible condition, the participant had access to their highly preferred toy and was provided brief attention every 30-60 s. Once the session started, the teacher said, “It’s my turn with the toy,” and took the toy away. The teacher

provided reinforcement (gave the toy back) and ended the session after 5 min or after the occurrence of challenging behavior. A calm criterion of 2 min was required before moving to the next condition. During the attention condition, the participant had access to their moderately preferred leisure item. Before the start of the session, the participant provided high quality attention to the participant for 2 min. The therapist began the session by saying, “I have some work to do but you can play with your toy,” and immediately stopped providing attention. The session ended after 5 min or after the occurrence of the target behavior. If the target behavior occurred, the therapist provided reinforcement (attention) and ended the session. The reinforcer was provided for at least 30 seconds. A calm criterion of 2 min was required before moving to the next condition.

The therapist reinforced only the target behavior (SIB), all other responses were ignored. However, Luke engaged in other topographies of challenging behavior, such as aggression, during these sessions. To assess whether aggression was a member of the same response class, an additional latency-based FA was conducted targeting aggression.

General procedures

FCT baseline and intervention sessions were conducted using the same reinforcers used in the test condition of the FA in which challenging behavior was identified. The participant had access to their highly preferred item (Legos) for at least 30 s prior to the start of the session. The therapist started the session by stating “it’s my turn with the toy” and took the toy away. Each session lasted for 5 min. A PECS book with one corresponding picture was placed in front of the participant or within arm reach.

Baseline

The researcher conducted a pre-intervention baseline following the FA. Based on the results of the latency-based FAs, the baseline of this study mimicked a tangible condition. Prior to the start of the baseline and intervention sessions, the participant had access to their preferred leisure item for at least 30s. Once the session started, the therapist stated, “It’s my turn with the toy,” and interrupted access to the reinforcer. The therapist reinforced any occurrences of the target behaviors (SIB and aggression) by giving the toy back for 30 s. All other responses were ignored.

Procedural Change

Prior to the second baseline, the therapist provided reinforcement for any type of response without any prompts. If the participant handed the corresponding picture card or engaged in challenging behavior, the therapist gave back the leisure item.

FCT with Delayed Preemptive + Immediate Reactive Prompts

In this treatment condition of FCT, the therapist waited 3 s for an independent FCR. If no response happened within that 3 second interval, the therapist began by providing a gestural prompt pointing at the picture card. If that prompt did not evoke the FCR, the therapist moved up the hierarchy by providing a partial/full physical prompt. If the participant engaged in any topography of the target behavior, the therapist immediately prompted the FCR. Reinforcement was provided for 30 s following any independent or prompted FCR.

CHAPTER 3

RESULTS

Figures 1 and 2 depict the results of the latency-based functional analysis. Luke engaged in SIB (Figure 1) more quickly during the tangible condition compared to the other conditions. The shortest latency to SIB during the tangible condition was 11 s. There was one occurrence of SIB in the attention condition with a latency of 201. Otherwise, SIB did not occur during this condition. Luke engaged in aggression (Figure 2) almost exclusively in the tangible and escape conditions. The shortest latency to aggression during the tangible condition was 19 s and 62 s during the escape condition. There may have been a potential carryover effect during the attention condition in session 9 (latency = 191) from the previous demand condition. Collectively, these results suggested that Luke engaged in multiply maintained challenging behavior (tangible and escape function).

Figure 3 displays the occurrences of challenging behavior and FCRs per minute in baseline and intervention sessions. During the initial baseline, Luke engaged in challenging behavior and did not emit any FCRs. Challenging behavior was on an upward trend with an increase in rate from session 4 to 5. The average rate of challenging behavior was 1.12 responses per minute across sessions. When the intervention was introduced, challenging behavior occurred at an average rate of 0.47 responses per minute. Luke engaged in independent FCRs following the first session of FCT. FCRs continued to increase with an average rate of 0.55 responses per minute. In the procedural change that occurred before the second baseline, Luke engaged in low levels of challenging behavior and FCRs continued to increase in an upward

trend. After reinstating the second baseline, FCRs decreased with an average rate of 0.13 responses per minute. Challenging behavior was depicted in an upward trend with an average rate of 0.93 responses per minute. Finally, once the intervention was reintroduced, challenging behavior decreased to near zero levels with an average rate of 0.12 responses per minute. Occurrences of FCRs were stable and increased with an average rate of 1.16 responses per minute across sessions.

