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Using Teacher Impression Journals to Improve Intervention Effectiveness

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Abstract

This article describes the use of *Teacher Impression Journals* during a larger study that examined the efficacy of an intervention program designed to promote kindergarteners' positive attitudes toward peers with disabilities (i.e., the *Special Friends* program). The journals were designed to gather information about intervention implementation and social validity. Weekly *Teacher Impression Journals* were collected from 32 teachers over a 6-week period. Each week teachers responded to questions related to the implementation of two interventions: children's behaviors related to the study's primary focus (i.e., acceptance of individuals with disabilities) and comments from key stakeholders (i.e., parents, other school professionals). Teachers' responses were analyzed using content analysis. Results revealed that teachers observed play interactions as evidence of children's acceptance of peers with disabilities. Teachers also reported hearing positive comments from other stakeholders about children's acceptance as well as about the interventions. Suggestions for research and implications for practice are discussed.

Keywords

teacher journals, intervention effectiveness, social validity, fidelity

In education, the application of evidence-based practices to promote positive outcomes for students is central. However, for decades, a growing gap between the identification and application of evidence-based practices has been noted and there is concern that teachers do not readily use accumulated knowledge in the form of evidence-based practices (Buysse & Wesley, 2006; Odom et al., 2005). With this concern in mind, federal funding has been provided to promote the use of evidence-based practices in educational contexts for learners across the life span. For example, in early childhood special education (ECSE), several national centers provide training and technical assistance in areas such as social-emotional readiness, literacy, and the use of evidence-based practices (see the Early Childhood Technical Assistance Center; www.ectacenter.org). To support the work of these centers, researchers are tasked with the goal of conducting high-quality research to address questions related to the *efficacy* of educational practices, interventions, or curricular programs (hereafter referred to as interventions). Interventions with sound empirical evidence provide the basis for professional development materials disseminated through national technical assistance centers like the ones mentioned above. However, one of the greatest problems faced by researchers and teachers when determining an intervention's overall effectiveness is the challenge of implementing the intervention with fidelity under routine conditions (Klingner, Ahwee, Pilonieta, & Menendez, 2003). Indeed, a consistent theme found in the research-to-practice literature is that many of the evidence-based practices are not visible in early intervention and ECSE programs (Odom, 2009).

Teachers want interventions that are not only feasible to implement but also provide them with the supports necessary to sustain their use of the intervention (Boardman, Argüelles, Vaughn, Hughes, & Klingner, 2005; Gersten, Chard, & Baker, 2000). When teachers feel supported and view interventions as feasible, it is easier to implement them with fidelity. However, barriers exist that may lead to low fidelity of implementation rates, and these barriers may differ based on the demands of a particular intervention.

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Researchers are often presented with opportunities to learn about the barriers teachers face while implementing an intervention, as well as a chance to identify solutions to problems that arise (Fixsen, Blasé, Naoom, & Wallace, 2009). Armed with this knowledge, researchers can design resources to support teachers' implementation of an intervention and increase the likelihood that the intervention can be used with fidelity under routine conditions.

An important step in understanding barriers that influence the delivery of an intervention under routine conditions is to gather data on issues in implementation. Teacher-report measures have been suggested as a way to assess implementation integrity and contextual issues in the delivery of an intervention (e.g., K. S. Sutherland, McLeod, Conroy, & Cox, 2013). Teacher reflective journals can help researchers understand what teachers think about and experience during the implementation of an intervention. Through the use of teacher reflective journals, researchers also can identify concerns that participating teachers might want to address related to an intervention program.

However, there is limited information about how researchers have used teacher-report measures to gather feedback about the implementation of an intervention. Although several research teams have used teacher reflection journals to support and assess pre-service teachers' practicum experiences (cf. Bailes, Hulsebosch, & Martin, 2010; Dieker & Monda-Amaya, 1995; L. Sutherland, Howard, & Markauskaite, 2010), no research has been reported focused on using teacher journals to investigate the implementation of an intervention. Thus, the purpose of this article is to describe a method (i.e., *Teacher Impression Journals*) used to gain teachers' perspectives about the implementation of two intervention programs in kindergarten classrooms and to describe how information from teachers can provide insight into the primary topic under investigation (i.e., children's acceptance of peers with disabilities). Also, the social validity of intervention components, as shared by key stakeholders (e.g., parents and school professionals), is described.

