AN EVALUATION OF THE EFFECTS OF THE ACADEMICS AND BEHAVIOR

CHECK-IN/CHECK-OUT INTERVENTION

by

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DISSERTATION ABSTRACT

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Title: An Evaluation of the Effects of the Academics and Behavior Check-in/Check-out
     Intervention

School professionals are faced with addressing social behavioral concerns across

multiple school settings with growing frequency.   There is a need for efficient and

effective methods to support students exhibiting challenging behavior. Tier -II

interventions, such as Check-in/Check-out, can be implemented efficiently in schools

with sufficient systems in place. However, these interventions are generally more

effective for students whose problem behavior is more sensitive to adult attention.

This study evaluated the effects of the Academic and Behavior Check-in/Check-

out (ABC) intervention, a Tier-II intervention designed to provide additional support for

students emitting behavior that is more sensitive to escape from academic tasks, relative

to CICO using an ABAB reversal design. Functional assessment procedures

corroborated that the behavior of three middle school students was in part motivated by

escape from tasks. Implementation of ABC with all subjects resulted in improvements in

academic engagement and reductions in problem behavior relative to CICO.

Additionally, the ABC intervention was implemented with high fidelity and was rated

favorably by stakeholders.

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CHAPTER I

INTRODUCTION

Standards for student performance driven by legislation such as the Improving America's Schools Act of 1994, and the No Child Left Behind Act of 2001(Yell & Drasgow, 2005) as well as stakeholder expectations (Carr, Levin, McConnachie, Carlson, Kemp, Smith, & McLaughin, 1999), hold schools accountable for providing an enriched educational experience that teaches a wide array of skills in academic subjects as well as social competence, self-management, life skills and work preparedness. Increasing diversity in the needs of students (Horner, Sugai, Todd, & Lewis-Palmer, 2005; Sugai, et. al., 2000) resulting from the prevalence of disabilities, mental health challenges, English language learning needs, high mobility, absenteeism, homelessness, and exposure to other multiple risk factors for academic failure and problem behavior present an added challenge to meeting this mandate.

As children enter school with diverse needs, school professionals are faced with addressing social behavioral concerns across multiple school settings with growing frequency (Lewis & Sugai, 1999; Stewart, Benner, Martella, Marchand-Martella, 2007). These behaviors can significantly interrupt the instructional milieu and the academic learning time of all students. If severe, problematic behavior may result in administrator involvement, and even less intense challenges can contribute to elevated rates of teacher burnout (Osher, Bear, Sprague, & Doyle, 2010). Occurrences of problem behavior may also adversely impact the overall school climate (Stewart et. al., 2007), lending to student concerns regarding their personal safety; in turn impacting school avoidance,

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absenteeism, and decreased participation in group academic activities (Cornell & Mayer, 2010).

Often pre-service training does not equip educators with the knowledge and skills to effectively manage student behavior in the instructional milieu (Oliver & Reschley, 2007). Teachers and administrators frequently respond to problem behaviors with reactive disciplinary processes such as reprimands, office referrals, detention, suspension, and even expulsion. Use of punitive discipline as the sole approach to problem behavior is linked with increases in additional problem behaviors such as vandalism, aggression, and truancy for example (Cornell & Mayer, 2010; Lewis & Sugai, 1999; Walker, Horner, Sugai, Bullis, Sprague, Bricker & Kaufman, 1996). Schools are in need of sustainable, evidence-based means to meet the range of student needs and to effectively and efficiently prevent the development and exacerbation of problem behavior. School-Wide Positive Behavior Supports (SWPBS) represents a systematic, prevention-orientated, research-validated approach to addressing the diverse needs of students (Anderson & Borgmeier, 2010).

School-Wide Positive Behavior Interventions and Supports

School-Wide Positive Behavior Interventions and Supports (SWPBIS) is a conceptual framework for providing effective behavior support and climate change in schools based on four guiding principles; a) define student outcomes, b) use research-validated practices, c) develop systems that sustain practices, and d) incorporate data into the decision making processes (Horner, et. al., 2005). The conceptual logic of SWPBIS, based on models of prevention science, helps to establish effective practices and systems

to sustain those practices to promote socially appropriate behavior in school settings and address problem behaviors along a three-tiered continuum of increasingly intensive support (Osher et. al., 2010; Walker et. al., 1996). The three tiers in the continuum consist of; a) a primary level of universal intervention practices aimed at delineating and teaching school wide expectations for appropriate behavior in conjunction with the use of effective classroom management strategies, b) a secondary level of intervention targeting more specific needs of small groups of at-risk students who require additional instruction for building skills, and c) a tertiary level of individualized support for students exhibiting severe behavior concerns (Walker & Shinn, 2002).

In SWPBIS, primary intervention practices applied universally (with the whole student population across all school settings) provide sufficient support for approximately 80% of the student population (Horner et. al., 2005; Sugai, Horner, & Gresham, 2002). Implementation of a range of evidence-based strategies establishes proactive measures aimed at preventing the development or exacerbation of problem behavior while promoting pro-social skills (Carr, et. al., 2002). The fundamental components at this tier of intervention include defining behavioral expectations, explicitly teaching those expectations, providing recognition for appropriate behaviors, utilizing effective classroom management strategies, delineating procedures for dealing with occurrences of problem behavior, developing systems that support these practices, and using data to inform decision making (Horner, Sugai, & Anderson, 2010; Todd, Horner, Sugai, & Sprague, 1999).

The evidence supporting the use of these practices derives from decades of extensive research in applied behavior analysis (e.g., Ayllon & Roberts, 1974; Fjellstedt

& Sulzer-Azaroff, 1973; Hall, Lund, & Jackson, 1968; Lloyd, Eberhardt, & Drake, 1996; Mayer, Butterworth, Nafpaktitus, & Sulzer-Azaroff, 1983). Further, numerous studies have documented positive effects of SWPBS on problem behaviors school-wide as measured via office discipline referral patterns (e.g., Horner, Sugai, Smolkowski, Eber, Nakasato, Todd, Esperanza, 2009; Russ, VanHorne, Robertson, & Karvonen, 2010), direct observations of student behavior (e.g, Cushing, 2000; Smith, 2000), academic outcomes (e.g., Horner, et. al, 2009), and evaluations of systems and organization of the school (Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008).

Tertiary interventions are reserved for students emitting serious behavior concerns or students whose behavior has not responded to primary or secondary supports. This level of support is highly individualized to student need using functional behavior assessment (FBA) procedures to inform specific strategies to incorporate into a behavior support plan. Functional behavior assessment procedures involve the use of a combination of direct (observation) and indirect (interviews, behavior rating forms) methods for gathering information to develop a hypothesis which operationally defines the target behavior, identifies the environmental conditions (antecedents) which predict the occurrence and non-occurrence of behavior, and identifies events (consequences) that maintain the problem behavior (O'Neil, Horner, Albin, Sprague, Storey, & Newton, 1997; Gresham, Watson, & Skinner, 2001; Sugai, et. al., 2000). Extensive research supports the use of functional behavior assessment and effective intervention strategies targeting environmental conditions to reduce problem behavior and enhance pro-social skills (e.g., Anderson, English & Hedrick, 2006; Carr, Levin, McConnachie, Carlson, Kemp, Smith, & McLaughlin, 1999; Ellingson, Miltenberger, Stricker, Galensky, &

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Garlinghouse, 2000; Hoff, Ervin, & Friman, 2005; Lalli, Browder, Mace, & Brown, 1993; March & Horner, 2002; McIntosh, Borgmeier, Anderson, Horner, Rodriguez, & Tobin, 2008; Newcomer & Lewis, 2004).

Tertiary intervention strategies require significant staff resources and extensive time to develop and implement (Anderson & Scott, 2010). The development of systems (i.e. behavior support team, data tracking program) are critical to support the development and implementation of tertiary interventions (Crone & Horner, 2003). Proficient systems assist in monitoring student progress and intervention effectiveness, subsequently allowing for expedient adjustments to the intervention as necessary (Crone & Horner, 2003; Todd, Horner, Sugai, & Colvin, 1999).

Along a continuum of support between universal and tertiary levels, secondary intervention practices are designed for students whose behavior has not responded to the primary, preventative practices in place within the building but may not require intensive, individualized support. Secondary practices are conceptualized as additional support practices utilized in conjunction with primary prevention practices, and are applied consistently across all students receiving the support (Anderson & Borgmeier, 2010). This involves the application of evidence-based technologies targeting specific student needs such as skill remediation, academic support, behavior support or other assistance to at-risk students to prevent the development of more significant behavior problems (Walker & Shinn, 2002). These may include a range of interventions dependent on student need such as peer-mentoring programs, social skill instruction, anger management instruction, tutoring, or homework support.

Several empirically validated intervention strategies have emerged as options for secondary support interventions in a SWPBIS framework. These include Check-in/check-out (CICO; Campbell & Anderson, 2011; Crone, et. al. 2009), Check and Connect (Cheney, Lynass, Flower, Waugh, Iwaszuk, Mielenz, & Hawken, 2010; Cheney, Stage, Hawken, Lynass, Mielenz, & Waugh, 2009) and First Steps to Success (Carter & Horner, 2009; Walker, Stiller, Golly, Kavanaugh, Severson, & Feil, 1997).

