

Behavioral Strategies for Students with Autism in the General Education Classroom

Hope Bice

St. Clair County Preschool
Springville, AL

Abstract

The following article examines how behavioral interventions used in the general education classroom effect students with autism. The number of students with autism has increased significantly in the past 10 years. Teachers are now faced with providing instruction in inclusive settings within the general education classroom environment. Teachers need to have relevant and important strategies to decrease inappropriate, as well as, increase appropriate behaviors for students with autism to be successful in the general education classroom. The following project was conducted in the spring of 2009 at Springville Elementary School in Springville, Alabama. It focused on three classrooms which included a total of four students with a diagnosis of autism. The objective of the project was to focus on behavioral interventions that can be used in the general education environment to decrease inappropriate behaviors, increase appropriate behaviors and increase students' time in the classroom with their typical peers.

Behavioral Strategies for Students with Autism in the General Education Classroom

According to the Centers of Disease Control (2007), the prevalence of autism has increased to 1 in 150 in the past year. Each year more students with autism enter public school systems and generally have least restrictive environments (LRE) written into their Individualized Education Programs (IEPs) for placement in the general education classroom. Unfortunately, most general education teachers have little to no training in working with students with autism.

The trend of inclusion of students with disabilities including autism has been mostly lead by theoretical arguments related to social development and legal issues. Researchers have documented that students with disabilities that are included in the general education classroom display larger friendship bases, give and receive higher levels of social support, exhibit higher levels of social interaction, and have more advanced IEP goals than students in segregated placements (Harrower & Dunlap, 2001).

Common Behaviors in Children with Autism

Students with autism exhibit various types of behavior in and out of the classroom. Many of which could be a major distraction within the general education classroom

environment. Some common behaviors are clapping, hand flapping, self injurious behaviors, and yelling. Others might include rocking, mouthing objects, intense staring, and fixation on certain objects and/or subjects. Not all students exhibit the same behaviors. Each student's needs will be different as far as his or her behavior is concerned (Harrower & Dunlap, 2001).

Why Behaviors Occur

There are many reasons unwanted and/or inappropriate behaviors occur. Generally, no two students' patterns of behavior are the same. The student may be bored, frustrated, or have a lack of motivation for learning. The student just may not understand that certain behaviors are not permissible. The student may be having problems at home and is lashing out for attention at school. There is a possibility that the list of reasons could be endless, however it is important to analyze the behaviors that are consistently exhibited by the student so that appropriate interventions can be implemented (Cohen & Spenciner, 2005).

Most students with autism have difficulty with social interactions and are believed to be uninterested in interacting with others. Many students with autism have mild to severe sensory issues which make their participation in busy, sometimes loud, classrooms with many students hard to deal with. They may be overly stimulated to the point that they exhibit self-stimulatory behaviors to calm themselves which may possibly be a distraction to their classmates and teacher(s) (Schaaf & Miller, 2005).

Analyzing Behaviors

The most common way to analyze behaviors is to complete a Functional Behavior Assessment. Functional Behavior Assessments are used by educators to examine student behavior and to assist in identifying its function. The information gathered is then used to plan intervention and positive behavioral supports that are written into students' behavioral intervention plans. To identify the problem behavior, the behavior must be concrete and observable. Standardized assessments, record reviews, structured interviews, and observations are all used to successfully complete Functional Behavior Assessments (Cohen & Spenciner, 2005).

Ways to Reduce Undesired Behaviors

There is no single, effective intervention to reduce or eliminate undesirable behaviors in children with autism. However, there are many proactive strategies that can be used; it just depends on the child. Each situation must be looked at individually and all persons involved must work together and be as consistent as possible to benefit the child to the maximum extent possible.

Antecedent Procedures

Antecedent procedures are a proactive approach to prevent and reduce challenging behaviors by addressing the behavior before its occurrence. The most common

antecedent procedures are priming, prompt delivery, and picture schedules. Priming allows the child with autism to have an introduction to the lesson before the larger classroom lesson. It focuses on increasing social interactions throughout the school day. Prompt delivery pairs teacher with a typically developing student and a student with autism. The teacher prompts and models for the typically developing student and then has that student to prompt the student with autism (Harrower & Dunlap, 2001).

Delayed Contingencies

Oftentimes students with autism depend on positive reinforcement throughout the activity they are working on or the school day in general. In most situations, an adult cannot be with them one hundred percent of the time. On the other hand, a long term goal of independence is also an unspoken expectation for all students so educators and administrators must look at removing contingencies to foster independence. The removal of contingencies must take place gradually by thinning reinforcement schedules and delaying delivery of corrective feedback (Griffin, Griffin, Fitch, Albera, & Gringas, 2006).

Self-Management Strategies

Students must learn self-management skills. The push toward students being actively engaged in their educational programs is a very popular concept in public schools today. Students need to be able to use self-control to monitor their own behaviors as well as evaluate their school work. Ways to evaluate include: Self-correction, self-recording, self-monitoring, self-reporting, and self-graphing. Students can monitor their own work, record their own behavior, report findings to teacher, and graph their own evaluations of behaviors. Students may use their finding to reinforce themselves with schedules and rewards (Rivera & Smith, 1997). Prompts that encourage the use of self-management skills in the classroom include verbal cues, hand motions, physical prompts, timers, and a watch with an alarm (Wilkinson, 2008).

