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The Effects of the *First Step to Success* Program on Teacher-Student Positive Interactions

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by

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ABSTRACT OF THE THESIS

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Positive student-teacher interactions have been linked to academic and social-success of all students. The present study examined the effects of the *First Steps to Success* program in improving the teacher-student interaction of three Latino English Language Learners (ELL) participants identified as at risk for behavioral and academic problems. A single subject multiple baseline research design was employed for this study. Data showed a functional relationship between the behavioral intervention and an increase in positive teacher and participating student interactions. Implications in regards to improving teacher student relationships of ELLs in early grades will be discussed.

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Introduction

Children rely on the attention and support of teachers and parents to succeed in school (Doll, Spies, & Champion, 2012). There is a wide range of research that has shown the significance of child-adult relationships in the development of behavior in early childhood. This includes emotional development, self-control, and intellectual performance (Greenberg, Speltz, & DeKlyen, 1993). In a longitudinal study by Birch and Ladd (1998), the relationship between 199 kindergartners' classroom behavior and features of their 1st-grade teacher-child relationships were examined. They found that children who were exhibiting antisocial behaviors in kindergarten, were more likely to have conflict ridden, dependent, non-close relationships with their teachers in first grade.

Another study examined the prediction of quality of teacher-student relationships by using data from a three-year longitudinal study beginning in their second-to-last year of preschool and continuing through kindergarten (Howes, Phillipsen, & Peisner, 2000). To assess teacher student relationships, the Pianta Student–Teacher Relationship Scale (STRS; Pianta, 1992) was used to examine teacher perceptions of conflict, closeness, and dependency. Three hundred fifty seven children had complete data and results suggested that perceptions of teacher–child relationship quality in regards to conflict tended to be consistent across the preschool to kindergarten transition. The findings draw attention to the predictive nature of preschool social adjustment with teacher-child relationship quality, particularly with regard to problem behaviors. Children whose teachers described them as higher in problem behaviors as four-year-olds were perceived as higher in problem behavior, conflict, and dependency in their teacher–child relationships in

kindergarten. Another major finding revealed that children who were perceived to be more sociable in preschool were perceived to have closer, less dependent, and less conflictual kindergarten teacher–child relationships.

Other researchers have looked at the theoretical framework of teachers affecting children's learning in preschools to design teacher training programs. Mashburn and Pianta, from the Center for Advanced Study of Teaching and Learning, looked at child development through the Bioecological Model of Development (Bronfenbrenner & Morris, 2006.) They use this model to inform the design of in-service and pre-service teacher training programs that focus on high quality emotional, instructional and organizational interactions in classrooms that support children's development of school-related competencies. Maintaining positive student-teacher relationships is important for all students, as positive and supportive teacher-student relationships can function as a buffer and prevent a variety of negative outcomes and promote resiliency (Doll et al., 2012).

Although the effects of a positive teacher-student relationship has been recognized in the literature, little is known about how this can be improved for children who are already exhibiting problem behaviors. Currently, there is limited empirical research that has focused on the consequences of negative teacher-student interactions, (Birch & Ladd, 1998). The need for further research in this area is even more evident for ethnic minority children. A strong body of research has documented that African American and Latinos are at higher risk for social, emotional, and academic problems (Vincent & Tobin, 2010) and in great need for interventions that would promote

resiliency (Castro-Olivo, Preciado, & Perry, 2011). The amount of empirical research on teacher interactions with minority populations in early childhood is limited, as most evidence-based interventions have been conducted with mainstream populations (Lau, 2006). Given that Latino ELLs are a fast growing population in the U. S. more research is needed to identify the validity of interventions with this population.

The need to intervene with Latino ELLs can be drawn from statistics that show how they are performing compared to peers. For example, English Learners are often among the lowest performing students academically, and tend to have higher rates of dropout compared to peers (Castro-Olivo, et al., 2011). Latino ELLs have also been disproportionately represented in special education since the 1960s (Artiles & Trent, 1994). Latino ELLs have also reported to feel socially marginalized from their schools (Olsen, 1997). Feelings of marginalization and lack of school belonging have been linked to social and emotional problems (Caraway, Tucker, Reinke, & Hall, 2003). These findings point to a need for establishing evidence based interventions at an early stage for Latino ELL students who may be at risk for negative school experiences and outcomes.

