

Adding Functional Behavioral Assessment to First Step to Success: A Case Study

Deborah R. Carter and Robert H. Horner
University of Oregon

Abstract

First Step to Success is a manualized early intervention program with documented success in reducing the problem behavior of young children. Walker and colleagues are now engaged in analyses of variables that will increase the proportion of children for whom First Step is effective. A possible enhancement to the First Step to Success protocol is the use of functional behavioral assessment, and individualized, function-based behavior support. The present analysis provides a case study with one, six-year old student who received First Step to Success. Following the “coaching phase” of First Step a reversal design was employed in which function-based features of behavior support were withdrawn and then re-implemented. Analysis of problem behavior, and academic engagement data suggest that incorporation of function-based features enhanced the impact of First Step to Success. Implications for modifications of the First Step protocol, and future research are provided.

Educators face a growing expectation that behavior support in schools will emphasize evidence-based practices implemented with high fidelity (IDEA). To meet this expectation two seemingly conflicting approaches are being proposed. One touts the importance of “manualized interventions” that can be described with precision, disseminated through written manuals, and replicated with consistency (Reid & Nelson, 2002). The other emphasizes the need for behavior support that is individualized, guided by functional behavioral assessment, relies on the competence of local professionals, and is tailored to the specific child and context (Carr et al., 1999; Sugai, et al., 2000). We provide in this case study an example of integrating these two approaches using the well-documented early intervention First Step to Success.

First Step to Success is a standardized, collaborative, home-school secondary intervention designed to target kindergarten to second graders at-risk for developing antisocial behavior patterns. The program incorporates three interconnected modules: screening, school intervention, and parent training. Screening occurs through use of the Systematic Screening for Behavior Disorders (SSBD, Walker & Severson, 1992), a combined teacher report plus direct observation tool for identifying children with externalizing and internalizing problem behavior. The school intervention module (CLASS) is a consultant-based intervention focusing on reducing problem behavior and increasing adaptive, pro-social behaviors. The CLASS module requires 30 program days across three phases (consultant, teacher, and maintenance) for successful completion. In the “consultant phase” a trained First Step Coach sits with the focus student and teaches him/her to discriminate appropriate from inappropriate behavior. The consultant “coach” uses a card that is red on one side and green on the other to define a “game” where the student earns points for appropriate behavior (e.g. when coach is displaying the green side of the card), and does not earn points for inappropriate behavior (e.g., when the coach is displaying the red side of the card). As the child progresses in the program, the length of sessions and points needed to earn class rewards are extended. Once the student is demonstrating high levels of appropriate behavior the consultant turns the red/green card over to the teacher, and the teacher gradually fades from tangible and frequent reinforcement to more natural and intermittent consequences (Golly, Stiller, & Walker, 1998; Walker, Kavanagh, Stiller, Golly, Severson, & Feil, 2001; Walker, Stiller, Golly, Kavanagh, Severson, & Feil, 1997). The parenting component of First Step to Success is implemented in concert with the CLASS program at school, and involves providing families with training in limit setting, expectation definition, and supporting appropriate behaviors.

Experimental studies of First Step to Success with kindergarten students have shown improvements in students’ academic engagement and aggressive behavior both during and following implementation of the program (Epstein & Walker, 2002; Golly, Stiller, & Walker, 1998; Walker, Kavanagh, Stiller, Golly, Severson, & Feil, 2001). A replication study examining effects for three first and second grade students found similar positive results (Lien-

Thorne &, Kamps, 2005). Positive behavior changes were also found in studies involving two sets of identical twins in kindergarten (Golly, Sprague, Walker, Beard, & Gorham, 2000). Further, social validation of the First Step program that asked participants of a training workshop to rate the importance, effectiveness and/or acceptability of the intervention found positive results regarding the content and quality of the training as well as the structure of the intervention itself. Training participants who later implemented the First Step program reported that (a) it was effective in teaching appropriate behavior, (b) it had a positive effect on the student's peer relationships, and (c) it was relatively easy to use and manage in conjunction with other teaching duties (Golly, Stiller, & Walker, 1998).

A major strength of First Step to Success has been the manualized precision with which the components of the intervention have been defined. The practices within First Step are defined with sufficient clarity that practitioners can use written materials to organize and implement the intervention. Manualized or standardized interventions for problem behavior provide one option that may "appeal to busy practitioners because they describe concrete procedures with immediate practical value" (Wilson, 1996). Treatment manuals provide an overall framework for treatment, communicate the rationale and parameters of an intervention, specify the patient population targeted by the intervention, and provide practitioners with strategies and techniques to assist in the evaluation, dissemination, and implementation of some evidence-based practices (Addis, & Cardemil, 2006; Fonagy, 1999; Henggeler, & Schoenwald, 2002; Kendall, Chu, Gifford, Hayes, & Nauta, 1998). Several advantages to the use of treatment manuals have been noted, including (a) treatment manuals are often empirically validated, (b) treatment manuals provide fuller articulation and an operationalized statement of the treatment being delivered, (c) manuals are useful in training and supervision of practitioners, (d) manuals communicate the conceptual background and boundaries of an intervention, (e) manuals allow practitioners to monitor the integrity of their intervention or their level of adherence to the program, (f) manuals can facilitate practitioners technical competence, (g) manuals can provide standardized systems for fading support over time, and (h) treatment manuals help to ensure the possibility of replication of results and development and identification of evidence-based practices (Addis, 1997; Addis, & Cardemil, 2006; Clarkin, 1998; Wilson, 1996; Wilson, 1998). Manuals can be helpful in creating and implementing clearly specified and structured interventions that tend to be more effective than interventions that are unstructured and do not contain clear goals and objectives (Fonagy, 1999).