Additional intervention strategies exist with evidence of effectiveness as group interventions, which could be utilized as secondary interventions, yet few were designed to be embedded within a multi-tiered, prevention-oriented framework such as SWPBIS (Anderson & Borgmeier, 2010; Scott, et. al., 2010). Anderson & Borgmeier outline several limiting factors that may be encountered if schools attempt to adopt one or more of these interventions: systems features required to support selected interventions as secondary support for students may be absent, a disorganized approach to intervention selection and implementation may result, interventions may not be implemented with fidelity due to inadequate school-based implementation or coaching capacity, or selected interventions may not be efficacious under the conditions they are implemented. These problems may ultimately lead to a failure to sustain practices which have likely utilized a significant investment of staff resources to prepare and put into practice. The authors provide specific guidance on necessary considerations for sustainability:

> After an intervention has been selected, effective and sustained use of the intervention will require identification of the behavior problems best suited to the intervention, the settings in which the intervention can be used, the skills needed

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by the implementer, and the criteria by which intervention success or failure will

be judged. (Anderson & Borgmeier, 2010, p. 36)

A significant body of research needs to be accomplished to delineate these features for

evidence-based strategies prior to adopting them as secondary support strategies in a

SWPBIS approach. To date, research evaluating CICO outline many of the necessary

features for sustainable implementation of the intervention in a SWPBIS approach,

Check-in/Check-out

Check-in/Check-out (CICO), also known as the Behavior Education Program is a

multi-component intervention designed to be used as a secondary intervention within the

framework of SWPBIS (Crone, et. al, 2010). The combination of components of CICO

are designed to increase structure throughout the day for students, increase adult feedback

to students, increase communication between the school and home and help students

establish positive relationships with adults (Filter, McKenna, Benedict, Horner, Todd, &

Watson, 2007; Todd, Campbell, Meyer, & Horner, 2008). This is accomplished through

the basic components of CICO working together in consistently occurring cycles of

events (Crone et. al., 2010). Before attending classes the student meets with an

intervention coordinator. Throughout the day teachers provide feedback on social

behavior at scheduled times. Near the conclusion of the day the student meets with the

intervention coordinator to review progress towards daily goals. Parents are encouraged

to also review student progress at home daily (McIntosh, Campbell, Carter, & Dickey,

2009). Within this cycle, a daily behavior report card (DBRC) is used to link all the

components, providing an additional system of structure to the student's day while also

allowing for structured feedback based on teacher-provided ratings of a student's performance at regular intervals. The school's behavioral expectations are printed on the DBRC and teacher-provided feedback focuses on the extent to which student behavior aligns with those expectations. Thus, the primary and secondary systems are linked and CICO provides additional instruction and feedback. The core of CICO is the adult check component. Twice daily a student establishes brief contact at the start of the day and again at the end of the day. During the check component the student receives positive encouragement from the adult, reminders of behavioral expectations, and feedback on the daily performance towards a goal established for that student.

Critical features of this intervention are grounded in empirically evaluated principles of behavior and the overarching preventative approach of SWPBIS. CICO combines strategies such as explicit instruction of desired behaviors, frequent opportunities to practice, feedback tied to target behavior, and reinforcement for desired behavior (Crone, Hawken, & Horner, 2010; McIntosh, Campbell, Carter, & Dickey, 2009). The components of CICO link several key behavioral mechanisms that may operate jointly to achieve effects. These include a token economy system, establishing operations and adult feedback. There is a vast empirical basis for token economies, across age groups (e.g., Phillips, Phillips, Fixsen, & Wolf, 1971; Inghram & Andrews, 1973), populations (e.g. Carton & Schweitzer, 1996; Dalton, Rubino, & Hislop, 1973), and settings (e.g. Fox, Hopkins, & Anger, 1987; Milan & McKee, 1976). In CICO, students earn points throughout the day for meeting behavioral expectations. Points can be traded for incentives periodically (in this school whenever a student earned 80% or more of possible points in a day). Establishing operations are changes to environmental

conditions which increase or decrease the value of a reinforcing item or event and in turn alters the frequency of the occurrence of behavior maintained by the reinforcement (Michael, 1993). CICO also includes opportunities for frequent and structured adult feedback. Students receive feedback at the end of each instructional period as well as summative feedback at the end of the day.

A strong evidence base exists documenting the effectiveness of CICO in decreasing problem behaviors and increasing associated positive outcomes for students (Campbell & Anderson, 2011; Fairbanks, Sugai, Guardino, & Lathrop, 2007; Filter, et. al., 2007; Hawken & Horner, 2003; Hawken, MacLeod, & Rawlings, 2007; March & Horner, 2002; McCurdy, Kunsch, & Reibstein, 2007; McIntosh, Campbell, Carter, & Dickey, 2009; Simonsen, Myers, & Briere, 2011; Todd, Campbell, Meyer, & Horner, 2008). For example, Hawken & Horner (2003) used a non-concurrent multiple baseline design across four sixth grade students with academic and behavioral concerns to evaluate effects of CICO on idiosyncratically defined disruptive classroom behavior (e.g. talking out, inappropriate language, out of seat, talking back, threatening gestures, physical aggression, throwing objects). They documented decreases in problem behavior and increases in academic engagement for all students and also demonstrated high levels of social validity based on teacher and parent ratings.

Fairbanks, Sugai, Guardino, & Lathrop (2007) examined effects of CICO modified with a dependent group contingency on inappropriate physical contact, talk-outs, inappropriate placement, non-compliance, and non-disruptive off-task behaviors of ten second grade students utilizing an ABCDE design. In this study, approximately 40% of students demonstrated improvements on direct measures of problem behavior. Four

students who were unsuccessful on CICO received additional individualized function-based support and two subjects were lost to attrition.

Hawken, MacLeod, and Rawlings (2007) evaluated effects of CICO on the office discipline referral rates for 12 elementary students, one of which was receiving special education services, using a non-concurrent multiple baseline design across four groups of students. In the study, 75% of the students responded to implementation of CICO as documented by decreases in ODR data. More recently, Campbell and Anderson (2011) used an ABAB reversal design with four typically developing elementary students to evaluate effects of CICO on problem behaviors of out of seat, disruption, noncompliance, and negative verbal or physical interactions. Data were also collected on academic engagement and points earned on CICO. Following the last reversal phase, a subsequent component analysis of the teacher feedback component of CICO was conducted. This study provided strong evidence of the positive effect of CICO on problem behavior and academic engagement across all subjects. The component analysis also documented the relative impact of the teacher feedback component of CICO with increases in problem behavior and decreases in academic engagement when teacher feedback throughout the day was entirely removed.

To date, most work on CICO suggests that the intervention is most effective for students whose behavior is attention maintained (Campbell & Anderson, 2011; Fairbanks, et. al., 2007; March & Horner, 2002; McIntosh et. al., 2009; Todd, et. al., 2008). For example, March and Horner (2002) measured the effects of CICO on discipline contacts (ODRs and detentions) with 24 middle school students in grades 6-7 using descriptive analysis of data from a quasi-experimental pretest-posttest design.

Additionally, these authors collected data on the perceived function of the students'
problem behavior utilizing the Functional Assessment Checklist for Staff and Teachers
(FACTS; McIntosh, et. al, 2008) at the outset of the study. Results from this study
indicated that measures of the dependent variable improved with 80% of the participating
students whose behavior was hypothesized to be maintained by adult attention. The study
outlined above, conducted by Fairbanks et. al., (2007) documented similar findings.
CICO was effective only for students whose behavior was maintained by adult attention.
A study conducted by McIntosh, Campbell, Carter, & Dickey (2009) with 34 elementary
students in grades 1- 5, provided further analysis of the effect of CICO based on the
hypothesized function of behavior. Analysis of ODR and standardized rating scale data
using a mixed model multivariate analysis of variance (MANOVA) with a pre-test post-
test design, this study indicated a differential effect for CICO based on the function of
behavior. More specifically, this study indicated that CICO is more effective for problem
behaviors maintained by attention.

In sum, CICO has been found to be an evidence-based intervention for students
whose behavior is sensitive to adult attention. However, it does not address the needs of
students whose behavior is believed to be sustained by escape or avoidance of academic
tasks without modification. Until recently, systematic modifications to CICO for such
students have not been well explored. Academics and Behavior Check-in/Check-out
(ABC) is a modified form of CICO, developed for use with students whose problem
behaviors may be maintained by avoidance of academic tasks (Turtura & Anderson,
2010).

Academics and Behavior Check-in/Check-out (ABC)

Academics and Behavior Check-in/Check-out (ABC) incorporates many similar procedures to CICO with slight variations (See Table 1 for a comparison of ABC and CICO procedures). The modifications are formulated to assist students with deficits in organizational skills and who exhibit problem behaviors hypothesized to be functionally related to avoidance of or escape from school-related tasks. Specifically, ABC is designed for students who emit escape-maintained behavior in academic routines and (1) are academically on target but struggle with organization or (2) are not academically on target but are receiving additional educational supports.