Social Stories

Social stories are short stories that describe relevant aspects of specific social situations. The aim of social stories is to teach social-perspective-taking to help interpret social cues and allows students to “read” social situations. They can be pictures and/or words, long or short, typed or handwritten. Social stories should be individualized to each situation and consist of descriptive, directive, perspective, and affirmative sentences (Delano & Snell, 2006). Areas where social stories may be extremely beneficial to the general education classroom teacher may include fire drill, tornado drill, assembly, change in scheduling, and preparation for a substitute (Gray, 2000).

Picture Schedules

Picture schedules use pictures of activities and/or objects for increasing predictability and as an alternative to verbal and written instruction. It allows the teacher to set up the

child's day and for them to manipulate what they must do, have done, and must finish within a certain time frame. Pictures may be of actual objects or from one of the many widely used picture symbol programs that are now available. Instead of pictures actual objects may be used, for example, a spoon may be used for breakfast; a ball may be used for physical education or recess time (Harrower & Dunlap, 2001).

Picture Exchange Communication Systems (PECS)

PECS was designed to help young children with autism initiate requests and communicate their needs. The system uses a behaviorally based program to teach the child to exchange a picture card for something he/she likes and wants. It starts with single pictures and then the pictures are combined with statements for requests. The pictures may be kept in a binder and used as needed. A teacher may add pictures at any time he/she feels the student needs them. Pictures may be used for classroom assignments and allowing the student to participate in classroom activities (Harrower & Dunlap, 2001).

For this project, behavioral interventions were designed to decrease inappropriate behaviors of students with autism. Strategies were introduced to be used in the general education classroom during instructional and non-instructional time. The goal was for the strategies to increase participation and time spent in the general education classroom while decreasing inappropriate behaviors.

Method

Participants

The focus of this project was directed at one second grade general education classroom, one third grade general education classroom, and one fourth grade general education classroom. The second grade class has two students with autism, third grade has one, and fourth grade has one. Each student has had the diagnosis of autism since before entering kindergarten. All of the students attend Springville Elementary School and receive varying types of special education services. General education teachers and paraprofessionals assigned to the students were trained in behavioral strategies. Each person participating had very little training in working with students with autism prior to this project.

Materials

Materials used in this project were PowerPoint presentations that were used to train teachers and paraprofessionals. Teachers and paraprofessionals were trained at an in-service on various behavioral strategies to use in their classroom to decrease the number of inappropriate behaviors from their students with autism.

Design and Procedure

Four students were selected to participate in the study. All students have a diagnosis on the autism spectrum scale. Teachers monitored the number of inappropriate behaviors exhibited by student with autism. The behaviors included outbursts during change of scheduling, refusal to complete assignments, lost assignments, apprehension to sitting during instruction, and self stimulating behaviors including but not limited to spinning objects, hand flapping, mouthing inappropriate objects and humming.

Teachers maintained the number of inappropriate behaviors by placing tally marks on the calendar. At the end of four weeks, behavioral strategies were introduced to teachers and paraprofessionals. The teachers began the implementation of the strategies and continued to tally the number of inappropriate behaviors for the next four weeks. At the end of this time, teachers completed a satisfaction survey in which their attitude toward students with autism was measured and the types of behavioral interventions they used were noted.

Scoring

Teacher Autism Questionnaire. Prior to the implementation of this project, all general education teachers were asked to complete a questionnaire anonymously in regards to their knowledge and experience with students with autism. Teachers were also asked to list different behavioral strategies they had used or were using with student(s) with autism. This data was used to choose behavioral strategies that were most appropriate for the students in the study.

Behavioral Tallies. The purpose of the behavioral tallies were for teachers to keep the track of the number of times a behavior was a distraction in the classroom. Each teacher was given a calendar grid and throughout instructional time within the classroom recorded the number of inappropriate behaviors. The behaviors recorded were outbursts during change of scheduling, refusal to complete assignments, lost assignments, apprehension to sitting during instruction, and self stimulating behaviors including but not limited to spinning objects, hand flapping, mouthing inappropriate objects and humming.

Teacher Satisfaction Survey. The purpose of the satisfaction survey was to measure teacher's knowledge of autism, what behavioral strategies they implemented, and did classroom disruptions decrease after the implementation of behavioral strategies.

Results

Teacher Autism Questionnaire

At the beginning of this project, general education teachers were asked to anonymously complete an autism questionnaire. Twenty four questionnaires were returned. Based on the results of the questionnaire, teachers had the following amount of teaching experience: one had zero to five years, nine had six to ten, six had 11 to 15, two had 16 to 20, three had 21 to 25, and three had more than 25 years.

Of the 24 questionnaire participants, eight currently have a student with autism in their classroom. All teachers have or have had a student with autism in their classroom. Six teachers reported that there was/is a paraprofessional with that student at all times. Thirteen teachers were included as a part of the IEP meeting/planning process for the student with autism in their classroom.