When determining the effectiveness of an intervention, researchers should consider whether consumers value the intervention. If consumers do not like or value an intervention, they will not use it, no matter how effective it is (Wolf, 1978). The term social validity refers to the degree to which an intervention has social importance, or is valued by consumers (Kazdin, 1977). Despite purposeful dissemination of effective interventions, those with low social validity have a lower probability of being adopted (Stolz, 1981). Researchers have assessed the social validity, or acceptability, of interventions using various methods such as conversations with consumers, surveys or questionnaires, focus groups, videos, and rating scales (Hurley, 2012). Questionnaires and surveys are the most common methods used to assess social validity, whereby researchers ask consumers to respond in writing to a series of questions.

The purpose of the *Teacher Impressions Journals* used in the current study was to gather information from teachers on the implementation of two interventions. These data, secondary measures from a larger efficacy study, were used to assess the social validity of the interventions. As we gathered teachers' feedback, we were interested in the following questions: (a) What issues or concerns did teachers have related to the implementation of two interventions? (b) What data would teachers share regarding the social validity of the intervention components (e.g., children's evidence of acceptance and non-acceptance of peers with disabilities when researchers were not present)? and (c) What feedback about the interventions did other stakeholders share with teacher participants?

First, we provide an overview of the larger *Special Friends* efficacy study. Next we describe the methods used to gather teachers' perspectives and discuss the categories that emerged from their feedback. We close with a discussion of implications for research and practice.

Method

The Special Friends *Efficacy Study*

Data were collected as part of a randomized control study to examine the efficacy of the *Special Friends* program (Favazza & Odom, 1996, 1997), designed to positively affect kindergartners' attitudes toward individuals with disabilities (Ostrosky & Favazza, 2008). This longitudinal study was designed to examine the efficacy of the *Special Friends* program with 16 experimental and 16 contact control classrooms. Teachers in these two types of classrooms implemented one of the two curricular programs (randomly assigned at the classroom level). The *Special Friends* program was used in experimental classrooms, and a *Science* program was used in contact control classrooms (the *Science* program was adapted from the *ScienceStart!* ™ curriculum; see French & Conezio, 2007). Teachers in both the experimental and contact control classrooms implemented their assigned program 3 times each week for 6 weeks (18 sessions in total).

Participants

The larger efficacy study was conducted in 32 kindergarten classrooms in public elementary schools across two states, with an equal number of classrooms in each condition. The average class size in the *Science* intervention was 20.4 (*SD* = 5.2; range = 17–26) and the average class size in *Special Friends* was 22.7 (*SD* = 2.7; range = 16–26). The primary criterion for recruitment was that the class had to have at least 4 students with disabilities.

Across the 32 kindergarten classrooms, there were 662 child participants (488 typically developing children and 174 children with disabilities). The *ABILITIES index* (Simeonsson & Bailey, 1991) was used to describe individuals with developmental disabilities, using a rating scale to classify functional capability in nine domains (e.g., hearing, behavioral social skills, intellectual functioning, limbs, intentional communication, muscle tone, integrity of physical health, vision, and structural status). The 32 teachers were asked to complete this scale for each of their students with a disability. Results showed that the majority of students had mild disabilities such as communication issues, academic difficulties, or behavioral issues, while nearly 10% of the students had severe disabilities.

Intervention

The *Special Friends* program consisted of books and activities related to disability-awareness, whereas the *Science* program utilized science-themed books and activities. Although the two programs were similar in format, they differed in content (disabilities vs. science); however, both programs focused on similarities. For example, the *Special Friends* program focused on similarities between children from the class and children with disabilities in the stories (e.g., many children like to play soccer and eat ice cream). The *Science* program focused on similarities between children from the class and living things in the stories (e.g., both animals and children live in homes). Aside from the focus on similarities, both the *Special Friends* and *Science* programs had the same structure: (a) class-wide book readings (15 min on each of 3 days/week for 6 weeks), (b) mixed-ability, cooperative learning groups (CLGs; 15 min on each of 3 days/week for 6 weeks, immediately after the book reading), and (c) home book reading (one book sent home in each of the 6 weeks). The CLGs remained consistent across the 6-week interventions, and each group included 3 to 5 typically developing children and at least one child with a disability. Thus, the only difference between the two intervention programs was the content of stories and discussions, and the materials present during the CLGs (play materials vs. science activities).