Evidence-based interventions, which are so essential in education today, have been described as manualized and replicable interventions that have been demonstrated, through research, to be effective (Addis, 1997; Nelson, & Epstein, 2002). Intervention manuals represent a necessary breakthrough in the development and dissemination of these evidence-based practices (Wilson, 1996). Manuals are quickly becoming an important medium for disseminating evidence-based practices and offer a potentially helpful way to bridge the gap between research and practice and deliver effective interventions to real-world settings (Addis, 1997; Addis, Wade, & Hatgis, 1999; Addis, & Waltz, 2002; Henggeler, & Schoenwald, 2002).

Manual-based interventions do not necessarily mean that interventions are not individualized or tailored to individual students' needs (Addis, Wade, & Hatgis, 1999; Wilson, 1996). However, it has been pointed out that manuals could be enhanced by describing common adaptations or strategies in addition to specific techniques (Addis, 1997; Addis, Wade, & Hatgis, 1999; Wilson, 1998). The movement toward manualization should allow for more systematic study of necessary intervention adaptations for non-responders and a priority should be placed on developing more effective methods for responding to cases where standardized interventions are not effective (Addis, Wade, & Hatgis, 1999; Wilson, 1998). One example of this theme is the potential addition of functional behavioral assessment procedures to the standard First Step to Success protocol.

Interventions designed based on the hypothesized function of problem behavior have shown notable results (Carr et al., 1999; Didden, Duker, & Korzilius, 1997; Gunter, Hummel, & Conroy, 1998; Horner, 1994). Studies comparing function-based or indicated and nonfunction-based or contra-indicated interventions have found distinct differences in the level of problem behavior between phases with decreases during the function-based or indicated phase for most participants (Ellingson, Miltenberger, Stricker, Galensky, & Garlinghouse, 2000; Ingram, Lewis-Palmer, & Sugai, 2005; Newcomber & Lewis, 2004).

The purpose of the present study was to assess the value of adding functional behavioral assessment procedures to the design of First Step intervention protocols. Specifically, this study investigated whether there was a differential effect between function-based First Step compared to nonfunction-based First Step in the reduction of problem behavior and increased academic engaged time performed by a first grade student.

Method

Participant and Setting

A six-year old male, Caucasian student (Noah) participated in the study. Noah was a first grade student who was referred for behavior support by his teacher due to talking out, disruption, and noncompliance in the classroom. Noah was not receiving special education services and was not taking any medication. Prior to intervention, Noah's teacher completed the social skills, problem behavior, and academic competence scales of the Social Skills Rating System (Gresham & Elliott, 1990). On the social skills scale, Noah scored in the 'average' range for cooperation and assertion and in the 'below average' range for self-control. On the problem behavior scale, Noah scored in the 'more than average' range for externalizing and hyperactivity, and in the 'average' range for internalizing. Noah scored near the high end of the 'average' range for academic competence. Table 1 presents specific data from the Social Skills Rating System for pre- and post-assessment.

Insert Table 1

Noah's average oral reading fluency score on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (Good & Kaminski, 2005) measure during baseline was 71.75 words per minute. The benchmark goal for children at the end of first grade is for all students to have established reading skills of 40 words per minute on Oral Reading Fluency. Based on benchmark standards, Noah was considered to be an established reader for his grade level.

All training and data collection were conducted in the classroom. Data collection took place during a whole-class Reasoning and Writing lesson near the end of the school day each day. There were 28 students in the class and the Reasoning and Writing lesson was structured as a 30-45 minute teacher-led activity. Instruction included a focus on several topics, including: following directions, grouping objects/items, creating if-then statements, and story comprehension. This period was targeted due to the academic focus of the activity and the high rates of problem behavior demonstrated by Noah during this time.

Measurement

Dependent Variable. Dependent variables for the study were problem behavior and academic engagement. Problem behavior included talk outs, out of seat, noncompliance/defiance, and confrontation/aggression. Talk outs were defined as any statement made by a student that interrupts or interferes with instruction, or disrupts other students' attention to task (academic engagement) or any verbal utterance that is made without being called on or asked a question directly. Out of seat was defined as the student not being in the expected place and/or not being in his seat when expected, during an activity. Not being in his seat included when the student loses contact with the seat surface or when all four legs of the chair were not touching the ground. Noncompliance/defiance was defined as the student not following directions or classroom rules/expectations and/or not complying with a teacher or classroom aide's directive for a behavior change (either to start doing something or to stop doing something) within five seconds. Confrontation/aggression was defined as the student physically placing his body in front of another person, posing threatening gestures toward another person, touching/pushing/hitting another person, throwing objects at another person or in the classroom, and/or using language that is negative, and assaults another person. Academic engagement was defined as orienting toward the board/overhead/teacher, engaging physically or verbally with materials/objects/tasks, writing or reading assigned task during independent work time, contributing to assigned cooperative activities, or engaging in appropriate activities approved by the teacher if independent work was completed early.