One hundred percent of the teachers returning the questionnaire reported they would be willing to participate in professional development activities about autism if given the opportunity. Teachers were split as how they felt about receiving enough support from the administration and special education teachers. Half felt as though they get enough support while the other half did not. Only one teacher felt as though teachers are prepared to work with students with autism upon the completion of college. Note: This teacher is a first year teacher.

Behavioral Tallies

Each time a student exhibited an inappropriate behavior, the general education teacher placed a tally mark on the calendar grid. The tallies were counted at the end of each week for the first 4 weeks. During week one the following amount of inappropriate behaviors were noted: Classroom one 16, classroom two 15, classroom three, 9. Week two totals were classroom one 18, classroom two 12, and classroom three, 10. Week three totals were classroom one 20, classroom two 16, and classroom three six. The final week of documentation before behavioral strategies were introduced were classroom one 17, classroom two 12, and classroom three nine.

After the implementation of behavioral strategies, teachers continued to keep tally marks on the calendar grid for 4 more weeks to determine if strategies were being effective. The following totals were reported for week one: Classroom one 14, classroom two 14, and classroom three nine. Week two totals were classroom one 10, classroom two eight, and classroom three six. Week three totals were as follows: Classroom one 10, classroom two eight and classroom three 10. Note on week seven, classroom three there was an increase in behaviors. The student in classroom three was extremely excited about his birthday and an upcoming weekend trip with his family. The final week in which behaviors were recorded the amount of inappropriate behaviors were classroom one 11, classroom two seven and classroom three five.

Teacher Satisfaction Survey

At the end of the program, a Teacher Satisfaction Survey was given to each teacher who participated in the project. Questions 1-3 were about how the teacher feels about having a student with autism in their general education classroom. Questions 4-5 were about dealing with behavior in the general education classroom. Question 6 was about participation in the student's IEP planning. Question 7 was a check list of behavioral strategies used in the general education classroom for this project. On Question 1, all teachers responded that they are glad to have a student with autism in their classroom.

Question 2, no teacher had ever requested a student with autism be in their classroom. Question 3, three teachers will and one will not request a student with autism be in a future class. Question 4, all teachers feel better prepared to work with a student with autism in their classroom. Question 5, all teachers are willing to share behavioral strategies with other teachers. Question 6, half of the teachers participated in the student with autism's IEP during the project time span. Question 7, the following behavioral strategies were used in the general education classrooms which participated in this study: social stories, peer modeling, picture/visual schedules, sensory box, sensory room, video modeling, weighted/pressure vests, first/then boards, choice boards, work stations, "home base," and assignment notebooks. The three classrooms which participated in this project consistently used social stories, first/then boards, and visual schedules.

Discussion

There was a positive change in students' behavior. This can be attributed to consistent implementation of behavioral strategies based on each student's needs. The strategies must continue to be used to maintain the level of expected behaviors from the students who participated in the study.

The number of students participating in the study was easy to handle, however a larger amount of students with autism might add more interest and accuracy to the study. Teachers were completely receptive to the strategies and were shocked at how simple some of them were because of the limited assistance they had received in the past. Teachers have agreed to continue the use of the behavioral strategies due to the positive impact they had on their classrooms.

Parental attitudes and participation were not measured during the study. It would be interesting to see if parents were using the behavioral strategies in various ways at home, if they too, would see a decrease in inappropriate behaviors.

The main limitation to the study was time. Doing the study within a nine week period did not give as much data as would be necessary to determine long term use of the behavioral strategies. It would be interesting to see if the behavioral strategies continue to be used for at least another school year if the students continue to show a decline in their inappropriate behaviors.

In spite of time restraints, the study was a success because the number of inappropriate behaviors decreased in each classroom. In fact, students started to request that certain strategies be used more often and in all classrooms (art, music, physical education). One paraprofessional who is also a mother to a student with autism thought the behavioral strategies were such a good idea that she started implementing many of them with her own son.

References

- Centers for disease control (2008). Retrieved October 15, 2008, Web site: www.cdc.gov.
- Cohen, L. & Spenciner, L.J. (2005). *Teaching students with mild and moderate disabilities*. Upper Saddle River, New Jersey: Pearson Education Inc.
- Delano, M. & Snell, M.E. (2006). The effects of social stories on the social engagement of children with autism. *Journal of Positive Behavior Interventions*, 8(1), 29-42.
- Gray, C. (2000). *The new social story book (Future Horizons, Inc)*. Texas: Arlington. (Original work published in 1994).
- Griffin, C.G., Griffin, L.W., Fitch, C.W., Albera, V., & Gingras, H. (2006). Educational interventions for individuals with asperger syndrome. *Intervention in School and Clinic*, 41(3), 150-155.
- Harrower, J.K. & Dunlap, G. (2001). Including children with autism in general education classrooms. *Behavior Modification*, 25(5), 762-784.
- Rivera, D.P. & Smith, D.D. (1997). *Teaching students with learning and behavioral problems*. Needham Heights, Massachusetts: Allyn & Bacon.
- Schaaf, R.C. & Miller, L.J. (2005). Occupational therapy using a sensory integrative approach for children with developmental disabilities. *Mental Retardation and Developmental Disabilities* 11, 143-148.
- Wilkinson, L. (2008). Self-management for children with high functioning autism spectrum disorders. *Intervention in School and Clinic*, 43(3), 150-157.