Measures

Teacher Impression Journals. The *Teacher Impression Journals* included one question focused on implementation issues (i.e., Were there any difficulties in running the *Special Friends* or *Science* intervention this week?) and three questions related to the social validity of the interventions: (a) What instances/episodes occurred this week to make you think that your students without disabilities *were accepting* of their peers with disabilities? (b) What instances/episodes occurred this week to make you think that your students without disabilities *were not accepting* of their peers with disabilities? and (c) What, if any, comments did you hear from parents of participating children or other teachers/staff at school that indicated *acceptance* of children with disabilities in children?

Teacher Impression Journals were collected weekly from the 2 male and 30 female teachers. Most of the teachers had taught students with disabilities in inclusive classrooms in the past 5 years. Four teachers in each condition had a bachelor's degree, while 8 teachers in the *Science* intervention and 6 teachers in the *Special Friends* intervention had taken courses beyond their bachelor's degree but had not earned a master's degree. Three teachers in the *Science* intervention and 2 teachers in *Special Friends* had earned master's degrees, and 1 *Science* teacher and 4 *Special Friends* teachers had taken courses beyond a master's degree. Additional information on the 32 teachers is presented in Table 1.

Fidelity measure. A checklist was designed to assess fidelity of implementation for the *Special Friends* and *Science* interventions. The implementation checklist consisted of 4 sections: (a) story introduction including 6 questions (e.g., Did the teacher ask the children for their predictions about the story?), (b) reading and discussion including 10 questions (e.g., Did the teacher ask the children questions during the book reading about the story, attempting to include all children?), (c) CLG set up including 8 questions (e.g., Did the teacher and research staff have the materials prepared in advance?), and (d) CLG activity including 5 questions (e.g., Did the teacher ask children for ideas of what to do with the materials?). Using the implementation checklist, research staff gathered fidelity data from 24 of the 32 classrooms (12 *Special Friends* and 12 *Science* classrooms).

For the 12 *Special Friends* classrooms, fidelity ranged from 80.5% to 100% and averaged 95.41% across the four sections described above. For the 12 *Science* classrooms, fidelity ranged from 81.6% to 99.31% and averaged 95.01% across all four sections. These results show that teachers in both groups (*Special Friends* and *Science*) implemented the interventions with equally high fidelity. It is not surprising that fidelity data were strong because the research team assisted teachers in all aspects of implementing the interventions.

Procedures

As part of the larger efficacy study, teachers were asked to complete weekly *Teacher Impression Journals* to gather their perspectives about their experiences and observations throughout the course of the study. A systematic method was followed to distribute and collect *Teacher Impression Journals*. Each week at the conclusion of the first intervention session, research staff provided a copy of the *Teacher*

Table 1. Teachers' Demographic Information.

Variables	*Special Friends*	*Science*
Education level		
BA or BS	4	4
BA or BS plus additional courses	6	8
MA	2	3
MA plus additional courses	4	1
Special education training		
None	1	0
Seminar or workshop	1	2
1−2 courses	7	7
3−4 courses	1	2
More than 4 courses	1	4
Special education graduates	5	1
Age		
Below 25 years old	2	1
26−35 years old	4	6
36−45 years old	4	4
46−55 years old	5	5
Above 55 years old	1	0
Number of years teaching		
M	13.5	13.3
SD	9.2	8.5
Range	1−30	3−33
Number of years teaching kindergarten		
M	8.1	7.4
SD	6.7	4.1
Range	1−22	2−16

Impression Journal to participating teachers. In the journal, teachers were asked to respond to the four questions in writing. Research staff collected the completed *Teacher Impression Journal*s from teachers following the last session of each week's intervention program. The process continued on a weekly basis throughout the 6-week intervention. Using this method of soliciting teacher feedback, research staff could have analyzed a total of 192 journal entries (32 teachers × 6 weeks); however, there were two missing entries from one of the teachers who implemented the *Special Friends* program. As a result, 190 journal entries were analyzed.

Data Analysis

Teacher data were analyzed using content analysis procedures described by Johnson and LaMontagne (1993). The researchers have had much experience using this method of data analysis over the past 10 years; prior to analyzing this data set, they re-read Johnson and LaMontagne and discussed the procedures. First, the teachers' weekly responses were typed into a word document, organized by the four journal questions. Then, to gain familiarity with the data, the researchers independently read all data from the first year of the study and proceeded to identify units of analysis. A unit of analysis represented a single, distinct theme in a response. For example, in response to the question, "What instances/episodes occurred this week to make you think that your students without disabilities *were accepting* of their peers with disabilities?" a teacher may have responded, "I saw children being more helpful with their classmates with disabilities and some children started using sign language." This response includes two distinctly different points in one sentence: The teacher observed children "being more helpful" and "using sign language." Because teachers' responses ranged from single words to multiple sentences, a decision was made to separate a response into multiple units of analysis when it included more than one distinct theme. Then, researchers discussed each response to identify emerging categories under each question. The categories reflected the distinct and unique themes found in the responses. In the example above, "being more helpful" was placed in a *social skills* category while "using sign language" was placed in a category entitled, *learning about disabilities*. Once categories were identified, definitions for each category were developed.