The dependent variables were measured through daily 20-min. observations by trained observers using a 10s partial-interval recording system. All observers were graduate students trained to a minimum level of 90% inter-observer agreement prior to beginning formal data collection. Only one type of problem behavior was marked during an interval using a hierarchical scoring system where only the most 'intense' behavior was documented, using the following order: 1) confrontation/aggression, 2) noncompliance/defiance, 3) out of seat/inappropriate placement, and 4) talk-out/disruption. For example, if Noah was out of his seat and talking, only out of seat behavior was recorded for that interval. Academic engagement was recorded when Noah was engaged for at least eight out of ten seconds in an interval.

Independent Variable. The independent variable was implementation of two variations of First Step to Success: (a) standard First Step, and (b) First Step plus function-based support. Fidelity of implementation was measured on 46% of observations and distributed across all phases. Fidelity of implementation was measured for both variations of First Step to Success implementation by the same trained observers who conducted daily problem behavior and academic engagement observations.

Fidelity of implementation of First Step to Success components included direct observation of 13 key features of the First Step intervention. Prior to implementation of the red card/green card game, the teacher was observed for eliciting a pledge of cooperation from the entire class and announcing the reward the child had chosen as well as the number of points needed to earn that reward. During the red/green card game observers tracked the visibility of the card to the child, the teacher's consistency at turning the card to red when appropriate, and the teacher's use of positive and corrective feedback. At the conclusion of the game, the fidelity measure documented whether the end of the game was announced, whether a reward was provided for the class, if appropriate, whether peers provided positive feedback to the student, and whether the teacher signed the card and encouraged Noah to take it home for his parents to sign. The First Step fidelity checklist generated a percent of items implemented score.

Fidelity of First Step plus function-based support procedures was assessed with a second checklist that required direct observation of the procedures uniquely defined as appropriate for Noah. Specifically, the First Step plus Function-based Support checklist, included 7 components: a) the teacher checked in with the student each morning upon arrival to school to give him the opportunity to discuss any upsetting events that may have occurred at home, b) the teacher completed a note to the parents each day to encourage home-school collaboration and consistency, c) the teacher provided pre-corrections to the class about specific expectations at the beginning of each transition/new activity to increase structure, d) the teacher awarded the class with points for following directions and ignoring distractions that led to a desired reward in order to decrease the peer attention Noah received for inappropriate behavior, e) the teacher did not provide Noah with attention for inappropriate behavior, f) the teacher awarded Noah with points that he could in turn award to another student to increase adult and peer attention for appropriate behavior, and g) time-out was used appropriately for escalated behavior to eliminate access to attention. Table 2 provides a comparison of standard First Step and First Step plus function-based support interventions.

See Table 2

Inter-observer agreement. Inter-observer agreement was assessed for each of the dependent variables, including each subtype of problem behavior. A second observer independently scored problem behavior and academic engagement during real-time observations. Inter-observer agreement was calculated using percent agreement, occurrence only agreement and kappa for academic engagement, problem behavior, and each subtype of problem behavior during 37% of observations. Percent agreement was calculated by taking the number of intervals in which the two observers agreed and dividing by the total number of intervals. Occurrence only agreement was calculated by taking the number of intervals in which the two observers agreed that problem behavior or academic engagement occurred and dividing by the number of intervals in which either observer recorded the targeted behavior. Average inter-observer agreement across phases for academic engagement was 92% for percent agreement, 85% for occurrence only agreement, and 75% for kappa. For problem behavior, average inter-observer agreement across phases was 97% for percent agreement, 87% for occurrence only agreement, and 90% for kappa. Information regarding the inter-observer agreement for specific types of problem behavior can be obtained from the first author.

Design and Procedures

The study employed an A-B-C-D-C within-subject reversal design to examine the effect of adding functional behavioral assessment procedures to the First Step intervention protocols. Following initial assessments, the First Step to Success Consultant/Coaching phase was implemented as defined in manualized protocols. The CDC phases of the study provide a withdrawal design assessing the value of adding the individualized FBA components to the First Step to Success protocol.

Functional Behavior Assessment. A comprehensive and individualized functional behavior assessment was completed with Noah to ascertain a description of the problem behavior, identify setting events and antecedent events that predicted occurrence and nonoccurrence of problem behavior, develop a hypothesis about the function of problem behavior, and create strategies for promoting appropriate behavior. The first author used the Functional

Assessment Checklist for Teachers and Staff (FACTS, March et al., 2000) to interview the classroom teacher. In addition, three 20-minute observations were conducted in Noah's classroom using the Functional Assessment Observation Form (FAOF, O'Neill et al., 1997) to verify the function-based summary statement.