Figure 1. Teacher Autism Questionnaire

Teacher Autism Questionnaire

1. Do you have a student with autism in your classroom? Yes or No
2. If not this year, have you had a student with autism in your classroom in the past?
Yes or No
3. How many years of teaching experience do you have? _____
4. Do you have any professional training in the area of autism? Yes or No. If yes,
briefly describe.

5. If you have had a student with autism, do you or were you offered professional
development/training in the area of autism? Yes or No. Briefly describe.
6. When included in your class, did or does the student have a paraprofessional with
them at all times? Yes or No
7. Were you a part of the planning process for the student's IEP? Yes or No
8. What strategies do you use or have you used to help students with autism in your
classroom?
9. Would you be willing to attend professional development training for autism? Yes
or No
10. Have you done any research on autism in preparation for a student with autism?
Yes or No. If yes, where?

11. Do you feel you received enough support from the administrators and special
education professionals with your student? Yes or No
12. Do you feel teachers are prepared to work with students with autism upon
completion of college? Yes or No
13. What type of information would benefit you when you have a student with
autism?
14. What problem behaviors have you observed with students with autism that you
feel training would be appreciated?
15. Feel free to use the space below to give any comments on students with autism
that you would like to share.

Figure 2. Teacher Satisfaction Survey

Teacher Satisfaction Survey

	Yes	No
1. Are you glad you have a student with autism in your classroom?		
2. Have you ever requested a student with autism be in your classroom?		
3. Will you request a student with autism in your class in the future?		
4. Do you feel better prepared to deal with behavior with students with autism?		
5. Are you willing to share behavioral strategies with other teachers?		
6. If your student has had an IEP meeting this semester, have you participated?		

7. Check the behavioral interventions you have used in your classroom with a student with autism:

- Social stories _____
- Picture Exchange Communication Systems _____
- Had peers to model appropriate play _____
- Music Therapy _____
- Visual/Picture Schedules _____
- Sensory _____
 - Rocking chair _____
 - Sensory box _____
 - Utilized sensory room _____
 - Other _____
- Applied Behavior Analysis _____
- Video Modeling _____
- Weighted/Pressure Vests _____
- First/Then boards _____
- Choice Boards _____
- Work Stations _____
- "Home Base" in classroom _____
- Graphic organizers _____
- Assignment Notebooks _____

Figure 3.

Graph Indicating Teaching Experience of Those Completing the Autism Questionnaire.