Once the categories and definitions were developed, the first three authors independently sorted all responses from the first year's data into the established categories and then compared their sorting. When there were disagreements, the researchers discussed the responses and categories to resolve differences and reach consensus. Following this process, the categories and definitions were refined and the researchers re-sorted the responses to ensure that revisions to categories and definitions yielded consistency in sorting across all researchers. The researchers coded all remaining data following the same procedures. Once the researchers were confident with the definitions and they had coded the data from all 32 teachers, they re-read all responses for each category and reached consensus on the coding of all responses to ensure that they were placed in the appropriate categories.

Reliability measures. A doctoral student majoring in ECSE served as a reliability coder. The coder was trained on the categories and definitions using 10% of the comments that were randomly selected from each category. The coder was asked to sort the responses into the appropriate categories, and a point-by-point method of agreement (Kazdin, 2011) was used. Training continued until inter-rater agreement equaled at least 80% on all categories ($M = 96.2\%$, range = 83.3%−100%). Once training was completed, 20% of the comments from each category were randomly selected for reliability coding. Reliability ranged from 80% to 100% and averaged 97.9% across all categories and questions. The researchers discussed all disagreements identified during the reliability process, including disagreements that

Table 2. Frequency and Percentage of Data Related to Difficulties With Running the Intervention Programs.

	Special Friends		*Science*		Both programs
Categories/definitions	Number of responses (*n* = 79)	Number of teachers (*n* = 16)	Number of responses (*n* = 95)	Number of teachers (*n* = 16)	Number of responses (*n* = 174)
Book reading component (i.e., length of time for book reading—took too much time, books too long, not enough preparation, children's inattention, and lack of engagement in book reading)	16 (20.3%)	10	10 (10.5%)	6	26 (14.9%)
Structure, format, or materials in the CLG (i.e., quantity of materials, need for additional materials, teacher's role during CLGs, children's behaviors that affected CLGs)	17 (21.5%)	9	34 (35.8%)	14	51 (29.3%)
Book distribution (i.e., length of time, organization, logistics of book distribution)	5 (6.3%)	4	7 (7.4%)	2	12 (6.9%)
Home component (i.e., anything that parents do with children at home such as reading books, signing books, returning books)	5 (6.3%)	4	7 (7.4%)	5	12 (6.9%)
General comments related to the project	2 (2.5%)	2	5 (5.3%)	5	7 (4%)
Other (including positive comments about the program)	34 (43%)	12	32 (33.7%)	14	66 (37.9%)

Note. CLGs = cooperative learning groups.

occurred during training, and consensus was reached on the appropriate code for each comment.

Results

Across the 32 teachers, 655 responses were coded (325 from teachers who implemented the *Special Friends* program and 330 from teachers who implemented the *Science* program). Major categories that emerged from data analyses follow. Detailed information on the responses and definitions is presented in Tables 2 to 5. The tables also include frequencies and percentages of responses and the number of teachers for each category.

Difficulties or Issues in Implementing the Intervention Programs

A total of 174 responses were coded for the question, "Were there any difficulties in running the *Special Friends* or *Science* intervention this week?" (79 from teachers who implemented the *Special Friends* program and 95 from teachers who implemented the *Science* program). Although this question focused on difficulties in running the interventions, many teachers shared positive comments related to implementation. Across teachers in both programs, approximately 38% of the 174 comments were positive. Due to this, all positive comments were placed in the category of *other* and were analyzed separately from the teachers' comments that addressed the question of interest. Of the remaining 108 comments that addressed difficulties with intervention implementation, five categories emerged: (a) book reading component; (b) structure, format, or materials in the CLGs; (c) book distribution; (d) home component; and (e) general comments related to the project.

The most frequently mentioned responses from both groups of teachers were categorized as *book reading component* and *structure, format, or materials in the CLG.* The category of *book reading component* included difficulties related to the length of time for reading (e.g., "Books were too long") and children's lack of attention and engagement in book reading (e.g., "I felt better this week. I tried different ways to increase listening and participation with some students with disabilities by encouraging them to make sounds or movements from the story"). The category of *structure, format, or materials in the CLG* included responses related to the number of materials, the teacher's role during CLGs (e.g., "I was unsure of how much I was to

Table 3. Frequency and Percentage of Data Related to Children's Acceptance of Peers With Disabilities.

