



HANDS in Autism: A Collaborative Community Classroom



Patricia Korzekwa, Naomi Swiezy, & Melissa Stuart

HANDS in Autism, Indiana University School of Medicine

Background

The HANDS in Autism model of training was developed in 2004 as a result of foundational funding from the Centers for Disease Control (CDC) and is primarily supported ongoing by the Indiana Department of Education (INDOE). The framework of the HANDS in Autism model developed as an intensive, hands-on training blending ABA principles and evidence-based practices. As an extension to the model, a collaborative classroom was developed to bridge clinical, home, and educational settings, and to demonstrate the use of evidence-based methodologies in a natural environment. The development of the collaborative classroom included three phases: 1) assessing the classroom's current strengths, resources, and needs; 2) training the classroom staff on methodologies individualized to the classroom; and 3) fading of training staff with an assessment of the classroom's ability to self-sustain. The process is reported after two academic years.

Beginning in the Spring 2007 semester, the HANDS in Autism team trained classroom staff on physical structure, choreography, blocking and ignoring, positive attention, and prompting strategies. Concurrently, the research team collected observational data on the demonstration of these skills as well as student's use of functional communication, independence during activities and routines, and rate of misbehavior.

Methods and Participants

The Spring 2007 semester includes data representing 3 students and 4 classroom staff. The Fall 2007 semester includes data on 6 students and 4 classroom staff. The Spring 2008 semester includes data on 7 students and 4 classroom staff. Three students and three classroom staff have been in the program since its inception.

Effectiveness of the project was assessed through observations of decreased student misbehavior, increased student use of functional communication, and increased classroom staff fidelity (both rate and percent appropriate) to methodologies. The training targets of focus for this presentation include contingent response to student misbehavior and the use of positive attention towards students in the classroom. The training consists of 2-4 hour sessions 2-4 times per week during the regular school day where HANDS in Autism trainers observe, model, and provide feedback regarding the classroom staff's use of the strategies discussed. Taught in the midst of many other structural, administrative, and global changes, training incorporated general information and more specific booster sessions to increase skill and maintain stability. Additionally, HANDS in Autism trainers provide classroom staff with structured didactic training opportunities.

Data were collected by trained research technicians using a computer-based observation platform. Observations were made for each student approximately one time during each 3-week observation period. Results for classroom staff and students were averaged across the 3-week period and are presented in Figures 1 (average contingent response to student misbehavior) and 2 (average positive attention toward students). Data are presented from the spring 2007 semester through the spring 2008 semester. Goal lines for each of the skills are highlighted on each graph. The goal for contingent response was to not exceed 20% contingent response to target behaviors. The goal for positive attention was to use appropriate positive attention greater than 80% of the time and to provide any positive attention (appropriate or inappropriate) at a rate of 0.2/minute (approximately 1 time every 5 minutes).

Figure 1. Average caregiver contingent response to student misbehavior.

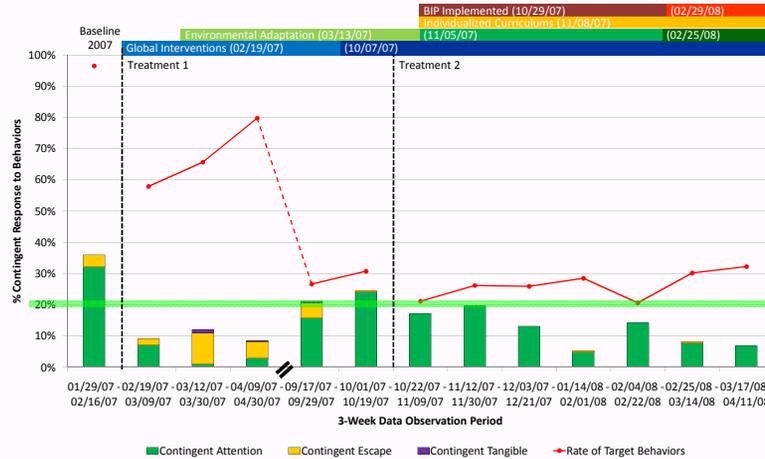


Figure 2. Average caregiver positive attention toward students.