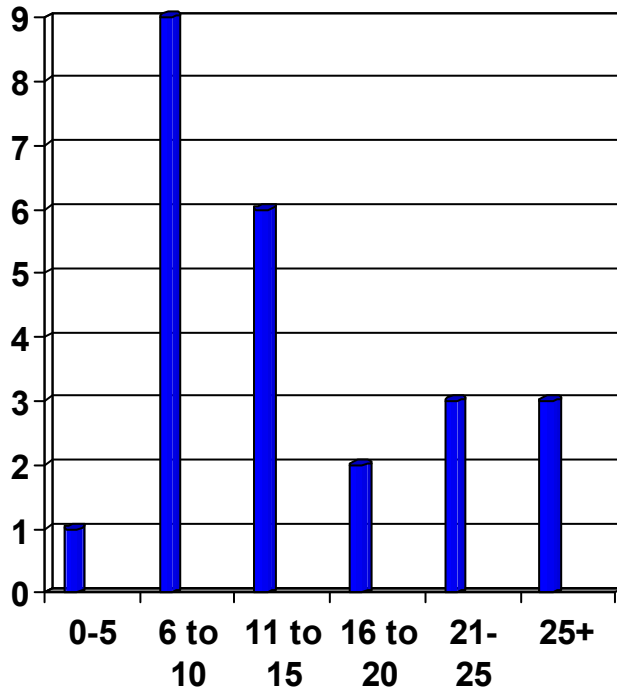
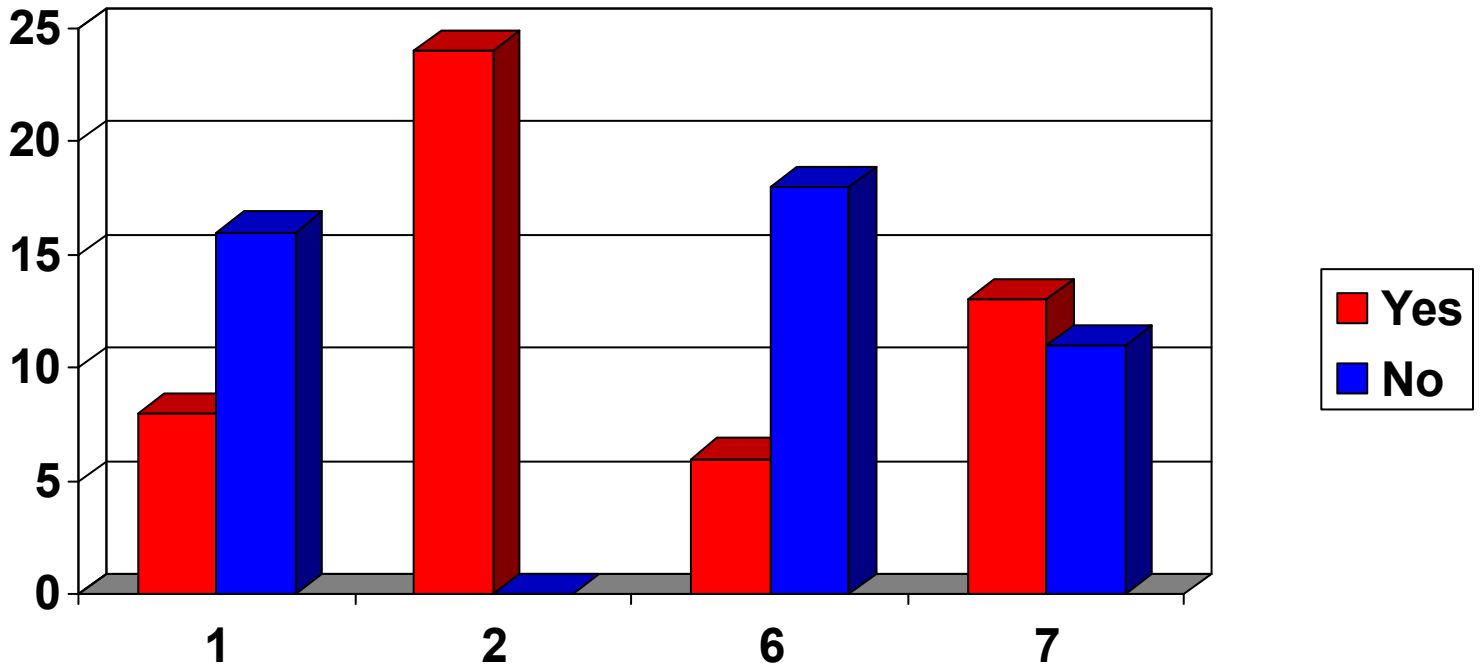


Figure 4. Responses to Questions 1, 2, 6, and 7 from Autism Questionnaire.



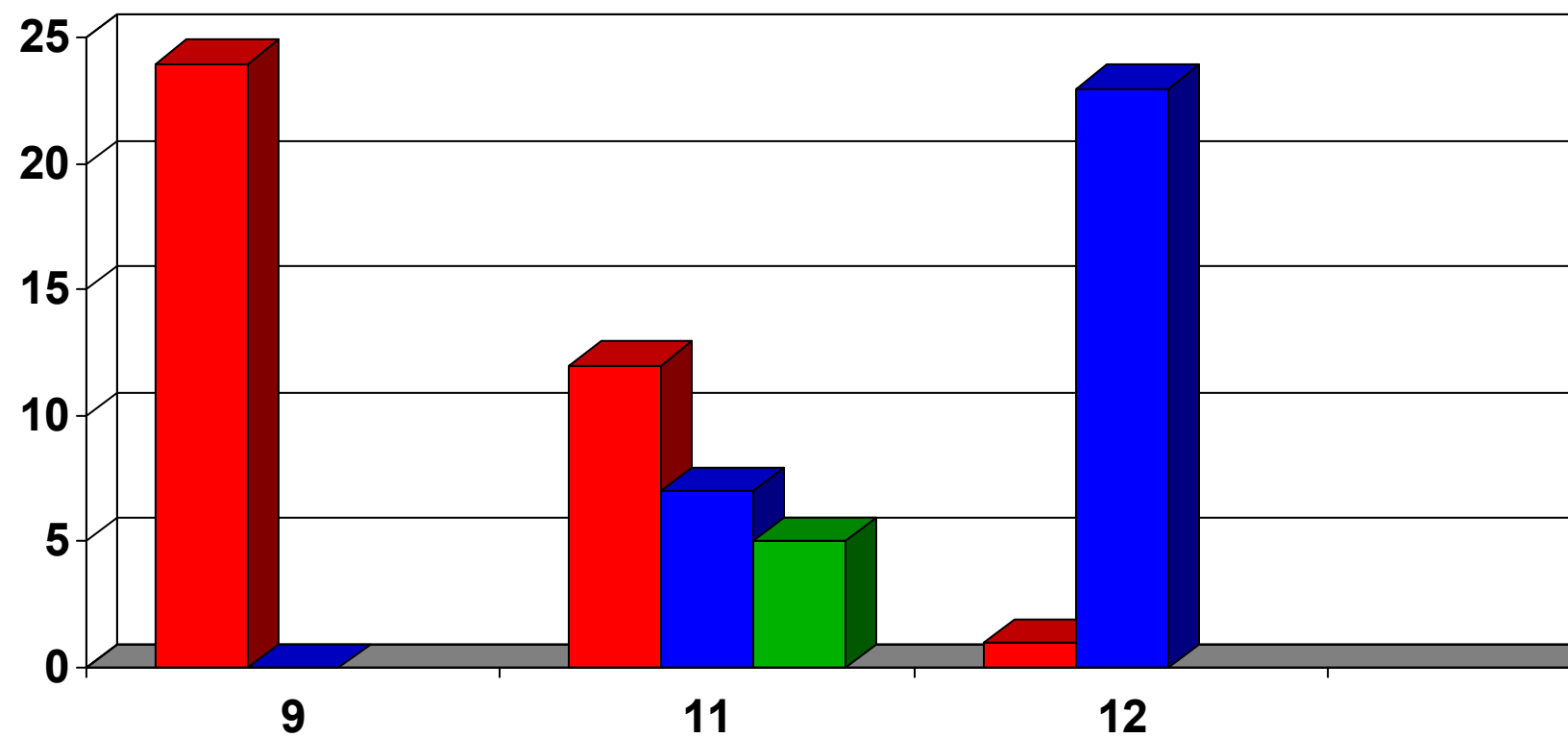
1. Student with autism currently in class?