	Special Friends		*Science*		Both programs
Categories/sub-categories	Number of responses (*n* = 126)	Number of teachers (*n* = 16)	Number of responses (*n* = 115)	Number of teachers (*n* = 16)	Number of responses (*n* = 241)
Social skills					
Play together (i.e., interact or communicate with peers, work cooperatively)	33 (26.2%)	11	41 (35.7%)	14	74 (30.7%)
Help, teach, and take care	10 (7.9%)	7	37 (32.2%)	12	47 (19.5%)
Be nice, kind, and friendly including friendships	12 (9.5%)	6	9 (7.8%)	6	21 (8.7%)
Encourage	7 (5.5%)	4	5 (4.3%)	0	12 (4.9%)
Share	5 (4%)	2	7 (6%)	6	12 (4.9%)
Be tolerant and patient	6 (4.8%)	4	3 (2.6%)	3	9 (3.7%)
Learning about disabilities					
Understand disabilities and relate it to personal experiences	19 (15.1%)	10	5 (4.3%)	3	24 (9.9%)
Use equipment	13 (10.3%)	10	2 (1.7%)	1	15 (6.2%)
Use sign language	6 (4.8%)	6	0 (0%)	0	6 (2.5%)
Other	15 (11.9%)	8	6 (5.2%)	7	21 (8.7%)

Table 4. Frequency and Percentage of Data Related to Children's Non-Acceptance of Peers With Disabilities.

	Special Friends		*Science*		Both programs
Categories/definitions	Number of responses (*n* = 67)	Number of teachers (*n* = 16)	Number of responses (*n* =68)	Number of teachers (*n* = 16)	Number of responses (*n* = 135)
Inappropriate social skills, or lack of social skills (e.g., typically developing children's inappropriate social skills toward peers with disabilities or lack of social communication and limited social interactions, including typically developing children's ignoring, leaving out, excluding peers with disabilities from an activity)	27 (40.3%)	10	27 (39.7%)	11	54 (40%)
Making fun of/name calling (e.g., typically developing children making fun of, or calling names of peers with disabilities, including mimicking)	8 (11.9%)	6	2 (2.9%)	1	10 (7.4%)
Actions of children with disabilities and responses by typically developing peers (e.g., including typically developing children's comments or complaints about behavioral problems of children with disabilities)	11 (16.4%)	5	22 (32.4%)	10	33 (24.4%)
Behavioral characteristics of children with disabilities (e.g., including social skill deficits of children with disabilities, but no mention of responses by typically developing peers toward the behaviors)	7 (10.4%)	4	5 (7.4%)	3	12 (8.9%)
Other	14 (20.9%)	7	12 (17.6%)	8	26 (19.3%)

intervene to get less frantic play"), and children's behaviors that affected CLGs (e.g., "The water was fun but I think we need to give them rules before tackling this"). Some teachers described difficulties related to the *home component* (e.g., "Families are not returning books") and *general comments about the project* (e.g., "Time is my only issue. I am having some difficulty getting the special teachers to cooperate as far as time goes").

Table 5. Frequency and Percentage of Comments From Parents or Other Teachers/Staff That Indicated Children's Acceptance of Peers With Disabilities.

	Special Friends		*Science*		Both programs
Categories/sub-categories	Number of responses (*n* = 53)	Number of teachers (*n* = 16)	Number of responses (*n* = 52)	Number of teachers (*n* = 16)	Number of responses (*n* = 105)
Acceptance of children with disabilities					
Comments from parents	2 (3.8%)	2	0 (0%)	0	2 (1.9%)
Comments from other adults in school	0 (0%)	0	3 (5.8%)	2	3 (2.9%)
Other comments from parents					
Learning about or having increased understanding of disabilities	5 (9.4%)	2	0 (0%)	0	5 (4.8%)
Learning or exposure to sign language	3 (5.7%)	5	0 (0%)	0	3 (2.9%)
Comments about the program	5 (9.4%)	5	9 (17.3%)	6	14 (13.3%)
Comments about books	19 (35.8%)	12	16 (30.8%)	9	35 (33.3%)
Other comments from other adults in school (e.g., other teachers/staff)					
Positive comments about the program	2 (3.8%)	2	0 (0%)	0	2 (1.9%)
Increased social skills and peer interactions	3 (5.7%)	3	9 (17.3%)	6	12 (11.4%)
Increased learning about vocabulary or science concepts and increased interest in science	0 (0%)	0	2 (3.8%)	1	2 (1.9%)
Learning or exposal to sign language	1 (1.9%)	1	0 (0%)	0	1 (0.9%)
Other	13 (24.5%)	10	13 (25%)	9	26 (24.7%)