As with CICO, the basic components of ABC are based on integrated cycles of events with a structure very similar to CICO. Before attending classes the student "checks-in" with a designated adult. Teachers provide feedback on academic behaviors at scheduled times and monitor accurate recording of homework. Near the conclusion of the day the student "checks-out" to review progress towards daily goals. Parents are encouraged to review student progress at home daily and are asked to monitor homework completion. A daily behavior report card (DBRC) is used to provide additional structure to the student's day and opportunities for feedback at regular intervals. The school's behavioral expectations are printed on the DBRC defined in terms of academic behaviors (e.g. Be Responsible may be defined as bring necessary materials to class, complete assigned tasks, and write assignments in planner) and teacher-provided feedback focuses on the extent to which student behavior aligns with those expectations.

During the check component the student receives positive encouragement from the adult, reminders of behavioral expectations, and feedback on the daily performance

towards a goal established for that student. At the daily check-in the adult also ensures that the student has all the necessary materials needed for the day, while at the check-out the adult also ensures that the student has recorded all their homework and are taking home all the necessary materials for completion of that homework. Due to the similarity in features, ABC can be efficiently implemented in schools already using CICO as a secondary intervention strategy, utilizing the same resources and systems already in place.

Turtura (2010) conducted a preliminary investigation of the effects of ABC with encouraging results. In this study, effects of ABC on problem behaviors were evaluated with three adolescent students in a middle school using ABAB reversal designs. For all participants, pre-intervention FBAs indicated that off-task behavior was maintained by escape or avoidance of academic routines. ABC resulted in reductions in off-task behavior for all participants. Further, teacher ratings of work completion and accuracy across the day suggested positive effects. Finally, ABC was viewed as socially valid by teachers, parents, and students.

Table 1

Critical Elements of CICO and ABC

Component	CICO	ABC
Morning Check-in		
Daily goals reviewed	Yes	Yes
Student provided with daily point card	Yes	Yes
Student shows materials needed for class	No	Yes
Homework completion checked	No	Yes
Unfinished homework completed	No	Yes
Daily Feedback		
Teacher(s) provide feedback on behavior to student at end of class	Yes	Yes
Daily goals linked to school-wide expectations	Yes	Yes
Daily goals defined in terms of academic behavior	No	Yes
Points earned for tracking homework	No	Yes
Afternoon Check-out		
Student returns card to facilitator	Yes	Yes
Points calculated based on teacher ratings throughout the day	Yes	Yes
Student receives praise and tangible rewards if goal is met	Yes	Yes

Table 1 (continued)

Component	CICO	ABC
Student receives brief feedback if goal is not met	Yes	Yes
Facilitator reviews that homework is recorded by the student in the planner/tracker	No	Yes
Earned rewards are relevant to student	No	Yes
Home Component		
Parents attend meeting with facilitator prior to initiation of intervention	No	Yes
Parents sign the point card daily	Yes	Yes
Parents indicate if child has completed homework	No	Yes
Student returns the signed point card to the facilitator each morning	Yes	Yes

While these results are promising, additional research is necessary to validate these initial findings. Moreover, while ABC is designed for escape-maintained behaviors, Turtura (2010) did not compare relative effects of CICO versus ABC. As a result, it is not known whether CICO would have been similarly effective for these participants.

Statement of the Problem

A small but strong literature base supports the effectiveness of CICO for reducing disruptive behaviors in schools as part of the continuum of support within SWPBS procedures (Horner, et. al, 2007). Most research suggests CICO is effective for students whose problem behavior is maintained, at least in part, by adult attention (Campbell & Anderson, 2011; Fairbanks, et. al., 2007; March & Horner, 2002; McIntosh et. al., 2009; Todd, et. al., 2008).There thus is a need for students whose behavior is more sensitive to avoidance of or escape from academic routines. The ABC intervention addresses this gap. Although previous research (Turtura & Anderson, in press) has shown that ABC can be effective for increasing engagement and decreasing disruptive behavior, it is not clear that ABC might be more effective than CICO for students engaging in work avoidance. The purpose of this study was to address that question. The goals of this study are to (1) determine whether a functional relation exists between the use of the ABC intervention with adolescent students who do not respond to the typical CICO procedures and the occurrence of idiosyncratically defined problem behavior, in-class work completion, and academic engagement.

CHAPTER II

METHOD

Setting and Participants

This study took place in a public middle school, grades 6-8, in a school district in the Pacific Northwest. In the previous academic year, this school had an enrollment of 376 students. Approximately 80% of these students received free or reduced school meals. On state assessments for the same academic year, 70% of students met or exceeded state benchmarks for reading while 53% met or exceeded state benchmarks for math. The school has implemented School-Wide Positive Behavior Interventions and Supports (SWPBIS) with fidelity for the past three years as documented by the School-wide Evaluation Tool (Horner, et. al., 2004) and the School-wide Benchmarks of Quality (Kincaid, Childs, & George, 2005). The school has implemented CICO for at least two years and obtained a score of 94% on the CICO Self Assessment (see Appendix A; Horner, Todd, & Dickey, 2006) completed by the building behavior support team this academic year, prior to the initiation of the study.

Participants were identified via consultation with the district behavior specialist, building administrators, and with the building behavior support team. We first identified students currently participating in CICO but not meeting the school's goal of earning 80% or more of possible points in CICO most days of the week across at least 2 weeks as potential participants in the study. Consent for participation was obtained from the student's parents or guardians, the school's CICO coordinator (who also served as the coordinator for ABC), and the teachers of the primary academic routines identified as

most problematic for the participants. Student assent was also obtained from each participant. Six students were identified as not meeting their goals on CICO and consent and assent was obtained for all however one chose not to participate. Inclusion criteria for the study were applied next and were as follows: (a) teacher report indicated that the student exhibited problem behavior within academic routines, b) teacher report indicated that the student struggled with organizational skills (see checklist in Appendix B), and (c) results of a functional behavior assessment (described in the Procedures) indicated that problem behavior was evoked by academic tasks and maintained by escape or avoidance of academic tasks. Four students met these selection criteria and participated in the study.

Donovan. Donovan was a white male, seventh grade student who received all instruction in the general education curriculum. Donovan was reported to have a high rate of absenteeism, and was referred for this study due to teacher concerns regarding missing homework assignments as well as disruptive and off-task behaviors in the classroom. On state-wide assessment measures conducted the previous academic year, he did not meet the sixth grade standards in reading with a score at the 29th percentile, and did not meet the standards in math for sixth grade students, with a score at the 15th percentile. On benchmark measures collected by the district this academic year, Donovan obtained oral reading fluency scores of 116 and 128 correct words per minute on measures administered in the fall and winter. On the easyCBM Mathmatics Measures (Nese, et. al., 2010) administered in the fall and winter, Donovan obtained scores at the 40th and 60th percentiles respectively.

Jessica. Jessica was a seventh grade, female, Hispanic student who received all education in the general education setting, with extra support for math via an additional class period of math instruction. This additional period did not include additional instruction in the math curriculum utilized in the general education setting but rather consisted of extra instruction in a range of grade level math skills. She was referred for this study by the building behavior support team due to low rates of class work and homework completion, and disruptive behavior during academic routines, especially in math class. On district benchmark measures for this academic year, Jessica performed in the 28th percentile on the easyCBM Mathmatics Measures (Nese, Lai, Anderson, Jamgochian, Kamata, Saez, Park, Alonzo, & Tindall, 2010) fall assessment. No score was available for the winter assessment. On benchmark oral reading fluency measures, Jessica obtained a fall score of 123 correct words per minute and a winter score of 112 correct words per minute. A criterion performance score of 180 correct words per minute is expected by the end of seventh grade. On state-wide assessment measures conducted the previous academic year, she did not meet the state standards for sixth grade in reading with a score at the 24th percentile, and did not meet the state standards in math for sixth grade students, with a score at the 22nd percentile.

Thomas. Thomas was a white, seventh grade, male student who received all instruction in the general education setting with extra adult support in a small group instructional setting, during one academic period daily. He was referred for this study by the building behavior support team due to challenges with work completion and off-task and disruptive problem behavior across all academic routines. Prior to selection in the study, the building behavior support team reported implementation of several strategies

and disciplinary consequences in addition to CICO to address concerns, such as office discipline referrals, in school suspension with the principal, and mandatory attendance at after school homework completion support. However, the details of these strategies were not formalized into a comprehensive support plan. Thomas' scores on statewide assessment tests conducted the previous year were at the 13th percentile in both math and reading. In both of these areas Thomas' scores did not meet state standards. Scores obtained by Thomas on district benchmark curriculum based measures (administered three times annually to monitor academic growth) were a fall score of 116 correct words per minute in reading, and on the easyCBM Mathmatics Measures (Nese, et. al., 2010) Thomas obtained a score at the 11th percentile on the measure administered in the fall. No score was available for the winter assessment on the reading and math measures.

Data Collection, Response Measurement, and Inter-Observer Agreement

Data on student behavior were collected via direct observation using a real-time data collection system, ABC Data Pro (Romanczyk and Gillis, 2010) run on hand-held tablet computers. Observations were conducted for each participant during the academic routine identified via a FACTS interview as being the one in which problem behavior occurred most often. For Thomas, observations were conducted in a reading class and for both Donovan and Jessica, observations were conducted in separate math classes. Observations were 20 min in length and were conducted 1-5 times per week.