Completion of the FACTS interview indicated that Noah's talk out, out of seat, and noncompliant behaviors were maintained by peer attention and were more likely to occur during unstructured time or structured academic time when behavior expectations were inconsistent. Direct observation with the FAOF documented behavior patterns that were consistent with the FACTS hypothesis that problem behaviors were more likely to occur in unstructured contexts, and were likely to be followed by peer attention. Problematic routines included recess, sharing, music, library, art, handwriting, and Reasoning and Writing.

Baseline (A). During the baseline phase Noah was observed under typical classroom conditions. No First Step or function-based support procedures were implemented.

Coaching Phase (B). During the coaching phase, a trained First Step coach worked with Noah to provide intervention that incorporated all the core features of First Step. During this phase, the coach coordinated the implementation process and ran the program in the classroom, completing the following tasks: a) explaining the CLASS program to the teacher, parents, target student, and peers, b) operating the program in the classroom, c) negotiating earned school and home privileges with the student, teacher, and parents, d) demonstrating the program and training the teacher in how to apply it, and e) fading out support and providing the teacher with initial supervision as he or she begins to take over program implementation (Walker, Stiller, Golly, Kavanagh, Severson, & Feil, 1997).

Added function-based support components were also developed during this phase based on results from the functional behavioral assessment and included strategies to make the problem behaviors irrelevant, inefficient, and ineffective by targeting antecedent triggers and maintaining consequences and by teaching new replacement skills. Added function-based support strategies included: (a) additional communication with the family each day and teacher check-in with Noah each morning to address any events that may have occurred at home, (b) pre-corrections for specific behavioral expectations at the beginning of each transition/new activity to increase the structure of the environment and make problem behavior irrelevant, (c) one-on-one instruction for the student on appropriate behavior to teach independent work skills and following directions, (d) reinforcement for appropriate behavior in the form of points given to Noah that he could then give to another student to increase peer attention for appropriate behavior, and (e) class incentives for ignoring distractions and following teacher directions to decrease peer attention for problem behavior. Since Noah's problem behaviors were maintained on a rich schedule of peer attention, reinforcement and consequence strategies focused on providing peer attention for appropriate behavior that was more frequent and easily accessible than is provided in the standard First Step program and minimizing peer attention for inappropriate behavior. To gain access to peer attention for engaging in appropriate behavior, Noah received points for appropriate behavior and was then allowed to choose another student to award a point to each time he earned one. To minimize peer attention for inappropriate behavior, the class was able to earn points throughout the day for ignoring distractions and following teacher directions. This gave the class incentive to minimize attention given to students for inappropriate behavior.

Teacher Phase with Function-Based Support (C). During this phase, the teacher took over the responsibility from the coach to implement core features of First Step and continued to implement added function-based support components.

Teacher Phase without Function-Based Support (D). During this phase, the teacher continued to implement all the core features of First Step but discontinued implementation of the added function-based support components. Noah continued to play the red/green card game and earn rewards for the entire class. However, class rewards that were given for following directions and ignoring distractions were discontinued. Further, the individual points that Noah earned and was then allowed to share with a peer were discontinued as well. This served to increase access to peer attention for problem behavior as the class incentive to ignore distractions had been removed and to decrease access to peer attention for appropriate behavior as Noah was no longer allowed to access the frequent peer attention he received for appropriate behavior when he could share his individual points with a chosen peer.

Results

Results provide preliminary support for the addition of functional behavioral assessment procedures to the design of First Step intervention protocols to decrease problem behavior and increase academic engagement.

Problem Behavior

Results for problem behavior are summarized in Figure 1. During baseline, Noah engaged in problem behavior an average of 37% of intervals, with a range from 20% to 60%. The last seven sessions of baseline data show five days with problem behavior over 40% of intervals and there is a steady and apparent increasing trend across the initial baseline phase.

When the coach began implementation of First Step intervention components with Noah, problem behavior decreased to an average of 10% of intervals with a range from 2% to 27%. All but three data points in the coaching phase show problem behavior in fewer than 10% of intervals and each of these three “peak” days correspond to a day when the coach was not present. The last four days of coaching show problem behavior consistently below 3% of intervals and represent four consistent days of implementation with a new coach.

When the teacher took over implementation of the First Step procedures and continued implementation of added function-based supports, problem behavior remained low with an average of 5% of intervals and a range from 1% to 13% of intervals. Only one day showed problem behavior over 10% of intervals and only two days showed problem behavior over 5% of intervals during this phase. A decreasing trend is also evident during this first teacher phase with function-based supports.

A steady increasing trend becomes apparent, however, when the added function-based supports were removed and the teacher continued to implement First Step procedures only. The average problem behavior for this teacher phase without function-based supports phase was 21% with a range from 3% on the first day of the phase to 53%.

The final teacher phase with function-based supports showed a steady low rate of problem behavior with a slight decreasing trend. The average problem behavior during this final phase was 8% with a range from 0% to 45%. All data points in this phase were below 11% except for one data point at 45% that represents a peak in the data for this phase.

See Figure 1

Academic Engagement

Results for academic engagement are provided in Figure 2, and demonstrate a pattern inverse to that observed for problem behavior. During baseline, Noah was academically engaged for an average of 49% of intervals with a range from 26% to 74%. A slight increasing trend is apparent during the baseline phase but becomes more rapid during the coaching phase with all but four data points showing academic engagement above 88% of intervals. Similar to problem behavior, each of the data points below 88% during the coaching phase correspond to days in which the coach was not in attendance. The average percent of intervals in which Noah was academically engaged during the coaching phase was 80% with a range from 48% to 99%.