Social Validity of the Interventions

To assess the social validity of the interventions, teachers were asked to respond to three questions (all addressing the primary aspect of the larger efficacy study, children's attitudes toward peers with disabilities). Two questions were based on teachers' observations about children's acceptance or non-acceptance of peers with disabilities, while the other question focused on comments related to children's acceptance of peers with disabilities that were shared by parents or other staff at school.

Children's acceptance of peers with disabilities. A total of 241 responses (126 from teachers who implemented the *Special Friends* program and 115 from teachers who implemented the *Science* program) were coded in response to the question, "What instances/episodes occurred this week to make you think that your students without disabilities *were accepting* of their peers with disabilities?" Using content analysis, two major categories emerged: *social skills* and *learning about disabilities*. The first category, *social skills*, emerged from 73% of the teachers' responses and included six sub-categories: (a) play together, including interactions or communication with peers and collaborative work; (b) help, teach, and take care; (c) be nice, kind, and friendly, including friendships; (d) encourage; (e) share; and (f) be tolerant and patient. The other thematic category, *learning about disabilities*, emerged from about 19% of the teachers' responses and included three sub-categories: (a) understand disabilities and relate it to personal experiences, (b) use equipment, and (c) use sign language. Approximately 9% of the total comments indicated there were no observed episodes of peer acceptance toward students with disabilities during a particular week (categorized as *other*).

Of the sub-categories identified under the larger category of *social skills*, the most frequently mentioned responses from teachers implementing both interventions (26.2% from the *Special Friends* program and 35.7% from the *Science* program) were categorized as *play together* (e.g., "Students are playing much better together-cooperating"). In other words, teachers using both interventions described many communicative and cooperative play interactions between children with and without disabilities as evidence of children's acceptance of peers with disabilities. Although the teachers' responses identified in the category *learning about disabilities* predominantly came from teachers implementing

the *Special Friends* intervention (approximately 30%; e.g., "Students are talking about seeing people in the community who have disabilities"), some responses were provided by the *Science* teachers (approximately 6%). More information about these categories and definitions is presented in Table 3.

Children's non-acceptance of peers with disabilities. A total of 135 responses (67 from teachers who implemented the *Special Friends* program and 68 from teachers who implemented the *Science* program) were coded for the question, "What instances/episodes occurred this week to make you think that your students without disabilities *were not accepting* of their peers with disabilities?" Four categories emerged from these responses: (a) inappropriate social skills or lack of social skills, (b) making fun of/name calling, (c) actions of children with disabilities and responses by typically developing peers, and (d) behavioral characteristics of children with disabilities.

Approximately 40% of the responses from both groups (40.3% from the *Special Friends* teachers and 39.7% from the *Science* teachers) indicated that children had *inappropriate social skills or lacked social skills.* This category included responses describing how typically developing children used inappropriate social skills toward peers with disabilities or lacked social communication and engaged in limited social interactions. Examples included typically developing children ignoring, leaving out, and excluding peers with disabilities from activities (e.g., "During reading workshops, a non-disabled student told a special friend to go play with something else").

The second category, *making fun of/name calling* (11.9% from *Special Friends* teachers and 2.9% from *Science* teachers) focused on typically developing children making fun of peers with disabilities, including name calling and mimicking peers (e.g., "Students imitated a special needs student who gets upset"). Also, responses to this question included comments about challenging behaviors exhibited by children with disabilities and reactions to these behaviors from typically developing children. These responses were coded in the category of *actions of children with disabilities and responses by typically developing peers* (e.g., "Some students become frustrated with a child with a disability who has tendency to speak out and seek attention"). In addition, across all teachers, approximately 10% of their responses focused on *behavioral characteristics of children with disabilities* (e.g., "G is not sharing"). However, these responses did not include typically developing children's reactions toward the children with disabilities. More information about these categories and definitions is presented in Table 4.