This study uses a single subject, multiple baseline design to assess whether the number of positive teacher-student interactions increases after the implementation of the *First Step to Success* Program on first grade English Language Learners exhibiting problem behavior and low reading skills. The study also looked at whether there was a functional relation between exposure to *First Step* and decrease in negative teacher interactions for Latino first graders. Also, the study examined whether a functional relation between exposure to *First Step* and a decrease in problem behavior for Latino

first grade students existed.

Single subject research designs have been documented as a way to identify functional relationships between independent and dependent variables. They are particularly appropriate in intervention settings, when the researcher seeks to understand the effect that an independent variable has on a specific individual under a given set of conditions (Horner, et al., 2005). For a single subject study, visual analysis is represented by plotting data points for each session on a graphic display. It is suggested to have a minimum of three data points during baseline, and as patterns emerge that show a trend of behavior in a hypothesized direction, researchers can choose to proceed with introduction of an independent variable (Kennedy, 2005).

Method

Setting and Participants

The study was conducted in two general education first grade classrooms in an elementary school in Southern California. In one of the classrooms, instruction was primarily taught in Spanish, with occasional English usage. The other class was an English only class where EL students received pulled out ELD and small group reading instruction. The classrooms were located in a Title 1 public school, and all students qualified for free lunch. The school district population consisted of 58.05% Hispanic or Latino, 22.59% Black or African American, 3.68% Asian, 9.95% White, and 4% other race/ethnicity. Three target students (all males) who were nominated by their teachers based on disruptive problem behavior during class and low decoding skills were selected to participate in the study. Teacher nominations have been established as a valid way of

identifying at risk children (Ollendick, Oswald, & Francis, 1989). All students were identified as English Language Learners and Spanish was their first language. The children were all six years old at the time of intervention. Teachers had at least 5 years of teaching experience. One of the two teachers was bilingual.

To assess students' problem behavior and "fit" for the study, teachers were interviewed using the Functional Assessment Checklist for Teachers and Staff (FACTS; March, Lewis-Palmer, Brown, Crone, Rodd, & Carr, 2000). The FACTS has been shown to be a reliable and valid measure for functional behavior assessment to assist in behavior support (McIntosh et al., 2008). Teachers were interviewed by the researcher to identify types of problem behaviors, when problem behaviors were most and least likely to occur, which events seem to precede the problem behavior, most frequent consequences for the behaviors, and settings were the problem behavior were more likely to occur. This information provided evidence of similar problem behaviors for the three target students.

Students who had been nominated by their teachers and the teachers FACTS' interview showed that their problem behaviors were maintained by attention were then observed during regular group wide reading instruction. Students who engaged in disruptive behavior at least 30% of the intervals observed were invited to participate. Participating students' disruptive behavior at baseline ranged from 42% to 78%. All further observations and intervention took place during the students regular large group reading instruction.

Teacher Student Interaction Form

The study included a teacher/student interaction form that was developed by the first author (C.L) for this study. The main goal of this form was to record the frequency of teacher- student interactions and code them as positive, negative, or neutral. Teacher-student interactions were coded during reading instruction and deskwork by one of two raters. The observer marked whether there was an interaction between the teacher and the target child within any given 15 second interval for twenty minutes. A check mark was placed for each interaction and then the interaction was further coded into positive, negative, or neutral. Prior to the study, researchers trained for using this form by individually watching videos of students in classrooms and coding their interactions. Then, the raters came together to compare their coding. The total number of intervals in which raters were in agreement was divided by the total number of intervals observed. Interrater reliability for the TSIF ranged from 89 to 95%. A copy of this form is included in Appendix A.

After every four intervals, a peer in close proximity to the target child was observed and any interaction was coded. Researchers agreed on which peer to observe. The total number of interactions per twenty-minute period was tallied, as well as how many were positive, negative and neutral.