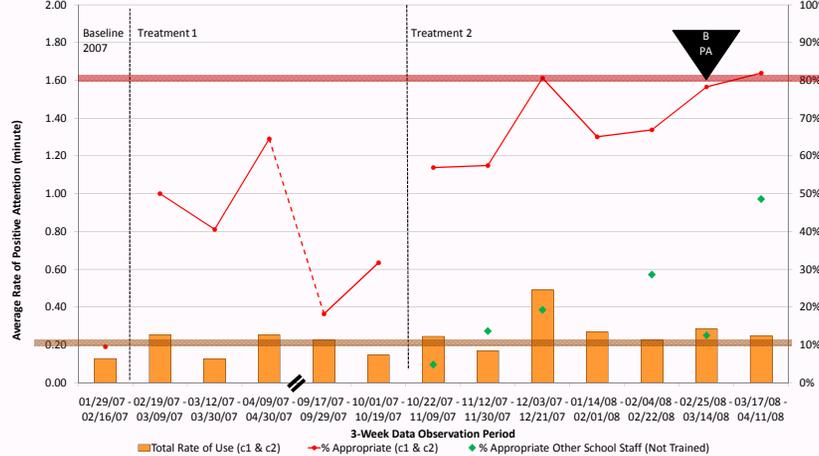
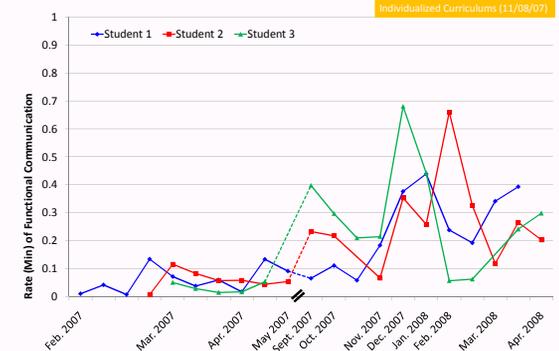


Figure 3. Rate of student functional communication.



Results

Overall, staff showed an improvement in contingent response to behavior. Currently, all staff are meeting the goal for contingent response to student behavior. Staff also improved in their use of appropriate positive attention and the frequency with which they are providing positive attention to the students. Currently, all staff are meeting the goal for positive attention. Data also presented a co-related change in student misbehavior and functional communication.

Students misbehavior is much improved from the start of the project, however, there has been a general increase in rates of misbehavior as of late. One possible explanation is that during the spring 2008 semester, a staff member was on maternity leave and several substitutes were used (but not coded for observation since they did not go through training) so any contingent response he or she may have provided to the students' misbehaviors would not be reflected in the classroom staff performance but would possible impact the student's rate of behavior.

The students use of functional communication is much improved since the start of the program. Figure 3 shows the rate per minute of functional communication for the three students who have been observed since the inception of the program. Other students currently in the classroom have also improved in their use of functional communication but are not presented here.

Conclusions & Future Directions

Thus far, the HANDS in Autism collaborative classroom has demonstrated efficacy through both decreases in rates of student misbehaviors, increases in rates of students' use of functional communication, and observed improvement in the classroom staff's non-contingent response to student misbehavior and increased use of positive attention.

During the Spring 2008 semester, a new structured system for training classroom staff members was implemented. Data are currently being collected to determine if these training booster sessions are effective in maintaining skill performance above the skill goal.

Starting in the Fall 2008 semester, the HANDS in Autism training staff will begin fading the frequency and intensity of the training. Data will continue to be collected to map the maintenance of the skills learned by the classroom staff. Future directions should also look to incorporating control classrooms and classrooms in which the teacher has only attended the HANDS in Autism week-long summer training program to investigate the effects of intensive hands-on training compared to training plus the addition of coaching and mentoring support.



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