Comments from other stakeholders. A total of 105 responses (53 from *Special Friends* teachers and 52 from *Science* teachers) were coded for the question, "What, if any, comments did you hear from parents of participating children or other teachers/staff at school that indicated *acceptance* of children with disabilities in the study?" These data were anecdotal. In other words, teachers were not asked to specifically solicit feedback from parents or other professionals, nor did we ask for descriptions of which parents and professionals made the comments. After carefully reviewing all responses to this question, only 5 comments directly answered the question about *acceptance of children with disabilities* (e.g., "The *Special Friends* program has helped me [a parent] talk about special people and I love that my child can talk about how he knows they are still the same as us-just different in some ways"). Approximately 25% of the comments were coded as *other* and revealed that the teachers had no feedback to share from parents, other teachers, or staff during a specific week.

The majority of responses to this question (approximately 54%) focused on parents' comments about the following: (a) *learning or having increased understanding of disabilities*, (b) *learning or exposure to sign language*, (c) *the program*, and (d) *books*. Not surprising, comments that fell into the first two sub-categories were all provided by parents whose children participated in the *Special Friends* program. The remaining 17 comments were from other adults in the school who mentioned something positive about the program or about children's increased social skills and peer interactions (e.g., "Teachers are commenting on how great the program is"). More information about these categories and definitions is presented in Table 5.

Discussion

Through this study, we were able to extend our knowledge about using teacher journals to better understand intervention implementation *and* as a venue for assessing social validity. Data were gathered on difficulties that teachers experienced in implementing two interventions, in an attempt to identify solutions to these problems. Teachers provided feedback on the three core intervention components (i.e., book reading, CLG, and a home book reading component), which provided research staff with opportunities to support implementation focused specifically on the challenges identified by teachers. Each week, the journals were collected and reviewed with teachers, in an attempt to problem-solve around the concerns identified. For example, one teacher wrote, "The kids get so excited when materials are put out for the CLGs that some have trouble listening to the story. Could materials be covered with something (sheets or table cloth) so they might focus more on the book?" In response to this comment, we began using a shower curtain to cover the CLG materials until the book reading ended. In addition, a few teachers wrote about

challenges related to the book distribution process (e.g., "We need a little extra time for book distribution," "It took a very long time to pass out books"). Thus, we brainstormed with the teachers and decided to have more research staff present on days when books were distributed.

Another focus of the *Teacher Impression Journals* was to assess the social validity of the interventions. Results showed that the majority of teachers observed positive changes in children's cooperative and communicative play interactions as evidence of children's acceptance of peers with disabilities. Although the categories mentioned were almost identical for the two groups of teachers, more than 30% of the responses from the *Special Friends* teachers indicated that students had learned about disabilities (e.g., equipment, sign language), whereas only 6% of the responses from *Science* teachers fell into this category. This was not surprising considering that the *Special Friends* program was designed to provide kindergarteners with opportunities to learn about individuals with disabilities. However, it was interesting that teachers reported that children applied the knowledge they were learning in storybooks about disabilities to their personal experiences in the community and within their school settings (e.g., "The students stopped in the hallway to let one of the foster grandparents with a walker go by. As she passed, I heard them say that the walker is just helping her; she can do things like us, you know. The conversation quietly went on about how she carried her lunch to her table just like them").

In addition, in response to the question about children's non-acceptance of peers with disabilities, many teachers described inappropriate social skills or limited social interactions between children with and without disabilities as evidence of children's non-acceptance of peers with disabilities. Also, teachers in both intervention groups pointed out that typically developing children often became upset or bothered by the actions and behaviors of their classmates with disabilities. In fact, some researchers have suggested that young children recognize differences in their peers' abilities (e.g., disabilities) and behaviors (e.g., challenging behaviors; Diamond, 1993; Yu, Ostrosky, & Fowler, 2015). Research has shown that typically developing children are less likely to rate their classmates with disabilities or behavioral issues, on sociometric peer ratings as someone they would like to play with compared with their typically developing classmates (Diamond, Le Furgy, & Blass, 1992; Odom et al., 2006). As these research studies suggest, children may have difficulty understanding and accepting peers with disabilities or challenging behaviors. This may reflect children's strong sense of "right and wrong" without having much knowledge about individuals with disabilities. The implementation of programs such as *Special Friends* may help promote positive attitudes toward peers with disabilities, but it may not be enough to support the development of friendships with peers who have disabilities or challenging behaviors (Meyer & Ostrosky, 2015). Perhaps the implementation of these evidence-based strategies in combination with peer interaction interventions, which teach social skills to both children with and without disabilities, may further promote peer acceptance and relationship development and lead to decreased episodes of non-acceptance.