Dependent Measures

Data was collected by graduate students regarding problem behavior using the Problem Behavior Measurement System (PBMS), a direct behavioral observation tool that was also developed by Dr. Castro-Olivo and piloted in previous studies. The PBMS

uses a partial interval recording system where students' problem behavior (examples: disruptive, aggressive, off-task, etc.) are observed and compared to a peer. The percentage of problem behaviors was calculated by dividing the number of instances of problem behavior in the intervals by the total number of intervals (54). Interrater reliability was over 90 percent - ranging from 89 to 95%. The PBMS is shown in Appendix B.

Intervention

The First Step to Success Program, developed by Walker Stiller, Severseen, Golly, & Feil (1998), is a research-based positive behavior support program aimed at reducing antisocial behavior of students in kindergarten to third grade. The main goal of the intervention is to train participating students to display prosocial behaviors at school by earning positive teacher and peer attention. The program consists of three main components: a coach phase, a school intervention phase, and a home base parent training. The coach phase involves modeling of appropriate social skills by the coach or consultant. The student is trained on how to appropriately ask for help from the teacher and to remain academically engaged.

The school intervention component involved a game where the target child works to win rewards for the class by demonstrating positive behavior. A trained researcher worked with each intervention case for twenty minutes each day for five to ten consecutive days. A card that was green on one side and red on the other was placed in a spot visible to the target child at all times. The card was flipped to the green side when behavior was appropriate, and red when the child exhibited inappropriate behavior. If the

child met the number of points for his/her goal for that day, the class earned a reward. In order for the child to meet their goal for the day, they must reach a minimum of 80% of the possible points during the 20-minute period. Participating teachers were expected to praise the child, catch him performing the appropriate action, and redirect when needed.

During the home base component, parents work with the teacher in reinforcing the child's positive behavior. *The First Step* program consultant meets with parents to practice key skills at home that work to complement the school intervention. The parents also have prearranged rewards for the student as an incentive and reinforcement for positive behavior. The coach remains in contact with parents during intervention for updates on the child's progress.

Additionally, a teacher-training portion of the program was carried out prior to the school intervention. This consisted of a research consultant meeting with teachers for a 2-hour training on positive behavior support and main components of *First Step*. Additionally, teachers received a video on how to implement the intervention, were provided with 5 days of modeling by the research consult, and were given one frequent check ins/consultation in addition to one week of support and guidance from the research team.

Fidelity of Implementation

Fidelity of implementation was recorded as suggested by Rodriguez et al. (2009). Two graduate student researchers observed the 2 weeks of intervention following the coach phase where the teacher began to implement the intervention. Both teachers were assessed on how closely they followed the intervention instructions. This included

whether they announced the reward to the class before the game began, whether the target child was positively reinforced after each interval of positive behavior, and whether the reward was carried out after the child received the number of points for that day. Teachers were observed engaging in all desired components while observed.

Results

The purpose of this study was to evaluate the effects of a behavior intervention on increase of positive teacher student interactions in the classroom and on decrease of problem behaviors (i.e. disruptive behaviors). A multiple-baseline across subjects design was used to demonstrate the effects of *First Step* as a function-based behavior intervention. A functional relationship between the *First Step* program and a reduction in problem behavior and increased positive teacher student interactions was identified.

Figure 1 displays baseline and intervention data for Eduardo, Victor, and Jaime for disruptive behavior. They exhibited, on average, 78%, 74%, and 42% of intervals with disruptive problem behavior, respectively. After intervention was introduced, problem behavior for Eduardo, Victor, and Jaime decreased to 20%, 4%, and 8% respectively. These show reductions of 58%, 70%, and 34% problem behavior from baseline for three students. A decreasing trend was observed for disruptive behavior.