2. Student with autism in the past?

6. Paraprofessional with student at all times?

7. Were you a part of IEP planning?

Figure 5. Responses to Questions 9, 11, and 12 from Autism Questionnaire.

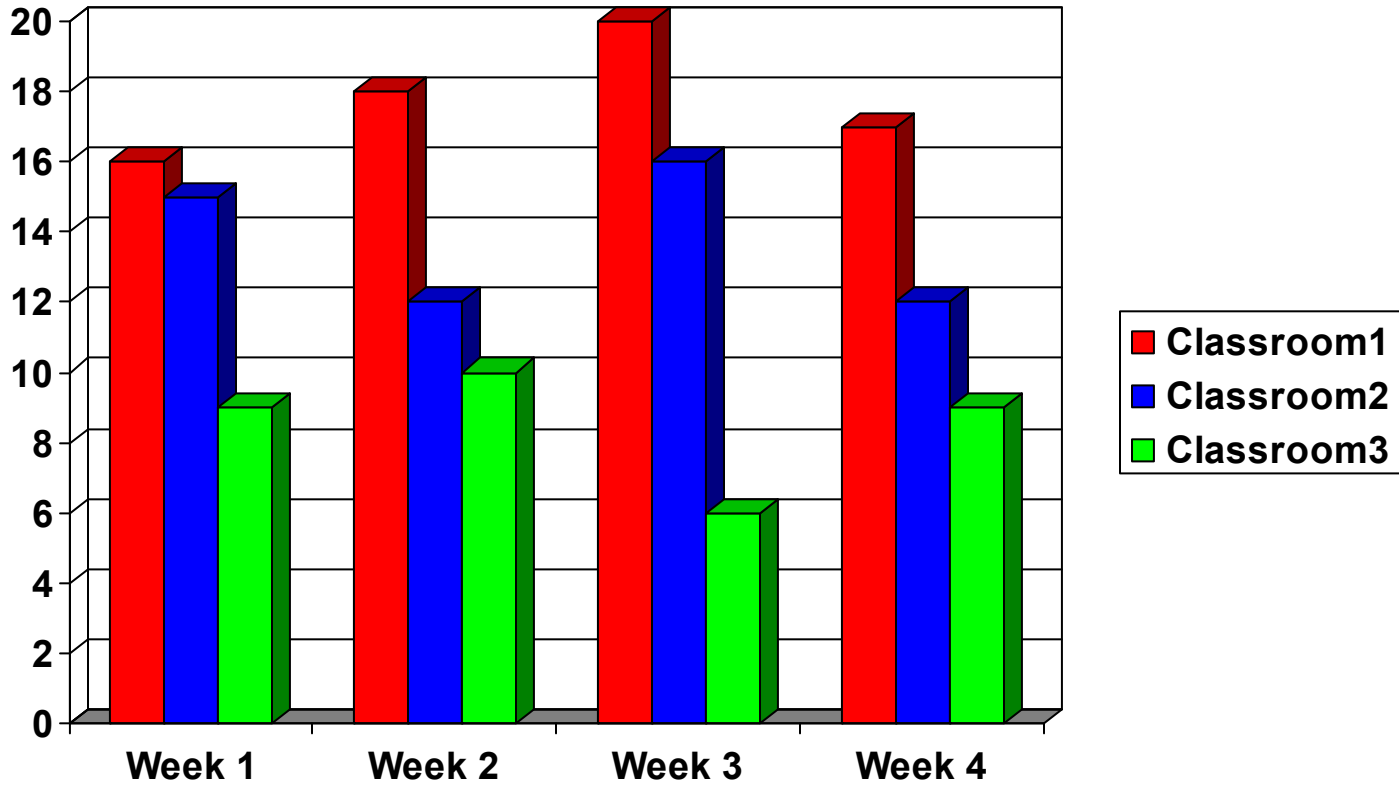


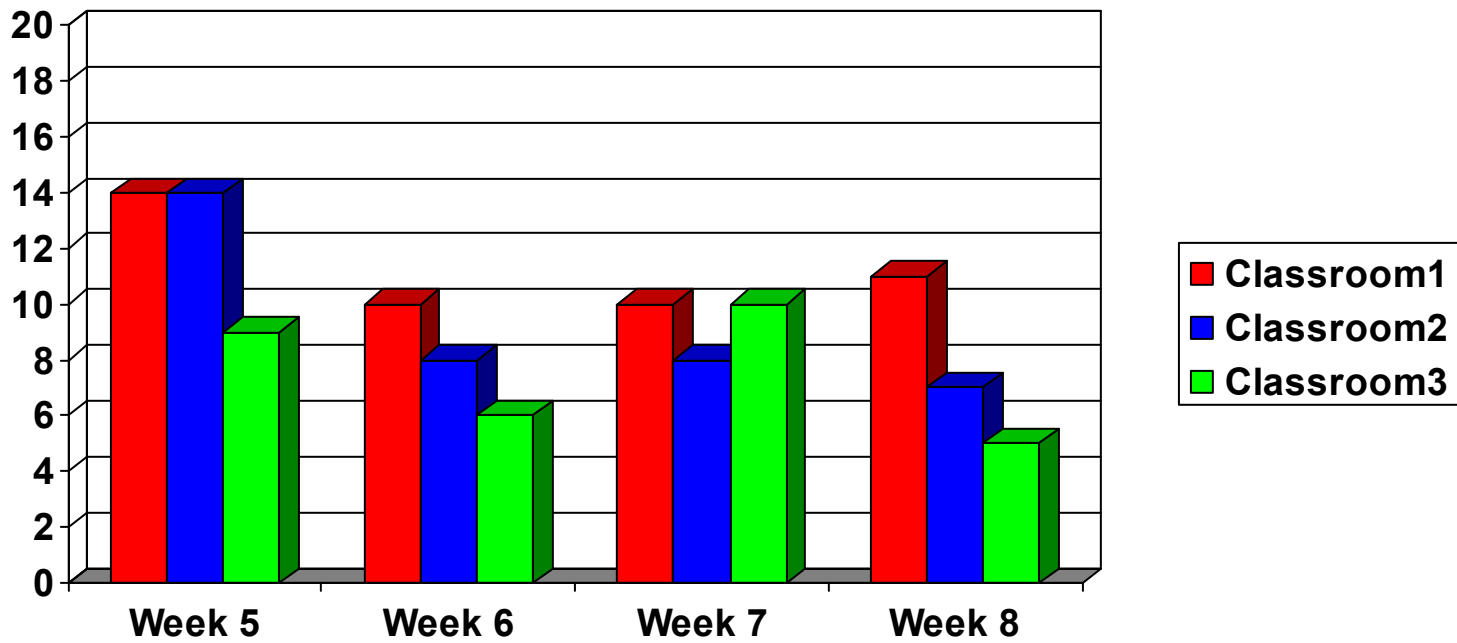
9. Willing to attend professional development?