Dependent variables included problem behavior, academic engagement, and class work completion. Problem behavior was coded using partial interval coding across consecutive 5-s intervals. For Donovan, problem behavior was defined as being out of

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seat and walking around the room when the expectation was to be seated, talking to peers or adults when the expectation was to be quiet, and manipulating personal items during work or instruction. Problem behavior was defined for Jessica as looking around the room, playing with items, out of seat, talking out, gesturing at peers, or making faces at peers. For Thomas problem behavior was defined as refusing to comply with a request, arguing with an adult about a request, being out of seat, talking to peers, and manipulating personal items. Academic engagement was coded using momentary time sampling across consecutive 5-s intervals and was defined as orientated towards didactic instruction or academic activities (i.e. group work, individual work assignments, or class notes), working on a specified task, and/or providing verbal responses to teacher questions either directed at the individual student or the entire class. Class work completion was scored using permanent products. On days observations occurred, work completed by the participant in class that day was collected and a percentage of problems completed from the total problems expected was calculated. For tasks with multiple parts, each part was scored as an individual problem if a separate response was required (e.g., a math problem with parts a, b, and c would be scored as 3 problems, or a reading work sheet that required a) a definition of a word, and b) to write the word in the sentence would be scored as 2 problems.)

A second observer simultaneously but independently collected data across 33% of the total sessions. Total agreement, occurrence-only agreement, and non-occurrence only agreement were calculated for responses scored using partial interval recording and momentary time-sampling. Total agreement was calculated by dividing the sum of the intervals in which both recorders agreed on occurrences and non-occurrences of behavior

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by the total number of intervals and multiplying by 100%. Occurrence-only agreement was calculated by dividing intervals both observers scored a response by intervals in which either observer recorded an occurrence and multiplying that product by 100%. Nonoccurrence agreement was calculated by dividing intervals in which both observers agreed a response did not occur by intervals in which either observer did not record the response, and multiplying that product by 100%. For academic engagement, total agreement was calculated at 86%, occurrence only agreement was 84% and non-occurrence only was 86% agreement. Agreement between measures of problem behavior were at 88% for occurrence only, non-occurrence only was 97% and the total agreement was 95%. Table 2 provides a summary of measures of agreement.

Table 2

Average Scores for Inter-observer Agreement on Dependent Variables by Student

Student	Dependent Measure	Total Agreement	Occurrence Only	Non-occurrence Only
Donovan	Academic engagement	88%	87%	82%
	Problem behavior	98%	97%	99%
Jessica	Academic engagement	86%	86%	87%
	Problem behavior	91%	83%	94%
Thomas	Academic engagement	85%	84%	90%
	Problem behavior	96%	83%	97%
Overall	Academic engagement	86%	86%	86%
	Problem behavior	95%	88%	97%

Observers were trained to collect data via a combination of didactic training sessions and practice sessions utilizing videos simulating student behavior in classroom settings. Didactic training included a brief overview of the study, description of the

operational definitions of the dependent variables, an outline of procedures for collecting

data in the school setting, and instruction in the use of the data collection software.

Following the didactic session, the trained observers utilized the software while watching

the video to simulate data collection as it would occur in the study; coding the same

dependent measures, for the duration of the 10 min scenario in the video. Data from these

sessions were compared and analyzed for agreement as described above. Observers had

to reach a minimum criterion score of 90% total agreement as compared to the data

collected by the principal investigator at the same time, prior to collecting data for this

study. Didactic training and practice sessions occurred until this criterion was met.

Additionally, if agreement hit or fell below 80% for any variable, trained observers did

not collect data for this study again until they received supplemental training and met the

90% criterion again. Supplemental training included a brief review of the operational

definitions utilized in the study and additional practice sessions utilizing the video

scenario.

Fidelity of Implementation

The fidelity of implementation of the school's CICO system was monitored

throughout the duration of the study. Data were collected on the implementation of the

critical components of CICO across all students in the building receiving this intervention

at least one time per week using the CICO Fidelity of Adult Check Components checklist

(Anderson, 2011; Appendix C). A summary of the results are provided in Table 3. As

this table shows, several components of CICO were not implemented with high fidelity,

with a range from 0% to 100%. The overall fidelity of the implementation of the critical

features of CICO was 56%. Fidelity of implementation of ABC with participants was

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monitored with the ABC Fidelity of Adult Check Components checklist (Anderson, 2011; Appendix D). These data were collected during the intervention condition at least one time per week. The procedures for completing the 10 items on this checklist included: observing check-in and check-out procedures to document fidelity of implementation of those components as well as reviewing daily point cards and the homework tracker. A percentage was calculated for implementation fidelity of each item using the following equation: the number of components implemented divided by the number of components implemented plus the number of components not implemented and multiplying that product by 100%. Data was used to inform additional training necessary to assist the intervention coach to reach or maintain the criterion of performance.

Table 3

Average Fidelity of Implementation at Check-in and Check-out
Meetings Across Critical Features of CICO

Critical Feature	CICO
Check-in	
Students attended	84%
Greet student individually	65%
Collect home note	0%
Check for materials	9%
Give new DBPC	94%
Award points for check-in	41%
Positive prompt to meet goals	44%
Record attendance	0%
Check-out	
Students attended	81%
Greet student	80%
Award points for attending	86%
Collect point card and review	82%
Positive feedback for meeting goal	60%
Neutral feedback if goal not met	26%
Give home note	0%

Table 3 continued

Average Fidelity of Implementation at Check-in and Check-out
Meetings Across Critical Features of CICO

Critical Feature	CICO
Record attendance	100%
Record points	100%
Overall	56%

Consumer Satisfaction

At the conclusion of the study; students, parents, and staff members were asked
to complete a brief, Likert-type survey (Turtura, 2010 Appendix E) that was developed
based on the Behavior Education Plan Acceptability Questionnaire (Hawken & Horner,
2003). This survey was used to provide additional information on teacher, staff, parent
and student perceptions and preferences in regards to the ABC intervention.

Design and Procedure

The functional behavior assessment was conducted first. After completion of the
functional assessment the experiment proper commenced.

Functional behavior assessment. The functional behavior assessment included:
(a) conducting interviews with a teacher using the Functional Assessment Checklist for
Teachers and Staff (FACTS; Anderson & Borgmeier, 2007), and (b) direct observation of
the student during academic routines in which the identified antecedent stimuli were

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present. Observations were 20 min in length and were conducted 2-4 times per week.

Responses were coded using partial interval coding across consecutive 5-s intervals, and

data were collected on antecedents preceding problem behavior and consequences

following the behavior. Variables coded included antecedent variables, problem behavior

and environmental consequences for problem behavior. Contextual variables, scored

using duration measures included didactic instruction, defined as teacher-led discussion

or lecture focused on the target academic routine, group work, defined as 2-6 students

engaged in an instructional activity, and independent work, scored when students were

expected to work individually on an instructional activity. Finally, consequence variables

were scored using 5-s partial interval recording. These included adult attention, peer

attention, and escape from academic tasks. Adult attention was defined as a teacher or

other staff member providing non-instructionally related verbal comments, physical

contact, or non-verbal gesture to the student or a group of students including the target

student. Peer attention was defined as verbal comments and/or physical gestures directed

at the target student or about the target student. Escape was scored in two ways. First,

escape to activity was scored when the target student engaged in another activity instead

of the assigned task (e.g., plays with pencil, doodles, walks around room, looks out

window). Second, escape only was scored when the student is not engaging in the

assigned task but is not engaging in another activity (e.g., stares into space, head on

desk).

A minimum of three observations were conducted, observations continued until a

pattern of problem behavior was observed to be stable based on visual analysis of the

data. The results of the functional assessment were used to identify potential participants

with problem behaviors hypothesized to be maintained by escape or avoidance of academic tasks and demands.

Procedures. An ABAB reversal design was used to assess functional control over the intervention and relative effects of the intervention. The following phases were conducted: baseline and the Academic and Behavior Check-in/Check-out (ABC) intervention.

Baseline (CICO). During this condition students participated in the ongoing CICO procedures for the building. The primary components of CICO included: a) use of a daily behavior report card (DBRC) b) a student check-in with an adult mentor prior to attending classes, c) the provision of written and verbal feedback throughout the day from teachers, d) afternoon check-out with the adult mentor, and d) the home component.

In CICO students used a daily behavior report card (DBRC) upon which the three school wide expectations were stated and defined. For example an expectation of a common school wide expectation such as "Be Respectful" was defined as "Use appropriate language, raise hand to talk, and follow directions." Teachers assigned points for expected behaviors using a Likert-type scale, ranging from 0 through 2 with 0 indicating "needs some work," and 2 indicating "great job."

Each morning before classes started the student met briefly with the CICO coordinator. At this meeting the adult provided the student with the DBRC, conducted a brief review of the expectations and reviewed the student's goals for the day.