In figure 2, the amount of positive teacher interactions was plotted for Eduardo, Victor, and Jaime. In baseline, Eduardo experienced 0 positive interactions for all three points. After intervention, interactions ranged from 0 to10 with a median of 4. A range of 1 to 7 negative interactions (median=1), and then showed 0 to 9 (median=1) after intervention were observed for Eduardo. During baseline, Victor experienced a range of

0-2 positive interactions with the teacher, and after intervention displayed 0-15 with a median of 4.5 positive interactions with the teacher over a 20-minute period. Jaime experienced the biggest increase in positive interactions with the teacher. Originally, his interactions ranged from 0 to 2 (median = 0), and increased to 1 to 15 interactions (median=6.5) after intervention. In all cases, an increase of positive teacher-student interactions was identified.

Figure 3 shows the trends of negative teacher interactions during the study. Eduardo exhibited a range of 1 to 7 negative interactions (median=1) in a twenty-minute period and ended up with a range of 0 to 9 interactions. Victor and Jaime previously had experienced a range of 0-9 (median=1) and 0-1(median=0) negative interactions, respectively, at baseline. After intervention was introduced, no negative interactions were observed for the remainder of the study. Jaime's negative interactions during and after intervention ranged from 0 to 1, with a median of 0. Negative teacher-student interactions decreased in all cases except Jaime.

Discussion

Students with disruptive behavior and low decoding skills were chosen to participate in the *First Step* program to assess the effects of positive teacher interactions, negative interactions, and decrease in problem behavior. Across all participants, an increase in positive teacher interactions was shown, while a decrease in negative teacher interactions was shown for all but one student. Additionally, there was a decreasing trend of disruptive behavior shown. This study provides evidence that a positive behavior support intervention is useful in (a) decreasing problem behavior for ELLs, and (b)

increasing positive teacher student interactions for ELLs. The study implies that teacher student interactions can be impacted and students' problem behavior can be improved with the consistent positive support of the teacher, class, and family members.

Limitations

This study had some limitations that should be considered and cautions should be made when generalizing the patterns of behavior using a single subject study. The students that were selected had to exhibit low reading skills and problem behavior. These students also had to have parents and teachers that were willing to participate in the intervention. Teachers did have to complete a training phase and parents had to be willing to meet with the research consultant. The intervention and observations were made during reading instruction in the classroom, so results are focused mainly on this instructional time during the school day.

Unexpected events played a part in limiting the study. During one data collection point for one of the students, the class had a substitute teacher. During one week, intervention data was not collected, as data collectors were not able to be present at the school during that week. Although the intervention resumed during this week, observations were not included in the overall results.

Secondly, Victor started taking medicine for ADHD shortly after his intervention phase started, which implies that our results could be confounded with the effects of his medicine.

Another limitation of the study is represented in figure 3, which shows the amount of negative teacher interactions with Eduardo. According to Kennedy (2005), the baseline

of behavior should be stable and predictable before introducing a treatment. We can see that Eduardo's behavior had declined at the last baseline point, therefore we cannot be sure that the introduction of the treatment was the main cause of his decrease in negative behavior, or whether it was due to another cause.

Future Directions

In a future study, a larger sample size could be used. A follow up study could be performed to assess teacher student relationships in later grades. For a more effective intervention, teacher coaching could be strengthened. The data obtained in a study by Miller, Harris, and Miller (1991) suggested that using professional coaching for pre-service or in-service teachers could increase instructional performance and positive teacher behaviors. During follow-up observations, the trained continued to use behaviors three months later. Effective behaviors identified by the coaches included giving specific praise.

In addition to using classroom observations as a way to check for fidelity, other researchers have used video and audiotapes, questionnaires, and teacher interviews to assess fidelity of implementation (O'Donnell, 2008). These methods could be used to strengthen a future study.

Another aspect of the study that could be further examined is the amount of neutral interactions between the teacher and student. Other than having positive interactions, merely being more engaged with the teacher and even having more neutral interactions may enhance teacher student relationships. Teachers that participated reported liking the program.