During the first teacher phase with function-based supports, Noah’s academic engagement remained above high with an average of 77% and a range from 29% to 95% of intervals. Only one data point in this phase was below 80%.

A change in level is apparent between teacher implementation with function-based supports and teacher implementation without function-based supports as the percent of intervals academically engaged dropped to an average of 56% with a range from 16% to 88%. All but the first data point in this phase were below 66% of intervals academically engaged representing a clear change from the previous phase.

During the final phase, when the teacher implemented function-based supports again, we see a quick and evident shift in the level of academic engagement with all but one data point above 78% and all but three data points above

90%. The average academic engagement for the final phase was 89% with a range from 48% to 98%. Data in this final phase are fairly stable and represent a remarkable increase from baseline and non function-based support phases.

See Figure 2

Social Skills Rating System Assessment

Table 1 provides pre- and post-assessment percentile ranks for social skills, problem behavior, and academic competence as well as raw score data for all subscales. Prior to intervention, Noah ranked in the 16th percentile for elementary boys in social skills. After intervention, Noah ranked in the 55th percentile for social skills. For problem behavior, Noah ranked in the 93rd percentile prior to intervention and in the 75th percentile following intervention. Finally, Noah's academic competence ratings moved him from the 73rd percentile before intervention to the 75th percentile following intervention. Following intervention, Noah scored within the 'average' range for elementary boys on all subscales.

Discussion

The results of this study suggest that the addition of functional behavioral assessment and function-based supports may be beneficial for some students receiving First Step to Success. First Step, in its current form, provides students with access to teacher and peer attention for appropriate behavior. In particular, the addition of function-based supports may be beneficial for students whose behavior is maintained by a function other than adult or peer attention or for whom levels of adult and peer attention received for inappropriate behavior are higher than those received for appropriate behavior in the standard First Step to Success program.

Observation data demonstrate a functional relationship between the addition of function-based supports and decreases in problem behavior and increases in academic engagement. Further, teacher perceptions of student behavior and academic competence (as indicated by the SSRS) show increases in social skills and academic competence and decreases in problem behavior following intervention. A marked increase in social skills is apparent with the teacher perception rating the student in the 16th percentile prior to intervention and in the 55th percentile following intervention. A moderate improvement is also apparent for problem behavior where the teacher's perception moved the student from the 93rd percentile to the 75th percentile following intervention. These changes in teacher perception of behavior may have important implications for future research.

There are several limitations of this study that should be noted. First, the outcomes reflect the effects for one child in one classroom. The ability to generalize these results to other children in other settings with other unique problem behaviors is therefore limited. Second, fidelity of implementation data do not show consistent full implementation of First Step procedures and practices across phases. This fluctuation in First Step implementation limits our ability to attribute changes in problem behavior and academic engagement solely to changes in implementation of function-based supports. This fluctuation in First Step fidelity may be partially attributed to an overlap between measures of implementation fidelity of First Step procedures and of added function-based support procedures. Both the First Step and function-based support fidelity measures looked at the teacher's use of redirection or attention for problem behavior as well as reinforcement for appropriate behavior. Future studies would benefit from creating a clear distinction between these two measures of fidelity. Third, due to communication and scheduling complications with Noah's family, the HomeBase component of First Step was not implemented in the home setting. Although this research study focused on the CLASS component of First Step and the addition of function-based supports in the classroom setting, failure to implement the HomeBase component may have limited the full effect of the First Step intervention. Finally, the design for this study does not control for the possibility that function-based interventions alone may have been sufficient to control Noah's problem behavior.

This research represents a pilot study for combining manualized interventions with individualized supports. While results from this study are not definitive, they do provide initial support for the efficacy of combining standardized, manualized interventions with individualized, function-based supports. Replication of this study across more participants will provide useful information regarding the efficacy of adding function-based supports to First Step to Success and improve our ability to generalize results to other children and settings. Further research in this area should also focus on the value of adding function-based supports to other established social skills curricula as well

as the time and effort involved, the social validity of such a process, and the ability of teachers and school teams to integrate interventions independently and effectively. Further research in this area will provide useful implications for the efficacy of adding function-based support components to established curricula for reducing problem behavior and increasing adaptive, pro-social behaviors.

