

# The Use of Bluetooth Technology to Promote Independent Responding in the Community: The Reduction of the Stigma of Prompting

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## INTRODUCTION / ABSTRACT

Community based instruction is a complex process made more complicated by the stigma associated with overt and conspicuous levels of prompting. The current research study investigated a method by which the stigma associated with such overt levels of prompting could be reduced through the use of a remote cell phone and Bluetooth technology. In the present study, verbal prompting was implemented by utilizing a Bluetooth and remote cell phone across multiple behaviors in a single environment and resulted in decreased levels of gestural prompting, increased levels of independence and greater social inclusion.

## PURPOSE

To examine the extent to which the Bluetooth technology can be used in lieu of gestural prompting to reduce stigma associated with such physical prompts and the presence of one-on-one support during the community based instruction.

## RATIONALE

- Community based instruction is critical to successful community integration as an adult
- There is a significant need for evidenced-based, cost effective methods of community based instruction which will result in greater independent functioning.
- Community based instruction is often complicated by the stigma associated with overt levels of prompting and one to one support. Therefore, the need for less conspicuous methods of prompting becomes apparent.

## METHOD

**Participant:** 16 year old male with a previously established diagnosis of moderate to severe autism who has been working on life skills in the community. Participant was considered particularly suited for this investigation given his previously documented history of prompt dependency.

**Setting:** All sessions were conducted and the data were collected at the local drug store. Participant had not been previously exposed to this particular store.

**Design/Data Collection:** A multiple baseline study was conducted wherein the frequency of physical and verbal prompts and distance between the participant and one-on-one instructor were collected over 3-week-period for three different behaviors in one consistent environment.

## PROCEDURE

A multiple baseline design was used across two behaviors in the same environment to determine the effect of Bluetooth technology on independent responding in the community.

### Behaviors:

- Locating an item within the aisle of the store
- Waiting in line in order to purchase the item.
- Purchase the item

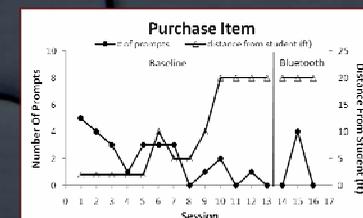
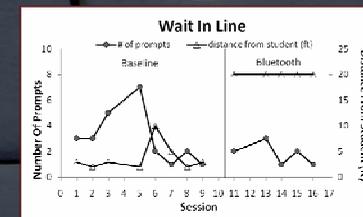
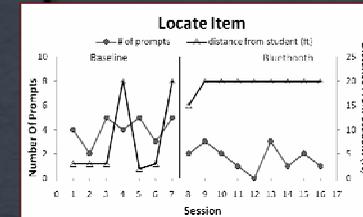
**Baseline:** Baseline was conducted in the community location for all three behaviors. The instructor provided only light physical guidance for the participant to complete the steps of purchasing items, including locating items, waiting in the line, and paying for the items. The participant wore an activated Blue tooth on his ear and kept the paired cell phone in his pants pocket.

**Intervention:** The instructor provided verbal prompts by speaking into a cell phone connected to the participants. If the participant did not respond to the verbal prompts, the instructor provided light physical guidance for the participant to complete the steps of purchasing items. The proximity of the instructor was gradually increased (faded) such that prompts were delivered to the participant via the Bluetooth only, without the instructor being physically proximate to the participant.



## DISCUSSION

- The use of Bluetooth technology to decrease physical and gestural prompting in community based instruction appears to be a potentially effective intervention.
- The use of Blue tooth technology allows prompting to be delivered from increasingly greater distances.
- Reduced levels of physical and gestural prompting can lead to greater independent functioning and reduction of stigma thereby promoting greater levels of social acceptance within the community.
- The participant frequently exhibited non-contextual vocalization across settings. The implementation of the Bluetooth disguised his vocalization as functional communication thereby reducing the stigma associated with this particular behavior.



The following factors also need to be considered to interpret the result.

## Limitation

- Through repeated practice, the participant may have improved the skills. This may have affected the decreased number of prompts.
- The length of the checkout line at the store appears to have had an impact on the data in that longer lines were associated with higher levels of both gestural and verbal (Bluetooth) prompting.
- The cashiers at the store started to provide prompts for the sequences of "Purchase Item" after they became familiar with the participant which may have impacted the data. However, it should that such familiarity with, and assistance from, his "nuclear community" is a highly desirable outcome resulting in greater independent functioning and social acceptance.
- The use of the Bluetooth requires pre-acquired skills such as receptive language and level of compliance.

## FUTURE IMPLICATIONS

- Study should be replicated across a greater number of individuals and over a more diverse skill set.
- Social validity data needs to be collected to establish that the use of blue tooth technology is perceived as less stigmatizing than close proximity of instructors or the use of physical and gestural prompting.