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Figure 1. Disruptive Behavior

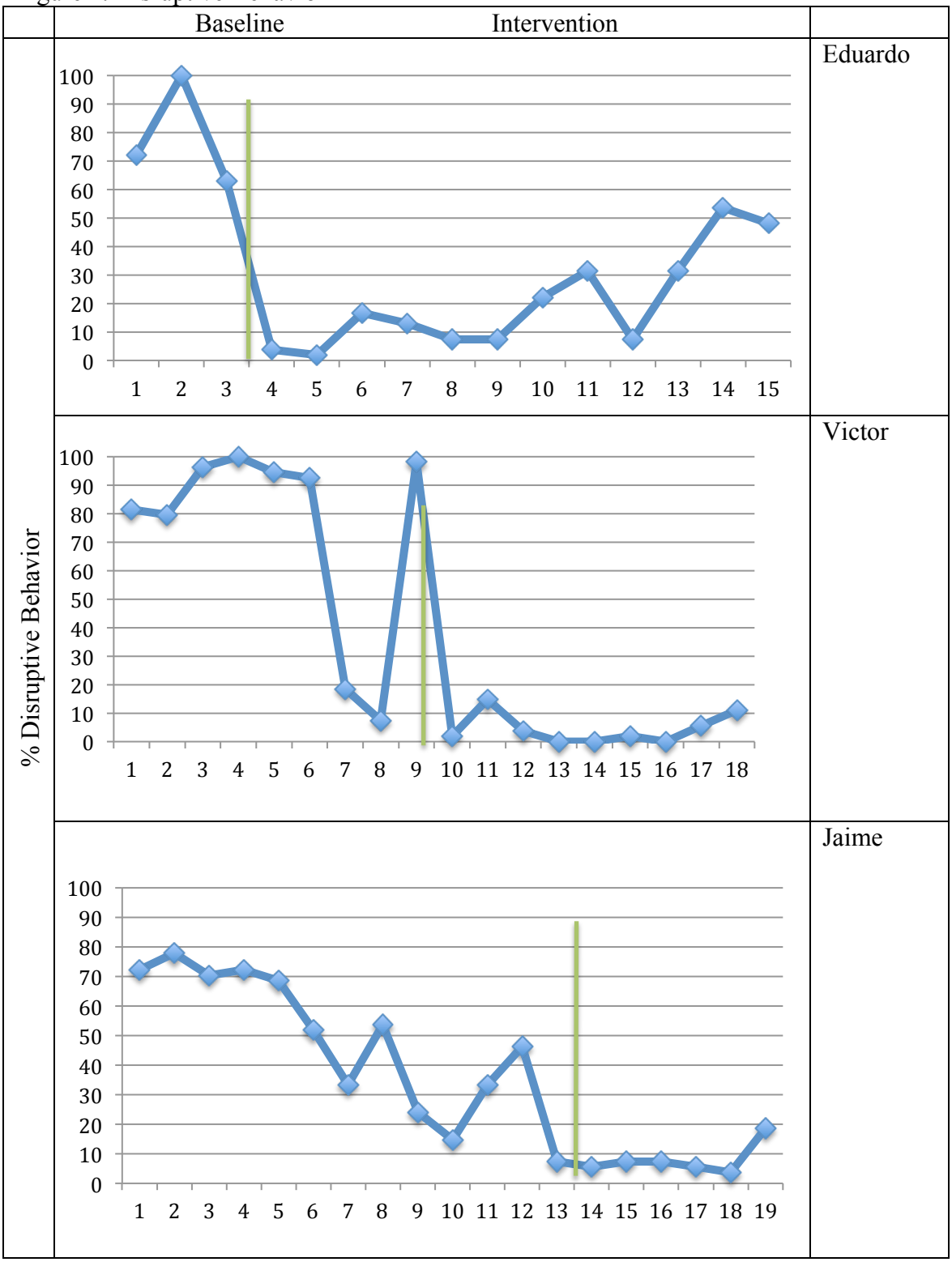


Figure 2. Positive Teacher Interactions