Throughout the day the student gave the DBRC to their teachers at the beginning of the class period. When class ended, teachers rated student performance on each of the

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school wide expectations with a 0, a 1 or a 2, indicating that the student did not meet the expectation, somewhat met the expectation, or met the expectation respectively. Teachers provided verbal feedback including praise or encouragement for improvement.

At or near the end of classes for the day, the student again met with the CICO coordinator. The adult tallied the total points earned for the day and indicated to the student if they met their daily goal. The coordinator provided verbal praise to the student for meeting expectations and neutral re-teaching statements to the students for areas in need of improvement. At this time, the coordinator also distributed daily rewards earned by the student for meeting goals and recorded the total points earned by the student for the day in the school's data analysis system.

ABC Coordinator, Teacher, and Parent Training. The CICO coordinator served as the ABC coordinator as well. Training was provided via didactic instruction and the coordinator was given a copy of the ABC Implementation Handbook (Turtura & Anderson, 2010; Appendix G). Training detailed the components of ABC and provided instruction on how to conduct the morning check-in and afternoon checkout, introduce and explain ABC to participating students, define school-wide expectations in terms of academic behaviors, establish a reward menu, conduct the parent training component, and communicate with teachers and behavior support teams about ABC. To ensure the coordinator accurately implemented ABC, he was observed during role-plays of morning and afternoon checks until he demonstrated 100% accuracy with completion of all of the critical features indentified in the ABC Fidelity of Adult Checks (see Appendix D).

A brief in-service was conducted with teachers in the school to introduce the ABC intervention. Training was provided via didactic instruction at a staff meeting and

included a review of critical features of CICO and roles of various staff in implementation, an overview of ABC, explanation of the critical features of ABC, a summary explicating the similarities and differences between ABC and CICO, and an overview of how to implement ABC in multiple settings in the school. In addition, participating teachers received additional one on one instruction with the primary investigator, which reviewed the critical features of ABC pertaining to implementation in their classrooms, and included problem solving barriers to implementation.

Before the ABC intervention was initiated with any participating student, the student's parents or guardians were asked to attend a training session for approximately one hour, facilitated by the ABC coordinator. At this session, parents were given the ABC Parent Manual (Turtura & Anderson, 2010; Appendix G) and provided with a) a description of the ABC intervention, b) tactics for assisting students with homework c) desired responses to deliver to a student when daily goals are met or unmet, d) an explanation on the use of the homework tracker, e) and information about the importance of signing and returning the daily behavior report card. Parents were also coached to provide positive praise statements to the student for bringing the card home, recording homework assignments and for meeting their daily goal. Parents were encouraged to refrain from providing negative comments or delivering negative consequences to the students, on days when these are not met by the student, but rather to provide neutral feedback statements. In addition, parents were coached to review the homework tracker with the student and to monitor assignment completion. Finally, parents were asked to sign the DBRC daily for the student to return it to the coordinator at check-in the following day.

Academics and Behavior Check-in/Check-out Intervention. The primary

components of ABC included: a) use of a DBRC with a homework tracker, b) student

check-in with an adult mentor (ABC coordinator) prior to attending classes, c) the

provision of written and verbal feedback throughout the day from teachers, d) afternoon

check-out with the adult mentor, and d) the home component.

For all participating students a daily behavior report card (see Appendix I for an

example) similar to those used in the CICO intervention was developed. Prior to the

study, the building behavior support team and the ABC coordinator defined the existing

school wide expectations (Respect, Diligence, and Safety) as academic behaviors.

Respect was defined as; use work time appropriately, listen to the teacher, and participate

in class discussions. Diligence was defined as; be on time, complete daily planner, bring

materials to class, and turn in class/homework. Safety was defined as; use materials

appropriately and remain in designated seat. Teachers assigned points for expected

behaviors using a Likert-type scale, ranging from 0 through 2 with 0 indicating "needs

some work," and 2 indicating "great job." Teachers also monitored whether assignments

were recorded accurately in the student's homework tracker, provided additional

feedback to the student about accuracy with recording work, and indicated on the DBRC

when the student recorded assignments.

Each morning before classes started the student met briefly with the ABC

coordinator. At the initial meeting, the coordinator reviewed the components of the

intervention and taught the expectations on the DBRC to the student, providing examples

and non-examples. This initial meeting took about 15 min. At subsequent meetings, the

coordinator provided a brief review of the expectations and reviewed the goals for the

day, monitored homework completion from the previous day, and ensured the student had all necessary materials for the day. During check-in, the student earned two additional "bonus" points if they completed all homework and had the necessary materials for the day. If these criteria were not met, the coordinator worked with the student to establish a plan for completing homework at appropriate time within that day.

Throughout the day, the student gave the DBRC to teachers at the beginning of class periods. At the culmination of the class period, teachers rated student performance on each of the school wide expectations with a 0, a 1 or a 2, indicating that the student did not meet the expectation, somewhat met the expectation, or met the expectation respectively. Teachers also provided verbal feedback including praise or encouragement as in CICO. In this condition, teachers additionally reviewed the student's planner or homework tracker to ensure assignments are recorded. If assignments are recorded properly a point was awarded. If not, the teacher assisted the student in completing the planner/tracker.

At or near the end of classes for the day, the student met again with the ABC coordinator. The coordinator totaled the points earned for the day and indicated to the student if they met their daily goal. Students earned 2 additional "bonus" points at check-out for completely documenting all homework for the day. The ABC coordinator then provided feedback to the student as verbal praise for meeting expectations and neutral re-teaching statements areas in need of improvement, and daily rewards were awarded accordingly. The student's homework assignments for the day were also reviewed by to coordinator to ensure that the student understood the tasks, took any needed materials home to complete the work, and that the student was reminded to have the card signed by

a parent or guardian. Finally, the ABC coordinator recorded the total points earned for the day by the student in the school's computerized data analysis program.

After ABC was implemented for at least five days and student behavior was stable as judged via visual inspection, a return to baseline (CICO) occurred. During this phase, typical CICO procedures for the building were again implemented for a minimum of 3 data points or until a stable pattern of responding was determined. Following this return to baseline, ABC was once again implemented.

Data Analysis

Data were graphed and visually inspected to monitor student progress and to guide decision-making regarding phase changes. For each participant, data were analyzed within and across phases by examining variability of responding, occurrence of responding, and trends in responding.

CHAPTER III

RESULTS

Results obtained with each participant follow. Results of the FBA are presented first followed by measures of the dependent variables (problem behavior, academic engagement, and work completion), fidelity of implementation of CICO and ABC, and, finally, consumer satisfaction.

Functional Assessment

Donovan. The operational definition of problem behavior for this participant, obtained via a FACTS interview with the teacher included being out of seat, talking out, turning around in seat, and shuffling through his personal items. These behaviors were reported to occur more frequently during math independent seat work. Donovan exhibited problem behaviors an average of 13% of intervals across direct observations, with a range of 11% to 15% of intervals. He was academically engaged an average of 61% of intervals, ranging between 57% and 63% of intervals. The top panel of Figure 2 illustrates these data.

The bottom panel of this figure summarizes an analysis of the probability of the co-occurrence of problem behavior and environmental variables. The left bottom panel indicates that escape was more likely when problem behavior occurred than when problem behavior did not occur. The right bottom panel indicates that independent work and instruction were more likely when problem behavior occurred than when problem behavior did not occur.

Observations
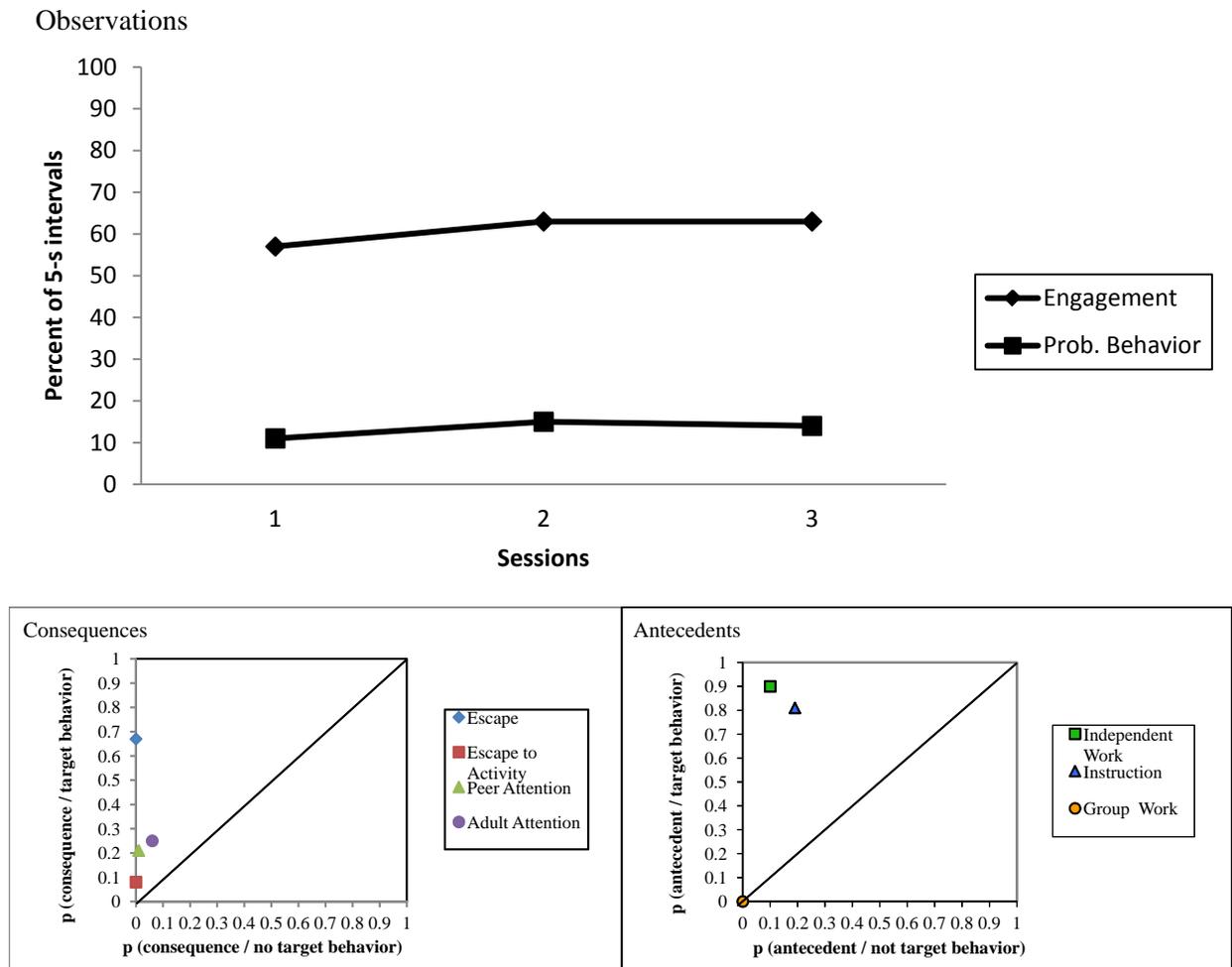
Figure 1. Functional assessment results for Donovan