CHAPTER 4

DISCUSSION

This study is a systematic replication of Landa et al. (2021) study that evaluated the effects of immediate prompting after challenging behavior occurred during FCT. It extends previous findings by including a different communicative response topography as well as conducting the study in a more naturalistic environment, such as a school setting. The results of this study strengthen previous findings that recommended the use of immediate prompting after challenging behavior occurs during FCT (Landa et al., 2021; Najdowski et al., 2008). Immediate prompting after challenging behavior occurred resulted in a decrease in the rate of challenging behavior and an increase in FCRs relative to baseline. These findings suggest that immediate prompting of FCR did not result in an undesirable response chain between the occurrence of challenging behavior and the communication response.

Before implementing FCT sessions, the researcher conducted latency-based FAs to identify the function of the behavior. Initially, the target behavior was SIB (head to surface) however Luke engaged in aggression in some of the conditions before engaging in SIB which led the researcher to conduct another FA targeting aggression. Based on the results on the latency-based FAs, Luke's challenging behavior is maintained by an escape and tangible function. It is important to note that Luke struggles with transitions within the classroom (e.g., from play center to the table) and outside the classroom thus a protocol had already been in place for transitions and for working at the table. Therefore, the study only mimicked a tangible condition.

The results of the latency-based FA showed that on average Luke does not engage in challenging behavior immediately after disrupting access to reinforcement (shortest latency to challenging behavior was 11 seconds). This might provide valuable insight as to why delayed/immediate prompting resulted in a decrease in challenging behavior for this participant. For instance, the 3-sec delay prompt might have been an appropriate interval to promote the acquisition of the FCR.

Compared to the initial baseline, a decreasing trend in challenging behavior was evident during FCT sessions. However, in session 6 and 10, Luke engaged in challenging behavior that might have been maintained by a different function. For example, when the researcher prompted the FCR, Luke would engage in challenging behavior even after receiving the leisure item. This might be because the function of his behavior during those sessions was escape rather than a tangible function. Nonetheless, challenging behavior continued to remain low during intervention sessions with an increasing trend in FCRs.

A few limitations are worth noting in this study. First, there was only one participant in this study which limits the generality of these findings across other individuals. Secondly, this protocol was implemented in one setting (play center) in the classroom. It would have been useful to implement the protocol across different settings, such as table activity, where Luke would also typically engage in challenging behavior. Lastly, some undesirable generalization might have occurred after the study ended where Luke would exchange any picture card he sees with the teacher. For instance, during DTT, Luke exchanged a picture card of a toy that he doesn’t usually play with, but the teacher reinforced that FCR by providing him access to that toy. However, he threw the toy away and engaged in SIB.

As previously acknowledged, the participant had mastered PECS phase I prior to the study. In this phase, participants are not taught yet to discriminate between pictures (Frost & Bondy, 2002). Therefore, during the study only one corresponding picture (Lego) was used. One concern of undesirable generalization during FCT, is that challenging behavior could occur more frequently and the trained FCR could result in extinction if it did not result in reinforcement (Falcomata et al., 2013). However, as PECS sessions resumed, Luke was better able to discriminate between picture cards.

Limited research has evaluated the timing of prompts after the occurrence of challenging behavior (Landa et al., 2021). Several studies found that challenging behavior decreased with immediate prompting due to the individual contacting reinforcement after emitting a functional communicative response (Landa et al., 2021; Najdowski et al., 2008; Shukla & Albin, 1996). Overall, the results of this study suggest potential benefits of prompting the FCR immediately after the occurrence of challenging behavior. This study, concerning the timing of prompts, might provide insight for teachers and practitioners on what prompting method to use when challenging behavior occurs during FCT. Future studies should further evaluate the effects of immediate prompting after the occurrence of challenging behavior with individuals who use different topographies of communicative responding. It would be further interesting to see whether an immediate prompt after challenging behavior occurs would yield similar results on a more complex FCR with individuals who use PECS.