Table 1. *Social Skills Rating System Data for Pre- and Post-Assessment*

	<i>Pre-Test</i>	<i>%ile Rank</i>	<i>Post-Test</i>	<i>%ile Rank</i>
Social Skills	27	16 th	42	55 th
Self-Control	7		12	
Cooperation	12		18	
Assertion	8		12	
Problem Behavior	21	93 rd	14	75 th
Externalizing	9		6	
Internalizing	4		2	
Hyperactivity	8		6	
Academic Competence	39	73 rd	40	75 th

Table 2. *Comparison of Standard First Step and First Step Plus Function-Based Support Interventions.*

<i>Standard First Step</i>	<i>First Step Plus Function-Based Support</i>
No morning check in and no note home (only first step cards sent home)	Teacher checks in with student in the morning & communicates with family via note home
Standard First Step introduction to class (elicit pledge of cooperation from peers)	Pre-correction for specific behavioral expectations & class reminder to ignore distractions
No class points for ignoring peer problem behavior	Class earns points for ignoring peer problem behavior
Target student earns points based on pre-determined First Step intervals only and does not share points with another student	Target student earns points that he can then award to another student for engaging in appropriate behaviors and working quietly and independently
Teacher corrects student for inappropriate behavior & student is talked to about his behavior during more intense problem behaviors (this is not part of standard First Step, but the standard procedure in place for this particular classroom)	Extinction: peers & teacher ignore problem behavior & head down/time-out for more intense problem behaviors

Figure 1. Percent of Intervals with Problem Behavior Across Sessions

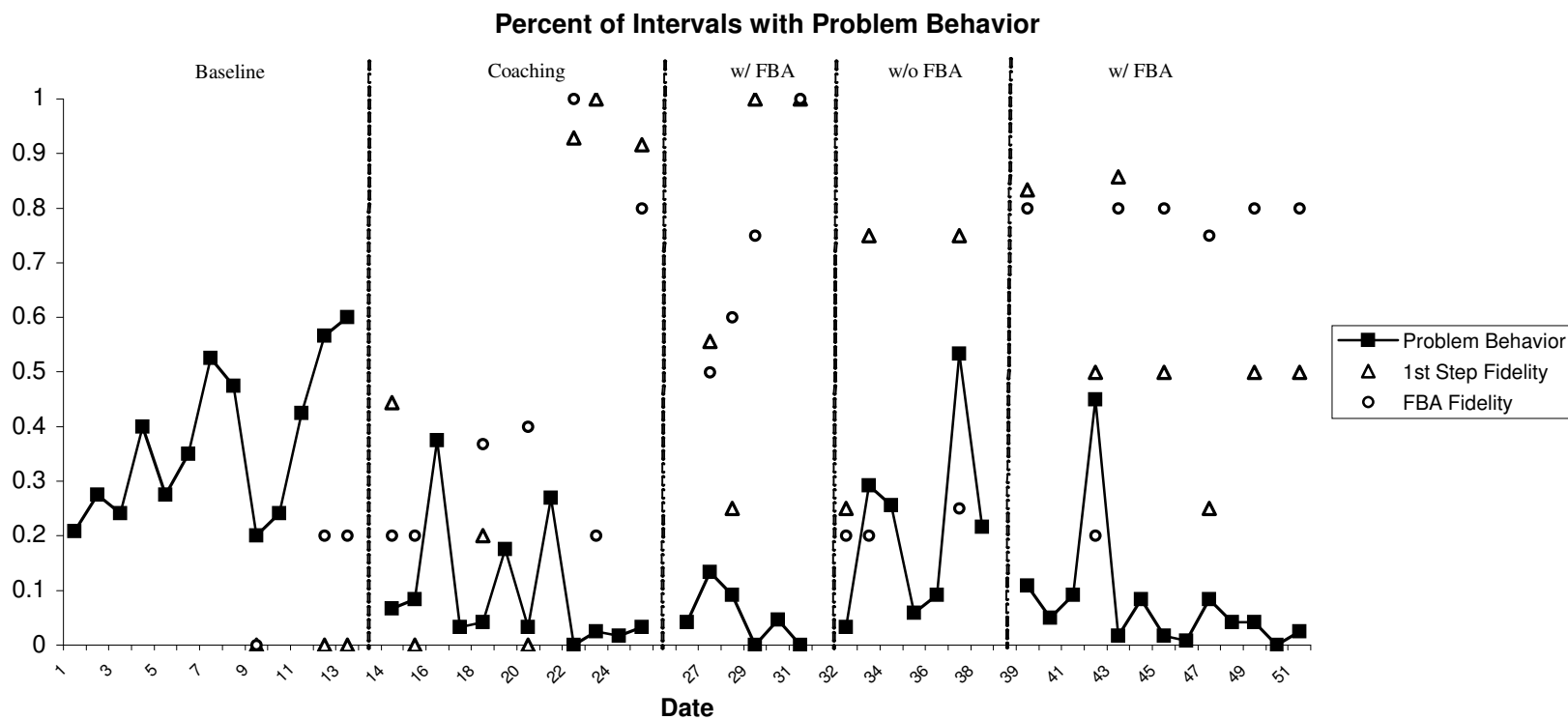
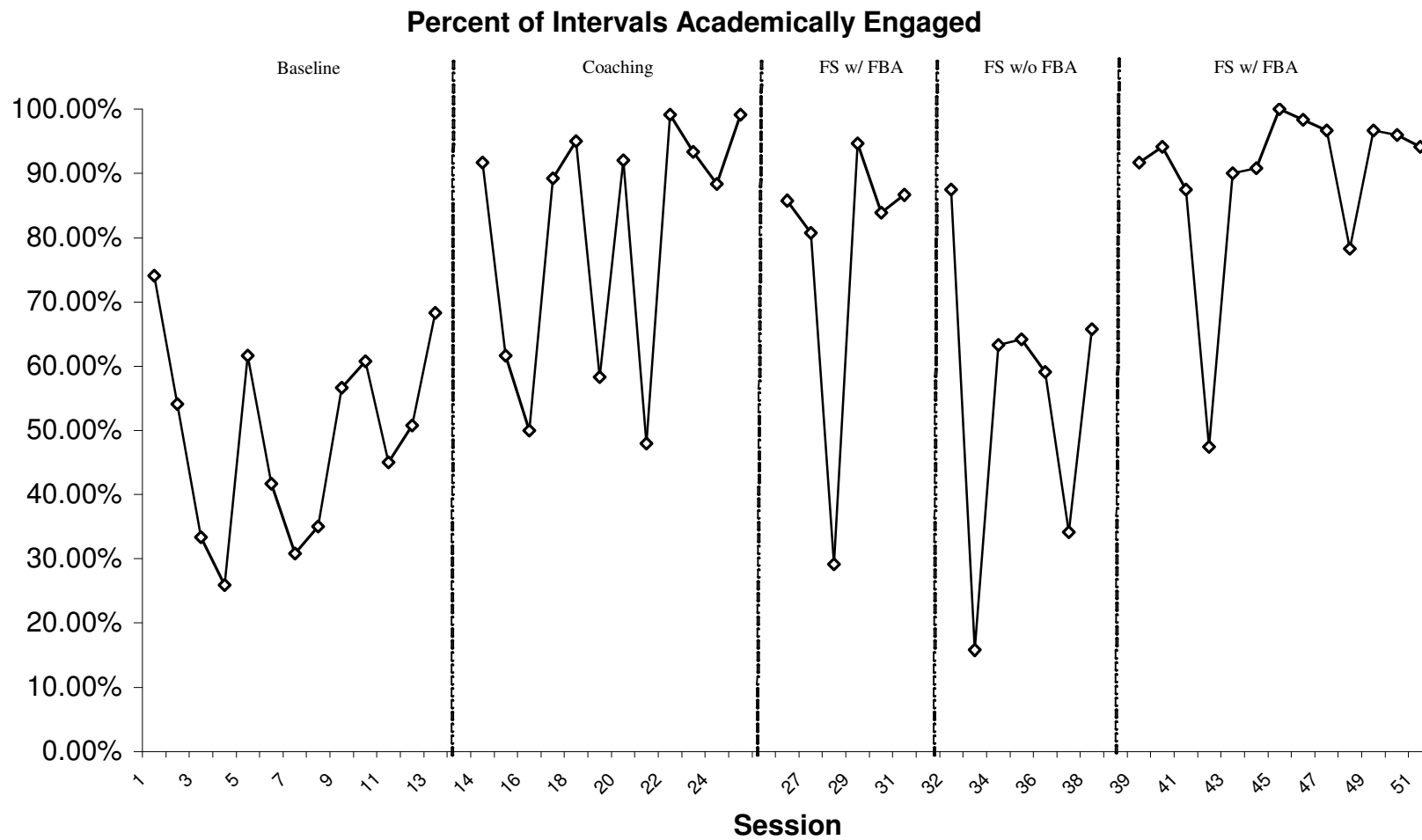