Jessica. Results of the FACTS interview conducted with Jessica's teacher

indicated that problem behavior occurred most often during math class and seemed to be

maintained by escape from academic tasks. Three observations were conducted during

math instruction to provide further data regarding Jessica's problem behavior see Figure

1). As is shown in the top panel, Jessica emitted problem behavior an average of 46 % of

intervals, with a range from 24% to 72% of intervals. She was academically engaged an

average of 37 % of intervals, with a range from 6% to 69% of intervals. Contingency

space analyses are depicted in the bottom panels. As is shown in the bottom left panel,

Jessica escaped from instruction only following problem behavior. Further, she was more

likely to receive peer attention and teacher attention following problem behavior than at

other times. The variability observed in Jessica's problem behavior (and probably

academic engagement) was due, at least in part, to the activity taking place when data

were collected (see bottom right panel).   Instruction and independent work were more

likely to precede problem behavior whereas problem behavior never occurred during

group work. These data together suggest the student emits problem behavior during

instruction and independent work, which is likely maintained by escape.

Observations
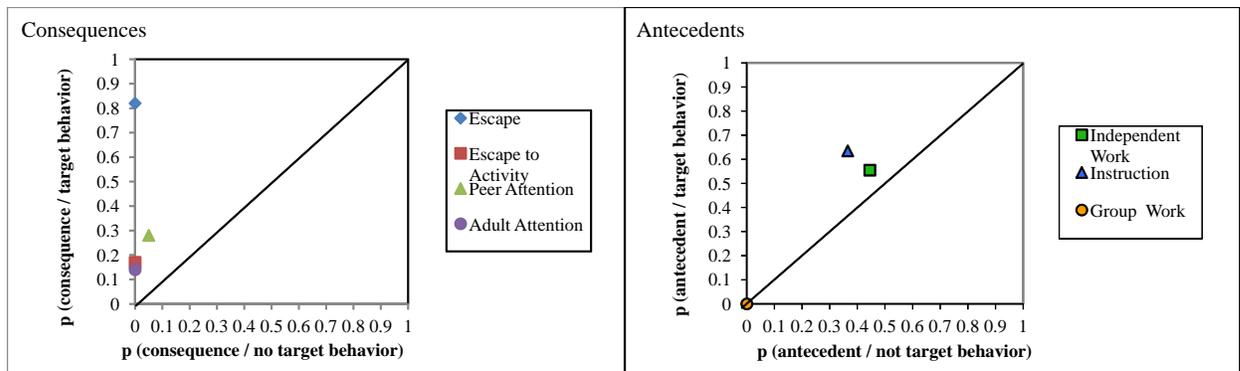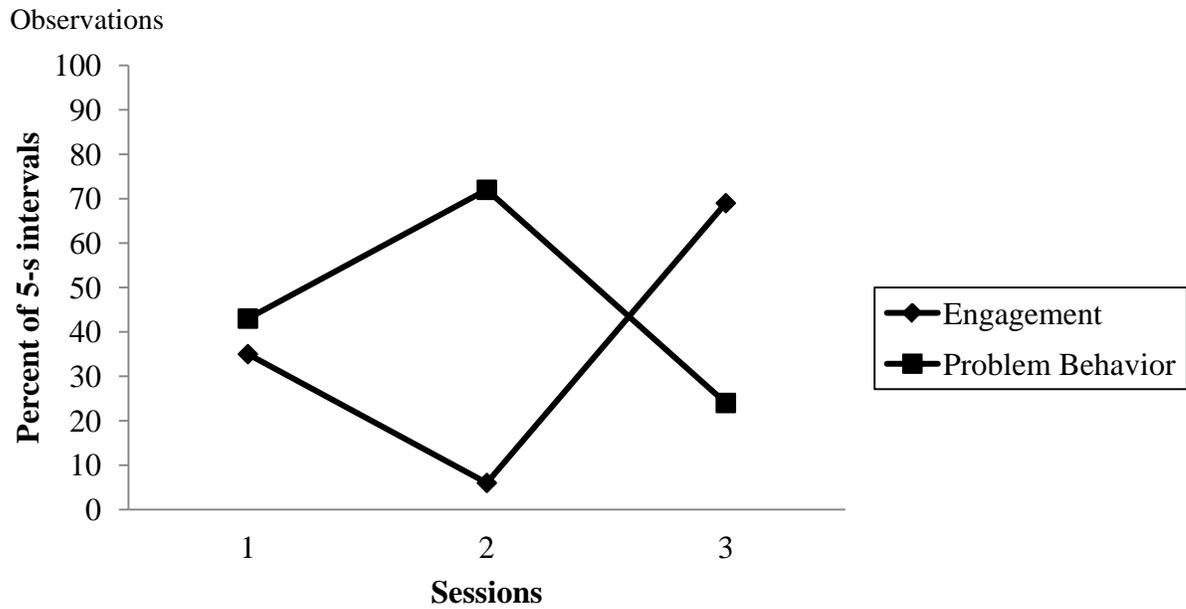
Figure 2. Functional assessment results for Jessica

Thomas. A FACTS interview identified the operational definition of problem behavior for Thomas to be out of seat, talking out, manipulating personal items, arguing with adult staff, and staring out the window. These behaviors were more likely to occur during all academic subjects and were hypothesized to be maintained by escape. Data collected in observations are summarized in Figure 3.
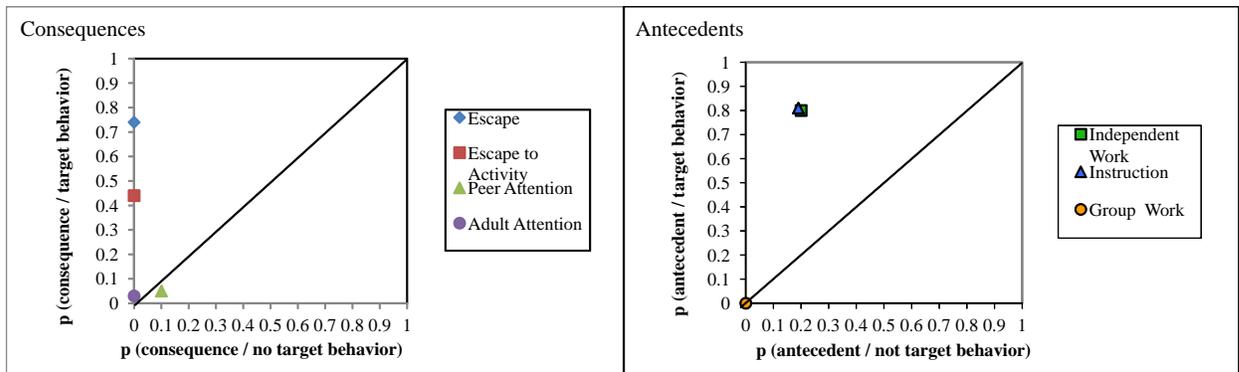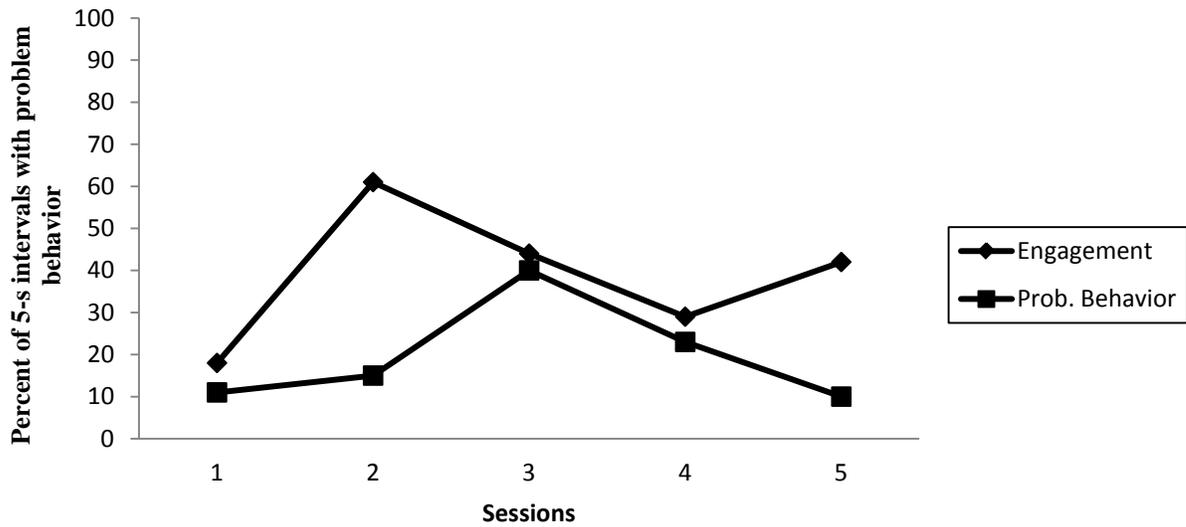
Figure 3. Functional assessment results for Thomas