11. Receive enough support from administrators and special education teachers?

12. Teachers are prepared to work with students with autism on completion of college?

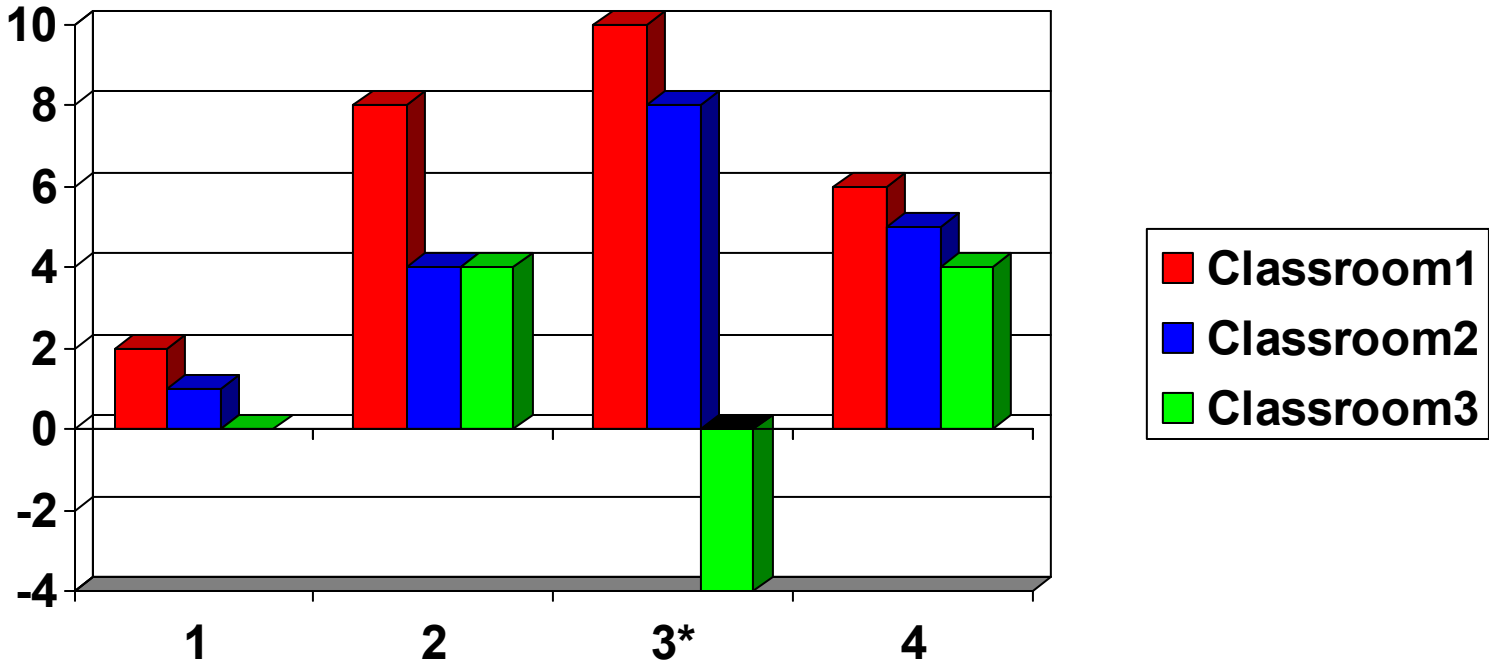
Figure 6. Difference in Behavioral Tallies During the Implementation Timeline.