Figure 2. Percent of Intervals Academically Engaged Across Sessions



References

- Addis, M.E. (1997). Evaluating the treatment manual as a means of disseminating empirically validated psychotherapies. *Clinical Psychology: Science and Practice, 4*(1), 1-11.
- Addis, M.E., & Cardemil, E.V. (2006). Does manualization improve therapy outcomes? In J.C. Norcross, L.E. Beutler, & R.F. Levant (Eds.), *Evidence-based practices in mental health: Debate and dialogue on the fundamental questions* (pp. 131-160). Washington, DC: American Psychological Association.
- Addis, M.E., Wade, W.A., & Hatgis, C. (1999). Barriers to dissemination of evidence-based practices: addressing practitioners' concerns about manual-based psychotherapies. *Clinical Psychology: Science and Practice, 6*(4), 430-441.
- Addis, M.E., & Waltz, J. (2002). Implicit and untested assumptions about the role of psychotherapy treatment manuals in evidence-based mental health practice. *Clinical Psychology: Science and Practice, 9*(4), 421-424.
- Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., McLaughlin, D. M., McAtee, M. L., Smith, C. E., Ryan, K. A., Ruef, M. B., Doolabh, A., & Braddock, D. (1999). *Positive behavior support for people with developmental disabilities*. Washington, DC: American Association on Mental Retardation.
- Clarkin, J.F. (1998). Intervention research: development and manualization. In A.S. Bellack & M. Hersen (Eds.), *Comprehensive Clinical Psychology, 3*, 189-200. Amsterdam: Pergamon.
- Diden, R., Duker, P.C., & Korzilius, H. (1997). Meta-analytic study on treatment effectiveness for problem behaviors with individuals who have mental retardation. *American Journal on Mental Retardation, 101*(4), 387-399.
- Ellingson, S.A., Miltenberger, R.G., Stricker, J., Galensky, T.L. & Gerlinghouse, M. (2000). Functional assessment and intervention for challenging behaviors in the classroom by general classroom teachers. *Journal of Positive Behavior Interventions, 2*, 85-97.
- Epstein, M., & Walker, H. (2002). Special education: Best practices and First Step to Success. In B. Burns & K. Hoagwood (Eds.), *Community treatment for youth: Evidence-based intervention for severe emotional and behavioral disorders* (pp. 177-197). New York: Oxford University Press.
- Fonagy, P. (1999). Achieving evidence-based psychotherapy practice: A psychodynamic perspective on the general acceptance of treatment manuals. *Clinical Psychology: Science and Practice, 6*(4), 442-444.
- Golly, A., Sprague, J., Walker, H.M., Beard, K., & Gorham, G. (2000). The First Step to Success program: An analysis of outcomes with identical twins across multiple baselines. *Behavioral Disorders, 25*(3), 170-182.
- Golly, A.M., Stiller, B., & Walker, H.M. (1998). First step to success: Replication and social validation of an early intervention program. *Journal of Emotional and Behavioral Disorders, 6*, 243-250.
- Good, R.H., & Kaminski, R.A. (Eds.). (2005). *Dynamic indicators of basic early literacy skills (6th ed.)*. Eugene, OR: Institute for the Development of Educational Achievement. Retrieved January 10, 2005, from <http://dibels.uoregon.edu/>
- Gresham, F.M., & Elliott, S.N. (1990). *Social skills rating system*. Circle Pines, MN: American Guidance Service.
- Gunter, P. L., Hummel, J. H., Conroy, M. A. (1998). Increasing correct academic responding: An effective intervention strategy to decrease behavior problems. *Effective School Practices, 17*, 55-62.
- Henggeler, S.W., & Schoenwald, S.K. (2002). Treatment manuals: Necessary, but far from sufficient. *Clinical Psychology: Science and Practice, 9*(4), 419-420.

