Increasing functional communication in a child diagnosed with Autism Spectrum Disorder (ASD) using the software Proloquo2GoTM.

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Conclusion

- Child learnt to mand and emit vocalization using three step Proloquo2GoTM application to communication partners and significant carers
- Child learnt to increase functional communication through increasing mands across two natural settings where she spends a significant amount of time
- Future research should consider conducting delayed multiple baseline across settings in order to save time
- Time can be allocated to additional goals and interventions in the school setting such as generalizing to the child's teachers and educators.
- Future research could replicate with additional participants diagnosed with ASD
- Future research could replicate to additional environments in the community such as the local library, the local shopping center, the local restaurant, the park and playgrounds where the child is usually expected to participate.

Introduction

- Mands are the first type of language acquired by children (Bijou & Baer, 1965)
- Important for the early development of language, which include day-to-day verbal interactions
- Van Der Meer, Sigafoos, O'Reilly and Lancioni (2011)
  - individuals who have communication deficits such as those who failed to develop speech or developed limited speech and language abilities are candidates for augmentative and alternative communication (AAC).
- Current study used an Apple iPAD® mini with Proloquo2GoTM software on a Speech Generating Device (SGD) to teach mands
- Child is currently pulling, pointing and pushing objects away
- Parents reported instances of challenging behaviour occurring in the form of tantrums, screaming and kicking.
- Using a SGD device will allow the child to increase functional communication and interact with significant adults and carers in the child's life to communicate needs and wants.

Purpose

-To increase functional communication by teaching a non verbal and non vocal child to mand and emit vocalization using Proloquo2GoTM application to communication partners and significant carers across settings.

Methods and Materials

Participants and Settings
- Five year old non-verbal and non-vocal girl diagnosed with ASD
- Sessions were conducted across two settings: in a designated area in the playground at the child's school and in a room at the child's home.

Communication Partners
- Both settings included the primary researcher, a Board Certified Assistant Behaviour Analyst (BCaBA), a Board Certified Behaviour Analyst (BCBA)
- the child's mother and father in the home setting.

Materials
- Conducted Multiple Stimulus Without Replacement (MSWO) preference assessment prior to baseline procedures (DeLeon & Iwata, 1996).
- Apple iPAD® mini equipped with the application Proloquo2GoTM was used, which consisted of five icons of target toys.

Dependent Variable
- Dependent variable were percentages of independent and accurate mands calculated across all sessions.
- Target behaviour involved the child independently touch a single icon and make eye contact within three seconds of touching the icon on Proloquo2GoTM
- To mand needed and desired items or activities with 85-100% accuracy as measured across 10 consecutive opportunities with 10 items.

Independent Variable
- Independent variable were the teaching sessions

Experimental Design
- Delayed multiple baseline across settings design

Measurement System
- Percentage was used to document the percentage of correct responses
- Gave clear comparison across the three different steps.

Interobserver Agreement (IOA)
- 100% IOA and IOA checks were conducted during 67% of sessions across settings

Mand Training

Procedures

For baseline procedures
- Each baseline session was 5 minutes in duration
- Sessions occurred until stable responding
- Child gained access to item for 10 seconds before removal

For intervention procedures
- Each Intervention session was 60 minutes in duration
- In intervention, an item/activity that the child needs/wants was identified.
- Access to preferred item was blocked and temporarily withheld until specified request response occurred in three steps
  - 1) tapping picture, 2) tapping sentence strip, 3) emitting eye contact
- If the child did not emit request, least to most prompt was provided and data was recorded for the entire session.

For 5 months follow up procedures
- Follow up probe data showed the child learnt to emit vocalization on every trial across both settings

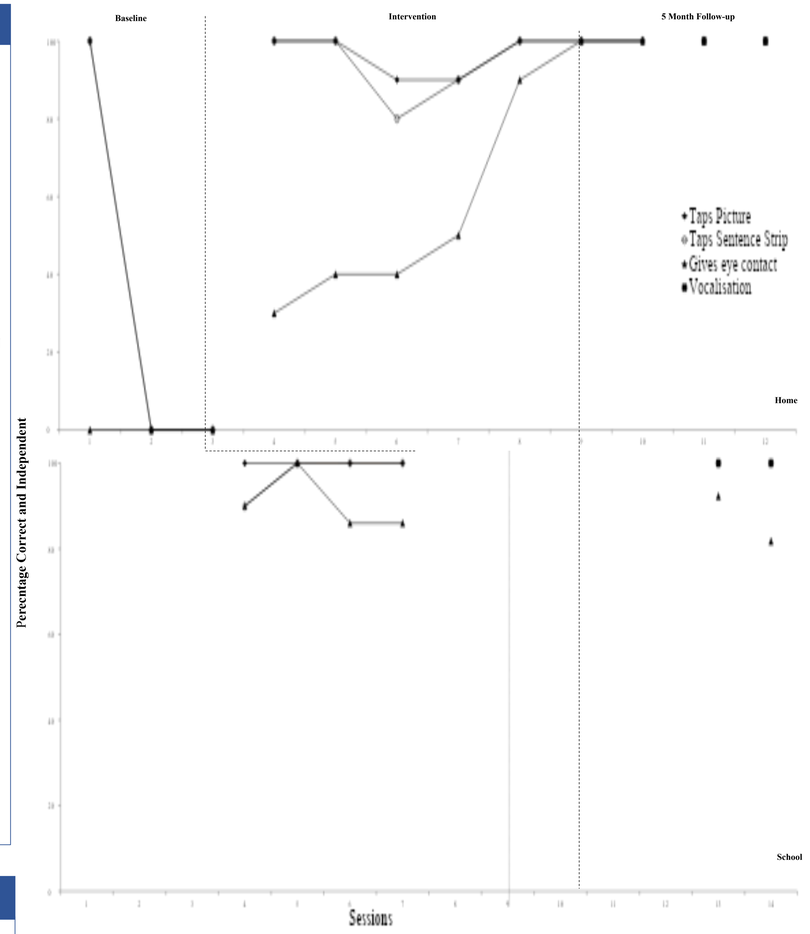

Figure 1. Percentage correct and independent for taps picture (closed circle) and taps sentence strip (open circle) and gives eye contact (closed triangle) and vocalization (closed square) across sessions at home (top panel) and at school (bottom panel).

Social Validity

- Treatment Acceptability Rating Form-Revised (TARF-R; Reimers, Wacker, & Cooper, 1991) post intervention rating form was completed by the child's mother
- 70% acceptability of the intervention
- severity of the child's behavioral difficulty was very severe at 93%
- 100% on understanding of the intervention
- Ratings suggested the intervention was very acceptable and very affordable for her child

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