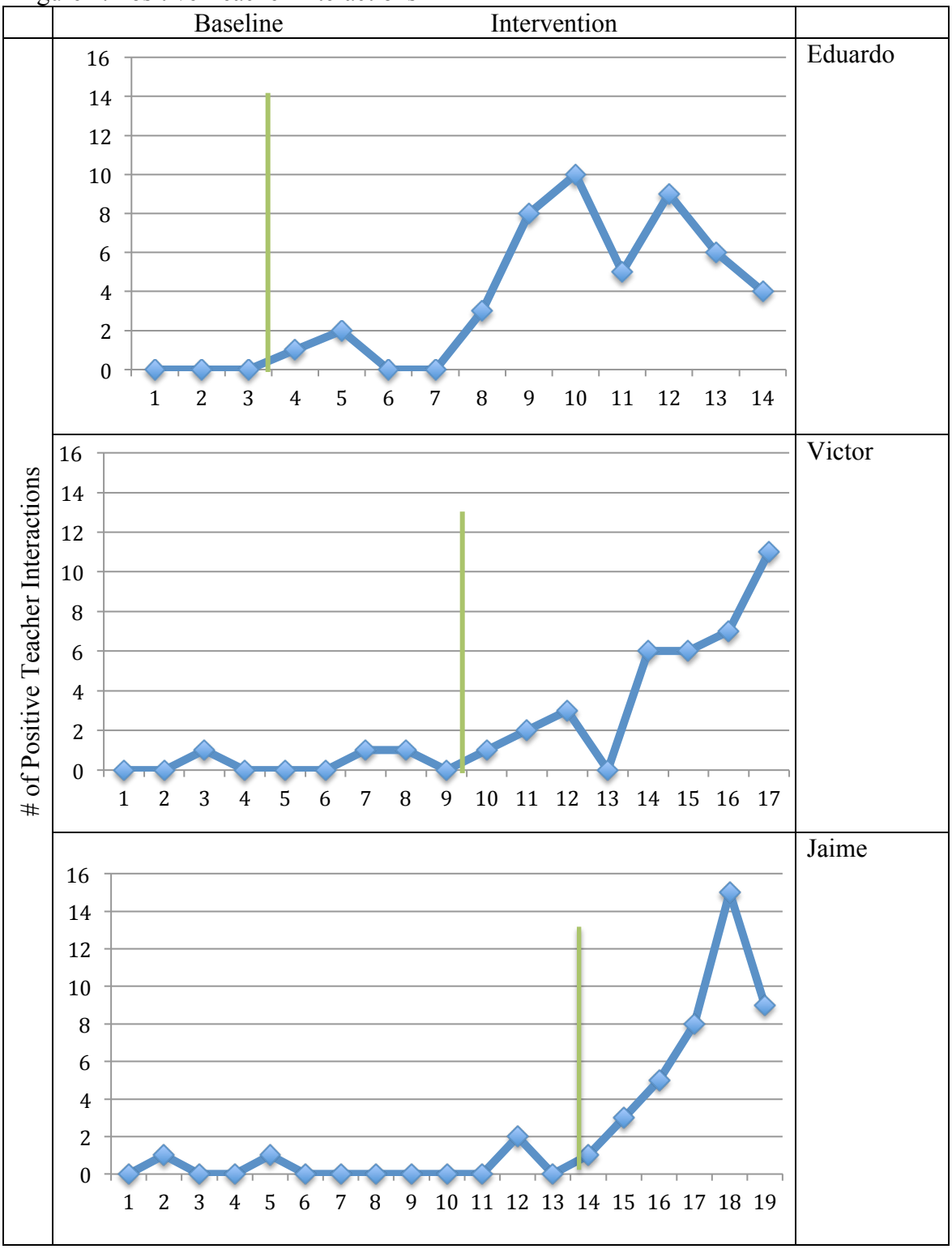
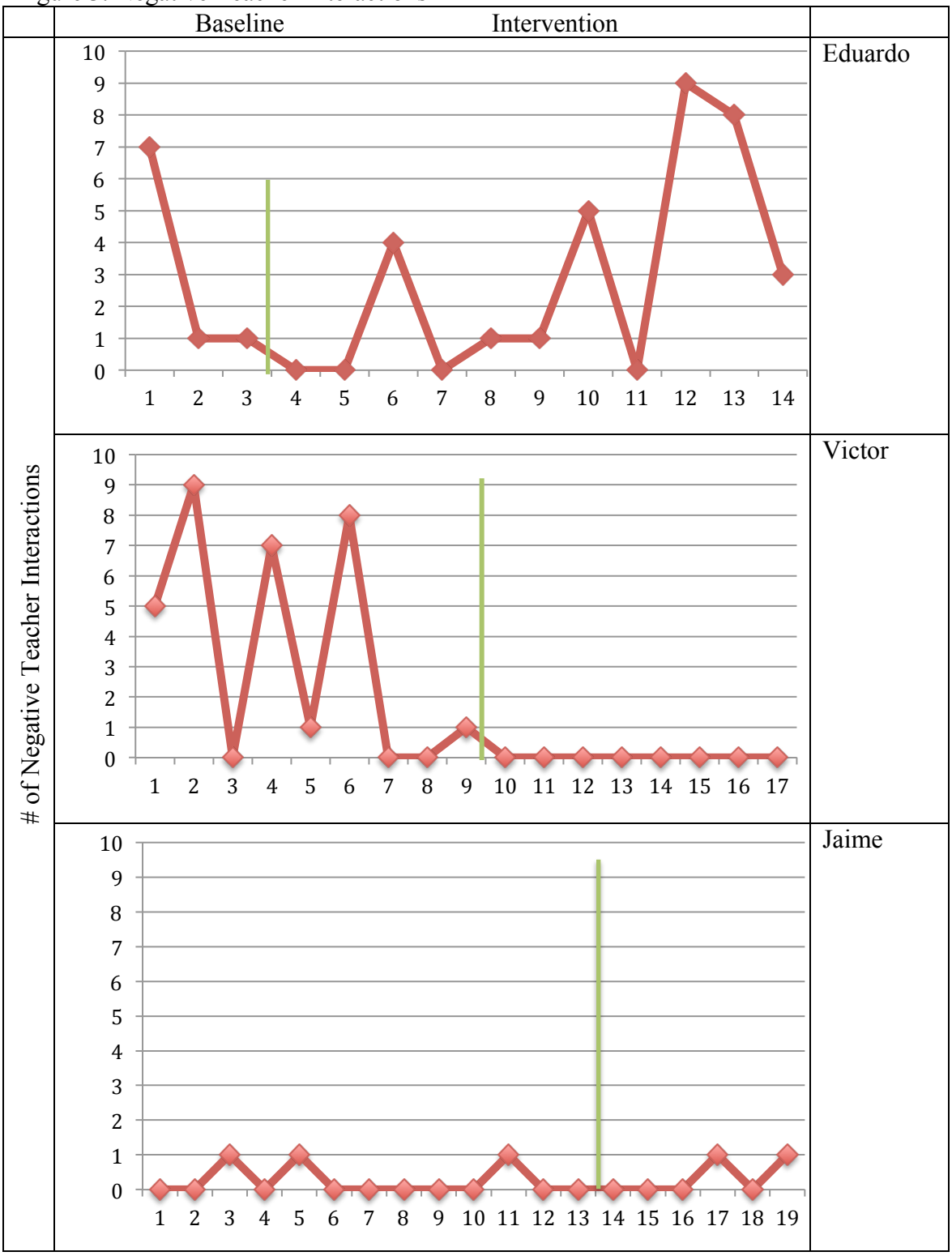