The top panel of Figure 3 indicates that the participant emitted behavior in the classroom

setting an average of 20% of intervals, with a range between 10% and 40% of intervals.

The student was academically engaged between 18% and 42% of intervals, with an

average of 39% of intervals. The bottom right panel illustrates that instruction and

independent work were more likely to precede the occurrence of problem behavior than

non-occurrence of the behavior. The bottom left panel indicates that the consequence of

escape was more likely to follow the occurrence of problem behavior than non-

occurrence of problem behavior. In sum, results from this functional assessment indicate that the student emits problem behavior that is likely maintained by escape, during instruction and independent work.

Academic Engagement

Measures of academic engagement across the baseline (CICO) and intervention (ABC) phases of the study are displayed in Figure 4. Results for each participant on this dependent measure are described in the following sections.

Donovan. As figure 4 shows, Donovan was academically engaged during the initial baseline condition an average of 59% of intervals. Data is in a stable and slightly increasing trend, and range from 43% to 67% of 5-s intervals. Following this phase, the ABC intervention was implemented. Data was collected across ten sessions. During this phase, Donovan's academic engagement was variable, ranging from 67% to 90% of intervals with an average of 77%. A stable pattern of responding was obtained over the last three data points. To evaluate function control, a return to baseline occurred. Following this phase change, Donovan's academic engagement significantly decreased on initial measures. Over this phase, the pattern of responding was variable with an initial increasing trend followed by a decreasing trend, data measures ranged from 35% to 69% of intervals and averaged 52% of intervals. A return to the ABC condition resulted in an increasing pattern of responding. Measures averaged 71% and ranged from 59% to 81% of intervals.

Jessica. In the initial baseline condition, the response pattern was highly variable at the outset. Over the sessions this stabilized to a level pattern across the last six data points.

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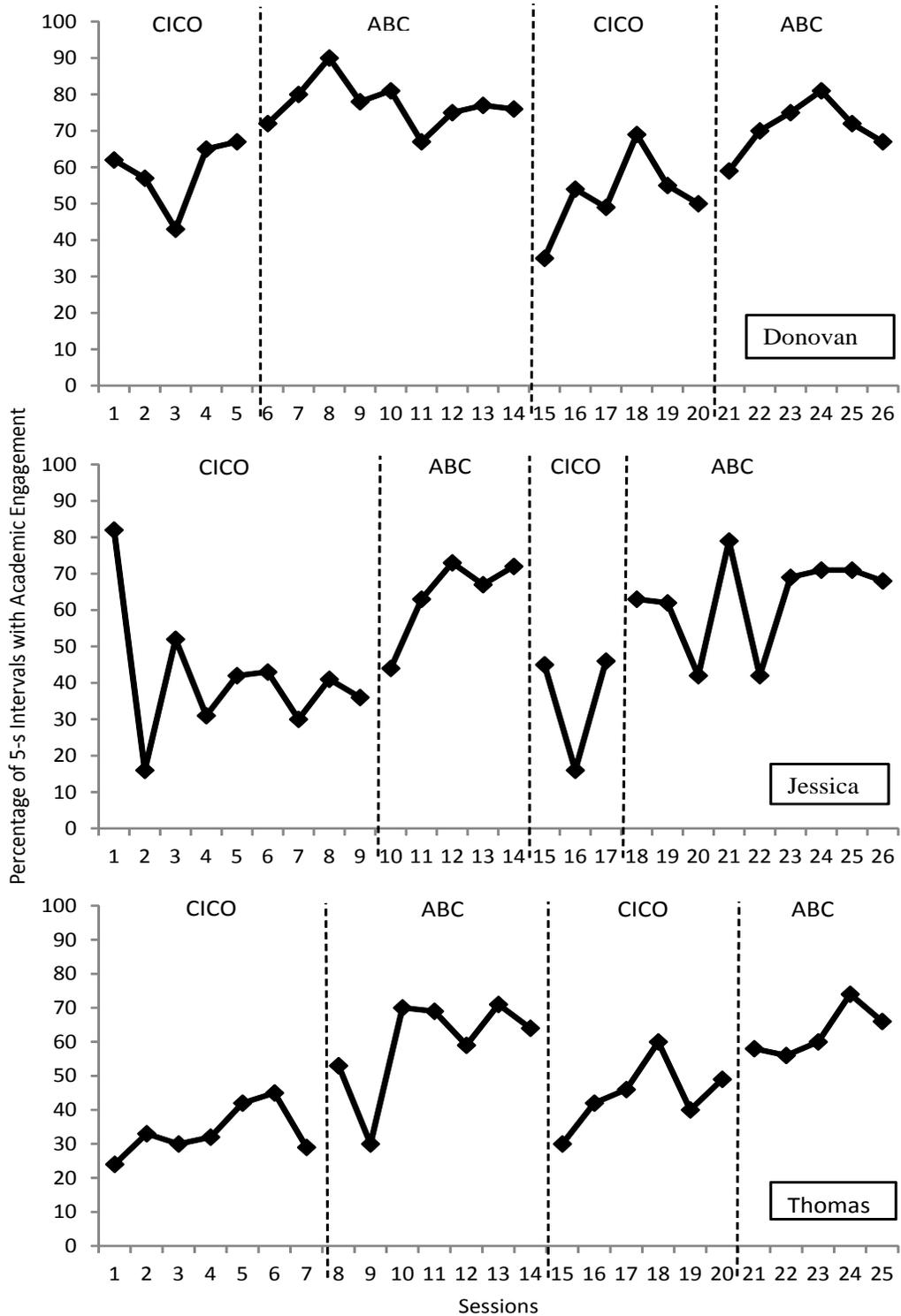
Figure 4. Percentage of 5-s intervals with academic engagement for baseline Check-in/check-out (CICO) and the Academics and Behavior Check-in/check-out (ABC) intervention across non-concurrent sessions for Donovan, Jessica and Thomas.

In this condition, academic engagement ranged from 16% of intervals to 82% of intervals. The average was 41%. Following this ABC was implemented; resulting in an increasing trend of responding that stabilized over the last three data points. The average of academic responding in this phase was 64% (range = 44% to 73%). To further evaluate functional control, a return to baseline occurred. This change yielded an immediate decrease in academic engagement and increased variability in responding from 16% to 46% with an average of 36% of intervals. In a return to the ABC condition, Jessica's academic engagement immediately increased with some variability. This pattern stabilized over the last three points. During this condition, academic engagement averaged 62% (range = 42% to 79%). Overall, these data indicate that ABC is functionally related to increases in academic engagement for this participant, with three documented changes in the pattern of responding in response to alternating phases.

   Thomas. In the first baseline condition, measures of academic engagement for Thomas were slightly variable, ranging from 24% to 45%. The pattern of responding was stable overall with this variability. The average for measures in this condition was 34%. To evaluate functional control, ABC was implemented with Thomas. Results of this change indicate an increase in academic engagement with initial variability in the responses that stabilized to a level pattern across the last five data points. The average of this pattern was 59% (range = 30% to 71%). In the return to baseline condition for this participant, measures of academic engagement immediately decreased; however, the overall pattern of responding is still being evaluated until a stable pattern is observed. To date the measures of academic engagement range from 59% to 81% of intervals, with an overall average of 71%.

Problem Behavior

The data collected on measures of problem behavior are displayed in Figure 4. This figure illustrates the results across the baseline (CICO) and intervention (ABC) phases of the study. Below, individual results are described for each participant.