Through the *Teacher Impression Journals*, teachers also were asked to share comments that they had heard from other stakeholders (e.g., students' parents or school professionals) about children's acceptance of peers with disabilities. Although only a small number of comments directly addressed this question, we received a great deal of feedback about the interventions from parents and other adults in the schools who did not directly participate in the programs. The comments from these stakeholders provide social validity data on the goals of the *Special Friends* program (e.g., increased knowledge and accepting attitudes toward peers with disabilities), acceptability of both programs' core components (e.g., enjoying the books that came home, feeling that both programs were beneficial to children's social and academic learning), and positive comments from other educators about the influence they felt the program had on children's social skills and peer interactions. Gathering this information from teachers reflected positive satisfaction with the *Special Friends* and the *Science* programs by teachers and parents, as well as the acceptability of the instructional components (i.e., book reading, CLGs, home literacy) of both programs.

Limitations and Implications for Future Research

Several limitations should be considered when evaluating the findings from this study. First, the format of the *Teacher Impression Journal* could be improved with several changes. Teachers were asked to write on a hard copy of the journals, which may have been viewed as additional work by some participants. In fact, many teachers wrote very short entries to answer the four questions each week, and there were some instances when teachers skipped questions. Due to this fact, we believe that some teachers might have viewed the journal as time-consuming and may not have realized the value of their contributions to our research. Future researchers may consider using alternative formats for journal entries (e.g., messages over e-mail, a checklist format, audio-recordings, online document sharing applications) to ease the burden of providing written feedback. In addition, researchers might want to stress the importance of teacher feedback before and during participants' engagement in a study.

Given the brevity of some teachers' responses, another limitation was the lack of details provided about the topics of interest. Originally, research staff thought there would be

time to debrief with the teachers about their journal entries prior to the start of each new week. However, the time needed to follow-up was not always available. Again, the use of alternative formats for journal entries may increase teachers' feedback and also could serve as a vehicle for researchers to further investigate comments of interest.

Finally, the data presented in this article were based exclusively on teacher report. Teachers were asked to complete their *Teacher Impression Journals* each week. However, depending on the teachers' characteristics or their availability, the length of the entries varied. Including observational methods or rating scales along with the *Teacher Impression Journals* would have provided more breadth and depth about specific information shared by teachers. Also, more research needs to be conducted to assess the validity and reliability of using *Teacher Impression Journals*. Thus, examining how researchers can obtain feedback from teachers and use the feedback to inform future studies and applications to practice is an important next step.

Implications for Practice

Using *Teacher Impression Journals* can be beneficial for both teachers and researchers in early childhood settings. By writing journal entries, teachers in our study set aside time to reflect on their interactions with students during the intervention programs and to consider what they observed regarding students' responses to the interventions. Teachers also could identify concerns that they wanted to address related to the intervention programs. In fact, many researchers suggest that self-reflection is critical for early childhood teachers, and they offer numerous ideas for beginning the self-reflection process (Brownman, 1989; Kaiser & Rasminsky, 2012). Through the process of self-reflection, teachers can consider how their beliefs, values, and experiences affect the way that they work with children, families, and other professionals (Hemmeter & Fox, 2008).

In addition, using *Teacher Impression Journals* might be helpful in identifying problems that teachers encounter when implementing evidence-based practices. Implementation science is defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practice into routine practices" (Eccles & Mittman, 2006, p. 1). However, implementing evidence-based practices in typical early childhood settings, while also attending to the individual needs of students, can be difficult for both researchers and educators. Researchers have expressed concerns that teachers often struggle to implement evidence-based practices in early childhood programs (Buysse & Wesley, 2006; Odom et al., 2005; K. S. Sutherland et al., 2013). Having teachers read about a practice, or learn about it through professional development trainings, may not be sufficient to support its use in their classrooms (Odom, 2009). Teachers might need additional support to effectively implement evidence-based interventions. *Teacher Impression Journals* may help researchers obtain practical ideas from teachers that can in turn increase the use of such practices in various educational contexts.

Taken collectively, this study provides insights into teachers' struggles in implementing an evidence-based intervention, the behaviors of young children that reflect acceptance and non-accceptance of peers with disabilities, and stakeholders' feedback on two multi-component interventions. Moreover, *Teacher Impression Journals* provided information on the social validity of the interventions and complement other data sources that were utilized to assess social inclusion and acceptance in kindergarten settings. Future research and program evaluation efforts would benefit from adding a similar data collection strategy to improve program implementation and provide another lens from which to examine data from multiple perspectives.

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