- Horner, R. H. (1994). Functional assessment: Contributions and future directions. *Journal of Applied Behavior Analysis, 27*, 401-404.
- Ingram, K., Lewis-Palmer, T., Sugai, G. (2005). Function-based intervention planning: Comparing the effectiveness of FBA indicated and contra-indicated intervention plans. *Journal of Positive Behavior Interventions, 7*(4), 224-236.
- Kendall, P.C., Chu, B., Gifford, A., Hayes, C., & Nauta, M. (1998). Breathing life into a manual: Flexibility and creativity with manual-based treatments. *Cognitive and Behavioral Practice, 5*, 177-198.
- Lien-Thorne, S., & Kamps, D. (2005). Replication study of the First Step to Success early intervention program. *Behavioral Disorders, 31*(1), 18-32.
- March, R., Horner, R. H., Lewis-Palmer, T., Brown, D., Crone, D., Todd, A. W., & Carr E. (2000). Functional Assessment Checklist for Teachers and Staff (FACTS). Eugene, OR: Department of Educational and Community Supports, University of Oregon.
- Nelson, J.R. & Epstein, M.H. (2002). Report on evidence-based interventions: Recommended next steps. *School Psychology Quarterly, 17*(4), 493-499.
- Newcomer, L.L., & Lewis, T.J. (2004). Functional behavioral assessment: An investigation of assessment reliability and effectiveness of function-based interventions. *Journal of Emotional and Behavioral Disorders, 12*(3), 168-181.
- O'Neill, R.E., Horner, R.H., Albin, R.W., Sprague, J.R., Storey, K., & Newton, J.S. (1997). *Functional assessment for problem behavior: A practical handbook*. (2nd ed.). Pacific Grove, CA: Brooks, Cole.
- Reid, R. & Nelson, J.R. (2002). The utility, acceptability, and practicality of functional behavioral assessment for students with high-incidence problem behaviors. *Remedial and Special Education, 23*, 15-23.
- Sugai, G., Horner, R.H., Dunlap, G., Heineman, M., Lewis, T.J., Nelson, C.M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A.P., Turnbull, H.R., Wickham, D., Wilcox, B., & Ruef, M. (2000). Applying positive behavior support and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions, 2*(3), 131-143.
- Walker, H.M., Kavanagh, K., Stiller, B., Golly, A., Severson, H.H., & Feil, E.G. (2001). First Step to Success: An early intervention approach for preventing school antisocial behavior. In H.M. Walker & M.H. Epstein (Eds.), *Making schools safer and violence free: Critical issues, solutions, and recommended practices* (pp. 73-87). Austin, Texas: Pro-Ed.
- Walker, H., & Severson, H. (1992). *Systematic Screening of Behavior Disorders (SSBD): A multiple gating procedure*. Longmont, CO: Sopris West.
- Walker, H.M., Stiller, B., Golly, A., Kavanagh, K., Severson, H.H., & Feil, E.G. (1997). *First Step to Success: Helping children overcome antisocial behavior: Implementation guide*. Longmont, Colorado: Sopris West.
- Wilson, G.T. (1996). Manual-based treatments: The clinical application of research findings. *Behaviour Research and Therapy, 34*(4), 295-314.
- Wilson, G.T. (1998). Manual-based treatment and clinical practice. *Clinical Psychology: Science and Practice, 5*(3), 363-375.