List of Figures

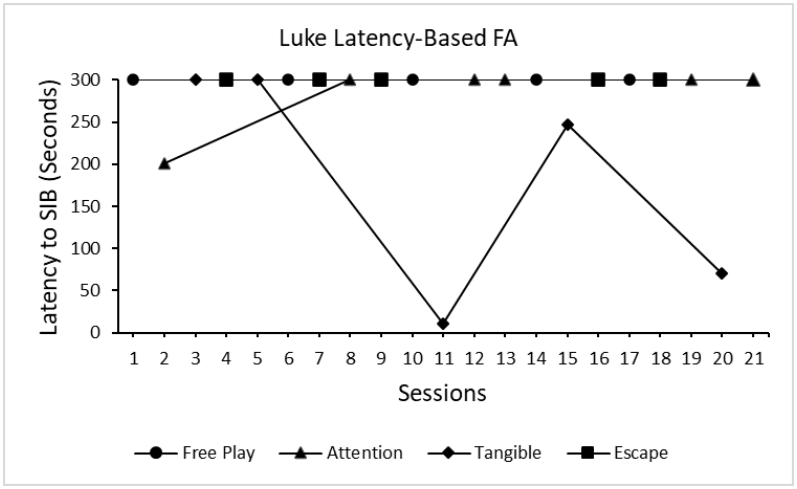

Figure 1: Latency to challenging behavior (SIB) during FA

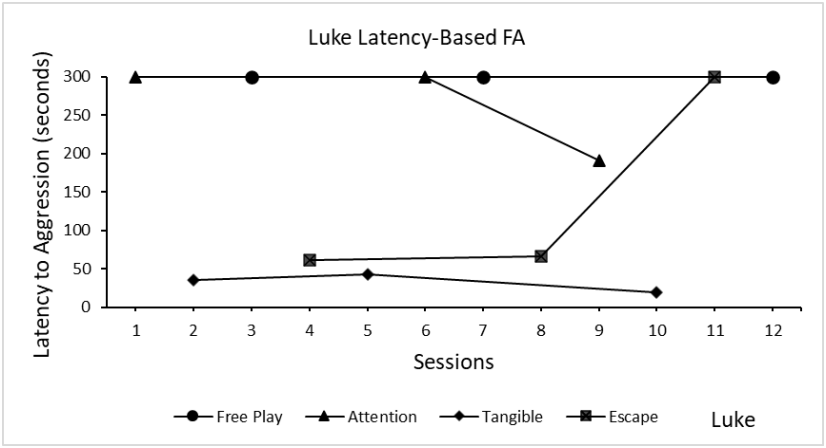

Figure 2: Latency to challenging behavior (aggression) during FA

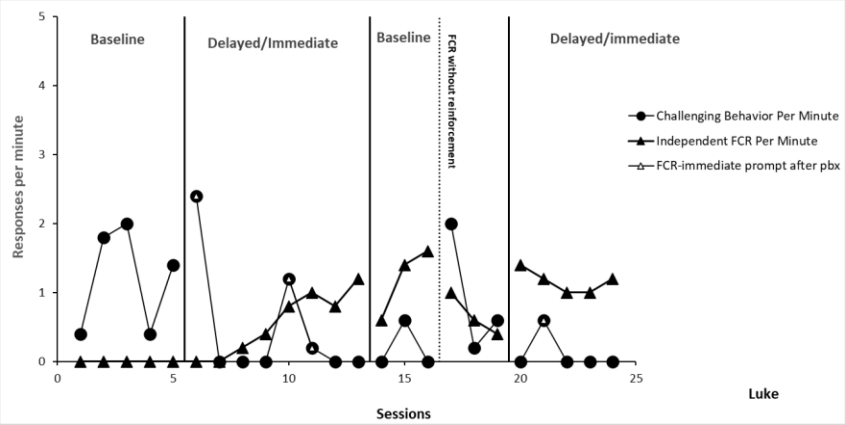

Figure 3. FCT graph. This graph displays challenging behavior and FCR occurrences per minute during baseline and intervention sessions. The solid line represents a condition change between sessions and the dotted line represents a procedural change from the second baseline. The type of data point is depicted on the top right of the graph.

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