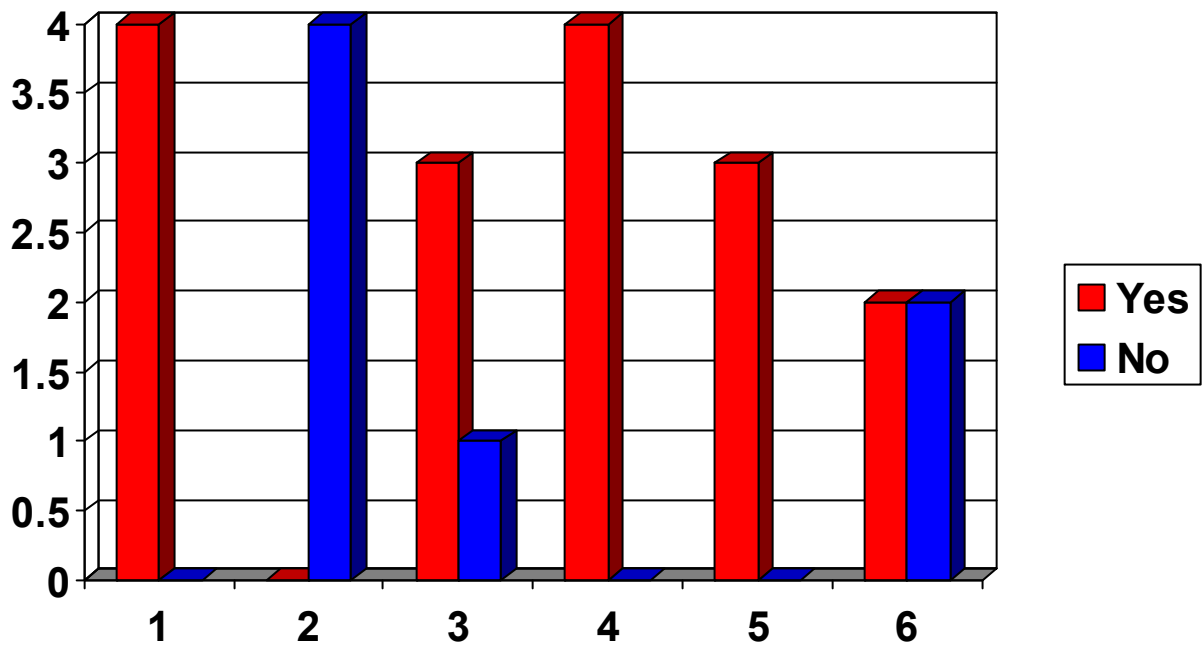
*Note: Week 7, Classroom 3- student was extremely excited about his birthday and a family trip that was planned for the weekend

Figure 7. Difference in Behavioral Tallies During the Implementation Timeline.



*Week #3- child excited about birthday and family vacation.

Figure 8. Results from Teacher Satisfaction Survey Upon Completion of Project.



1. Glad to have student with autism in classroom?
2. Requested a student with autism in classroom?
3. Request a student in the future?
4. Better prepared to deal with students with autism?
5. Willing to share strategies with others?
6. Participated in IEP meeting?

Figure 9. Types of Behavioral Interventions Used During Project by Classroom.

<p>Classroom 1 used: Social stories Visual schedules Sensory room & box First/then boards Weighted vests Work stations</p>	<p>Classroom 2 used: Social Stories Peer Model Picture schedules Video Modeling First/then boards Home Base</p>
--	---

<p>Classroom 3 used: Social Stories Peer Models Visual Schedules Sensory Choice Boards Assignment Notebooks First/then Work stations</p>	<p>All had the following in common: Social Stories First/Then Visual Schedules</p>
--	---