Figure 3. Negative Teacher Interactions



Appendix A

Teacher/Student Interaction Form

Student_____Date: _____ Time: _____

Class Subject: _____ Teacher: _____Observer: _____

Directions: For 15-second intervals mark with a √ every time there is a teacher/student interaction displayed either by the target student or comparison peer. If behavior is not displayed during the 15 seconds, leave box blank.

Positive Interaction= + Negative Interaction = - Neutral Interaction = 0 Praise = ☺

Interval	1	2	3	4		Peer
Interaction Present?						
Interaction						
Praise						
	6	7	8	9		10
Interaction Present?						
Interaction						
Praise						
	11	12	13	14		15
Interaction Present?						
Interaction						
Praise						
	16	17	18	19		20
Interaction Present?						
Interaction						
Praise						
	21	22	23	24		25
Interaction Present?						
Interaction						
Praise						
	26	27	28	29		30
Interaction Present?						
Interaction						
Praise						
	31	32	33	34		35
Interaction Present						
Interaction						
Praise						
	36	37	38	39		40
Interaction Present?						
Interaction						

Appendix B

Observation Measurement System
Problem Behavior

Date: _____ Time: _____ Observer: _____ Student: _____

Class Subject: _____ Teacher: _____

Directions: For 15-second intervals mark with a *D* or A every time the target behaviors (i.e. disruptive= D or Aggressive= A) are displayed either by the target student or comparison peer. If behavior is not displayed during the 20 seconds, leave box blank.

Target behaviors/Operational Definition:

Disruptive behavior: student engages in any behavior that disrupts the flow of instruction/education activity

Example: talk outs, out of seat, taking papers from others, hiding materials, etc

Non-example: Student raises his had to talk, students are expected to talk out answers

Aggressive behavior: student engages in any behavior that intentionally hurts objects or others children. The inflected pain can either physically and/or emotionally.

Example: hitting, biting, teasing, breaking objects, intending to break/rip objects (like papers or materials), etc

Non-example: student uses physical aggression to defend him/herself.

- ❑ Make sure to compare target student's behaviors with a peer's behavior during the highlighted intervals.

0:01-0:15 A= D=	0:16-0:30 A= D=	0:31-0:45 A= D=	0:46 -1:00 A= D=	1:01-1:15 A= D=
1:16-1:30 A= D=	1:31-1:45 A= D=	1:46-2:00 A= D=	2:01-2:15 A= D=	2:16-2:30 A= D=
2:31-2:45 A= D=	2:46-3:00 A= D=	3:01-3:15 A= D=	3:16-3:30 A= D=	3:31-3:45 A= D=
3:46-4:00 A= D=	4:01-4:15 A= D=	4:16-4:30 A= D=	4:31-4:45 A= D=	4:46-5:00 A= D=
5:01-5:15 A= D=	5:16-5:30 A= D=	5:31-5:45 A= D=	5:46-6:00 A= D=	6:01-6:15 A= D=
6:16-6:30 A= D=	6:31-6:45 A= D=	6:46-7:00 A= D=	7:01-7:15 A= D=	7:16-7:30 A= D=

7:31-7:45 A= D=	7:46-8:00 A= D=	8:01-8:15 A= D=	8:16 -8:30 A= D=	8:31-8:45 A= D=
8:46-9:00 A= D=	9:01-9:15 A= D=	9:16-9:30 A= D=	9:31-9:45 A= D=	9:46-10:00 A= D=
10:01-10:15 A= D=	10:16-10:30 A= D=	10:31-10:45 A= D=	10:46-11:00 A= D=	11:01-11:15 A= D=
11:16-11:30 A= D=	11:31-11:45 A= D=	11:46-12:00 A= D=	12:01-12:15 A= D=	12:16-12:30 A= D=
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13:46-14:00 A= D=	14:01-14:15 A= D=	14:16-14:30 A= D=	14:31-14:45 A= D=	14:46-15:00 A= D=

15:01-15:15 A= D=	15:16-15:30 A= D=	15:31-15:45 A= D=	15:46 -16:00 A= D=	16:01-16:15 A= D=
16:16-16:30 A= D=	16:31-16:45 A= D=	16:46-17:00 A= D=	17:01-17:15 A= D=	17:16-17:30 A= D=
17:31-17:45 A= D=	17:46-18:00 A= D=	18:01-18:15 A= D=	18:16-18:30 A= D=	18:31-18:45 A= D=
18:46-19:00 A= D=	19:01-19:15 A= D=	19:16-19:30 A= D=	19:31-19:45 A= D=	19:46-20:00 A= D=

	Target Student	Peer
D= total intervals of observed occurrences/all possible observed intervals	/54=	/26=
A= total intervals of observed occurrences/all possible observed intervals	/54=	/26=