Donovan. On measures of problem behavior conducted during the initial baseline condition, Donovan's responding varied between 0% and 13%. The pattern was relatively stable within this range. The average for problem behavior in this phase was 7% of intervals. During the initial ABC condition, the average for problem behavior decreased to 2%. Variability also decreased with a range of 0% to 8%. This pattern was relatively stable in this condition. In the subsequent phase, a return to baseline occurred, with no change in variability from the previous condition (range = 0% to 8%). However, there was slight increase in the average to 4% of intervals. The pattern of responding appeared stable via visual inspection. In a return to the intervention condition (ABC), measures of problem behavior appeared in a stable trend with less variability and a decreased range of 0% to 1%. The average for this condition was 0%.

Jessica. Measures of problem behavior for this participant during the initial baseline phase were highly variable, particularly at the outset. Data measures were in a significant range from 5% to 61%. However, data stabilized between a range of 11% and 29% across the last six data points in this phase. The average for this phase was 22%. In the initial ABC phase, Jessica's pattern of responding resulted in a decrease in problem behavior overall with a decrease in the average to 11%. Variability in responding also decreased in this phase, with a reduction in problem behavior to between 0% and 25% of intervals across data points. In the return to baseline condition, Jessica's problem

behavior increased slightly to an average of 21% and an increase in range from 12% to 36%. The response pattern altered again with the reversal to the subsequent intervention phase. Measures of problem behavior indicate some variability at the outset, but the behavior stabilized to a significantly lower pattern of responding across the last five data points. Within these data, problem behavior was at the lowest trend of all phases, approaching near zero levels. The average for this phase was 8% (range = 0% to 32%).

Thomas. In the initial baseline phase for this participant, measures of problem behavior ranged between 1% and 32%. The trend was sharply increasing at first and then decreased across the last three data points. The overall average for problem behavior in this phase was 8%. Within the initial ABC phase, variability in measures decreased across a stable pattern of responding of low rates of problem behavior. The average for this phase decreased to 4%. The range for measures also decreased to between 1% and 7%. Measures of problem behavior in the return to baseline increased immediately and stabilized to a level trend which was slightly elevated from the previous phase. The range increased to measures between 7% and 29%, and an increase in the overall average to 14%.
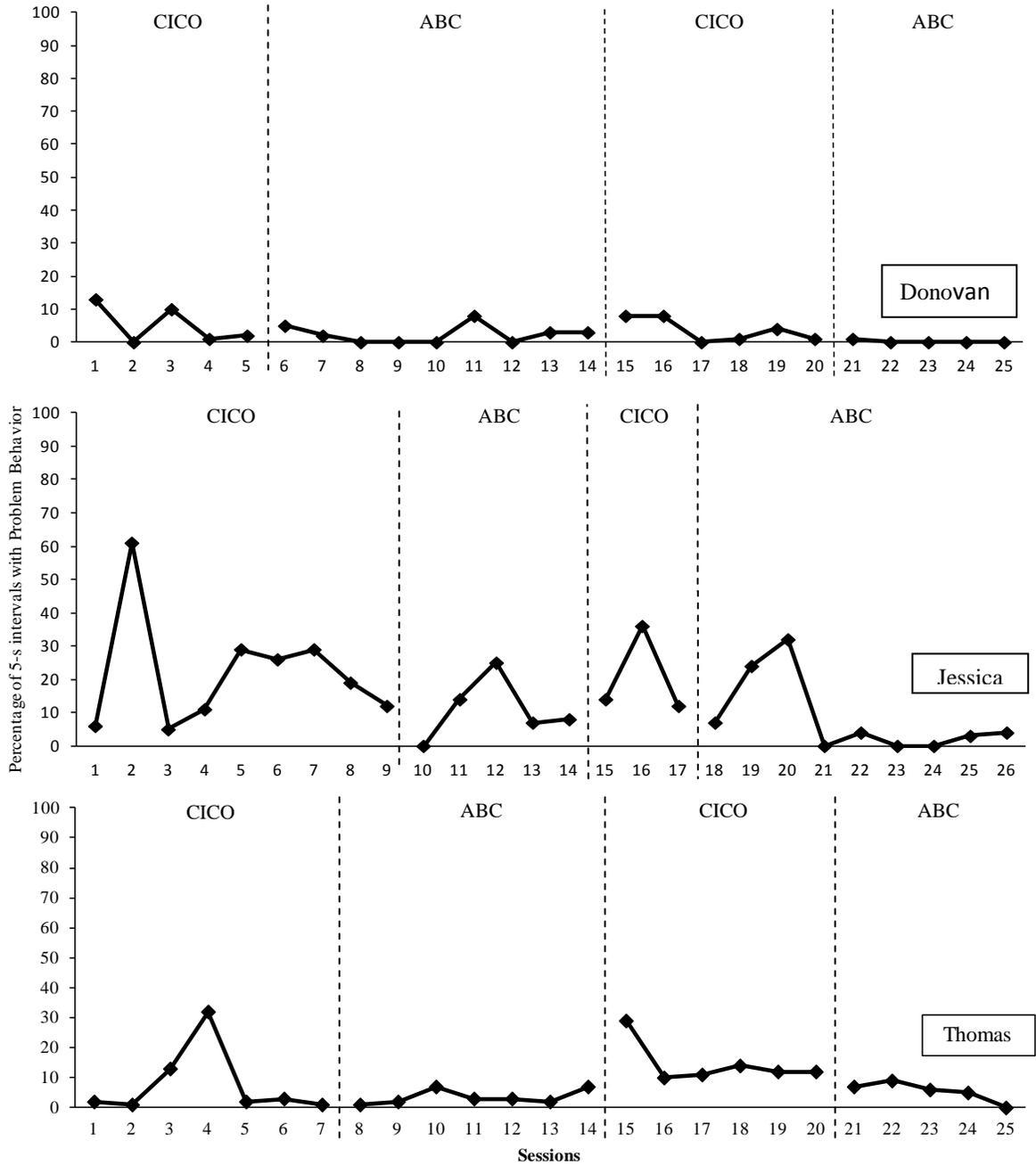
Figure 5. Percentage of 5-s intervals scored with problem behavior for baseline Check-in/check-out (CICO) and the Academics and Behavior Check-in/check-out (ABC) intervention conditions across non-concurrent sessions for Donovan, Jessica, and Thomas.

Work Completion

Jessica. Results for homework completion for Jessica are displayed in Figure 7. This figure illustrates variability in measures within the initial baseline phase. Homework completion in this phase ranged between 22% and 60%. The average for homework completion for this phase was 42%. A change to the initial intervention condition resulted in a slight increase in the range with a lower end of 33% and an upper range of 75%, the average slightly increased as well to 49%. In the return to baseline, work completion measures decreased overall with an average of 35% (range = 25% to 50%). In the final phase, the trend for work completion altered to a stable, increasing trend with an average of 51% and a range from 31% to 70%.
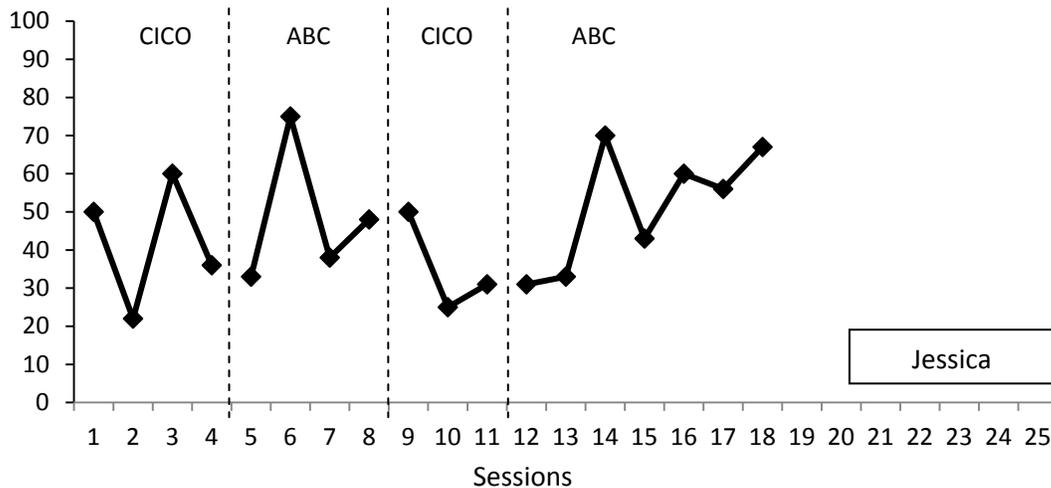
Figure 6. Percent of class work completion for Check-in/check-out (CICO) and the Academics and Behavior Check-in/check-out (ABC) intervention across non-concurrent sessions for Jessica.

Thomas. Figure 6 illustrates the data for Thomas across baseline and intervention (ABC) conditions. Measures of in class work completion for Thomas document rates of work completion between 0% and 54% in the initial baseline

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condition, with an overall average of 13% of expected problems completed. With the

change to the ABC intervention, a significant and immediate increase in Thomas' work

completion was measured. The trend of responding increased to a stable pattern of 100%

work completion across the last three data points. The average of 96% for this phase was

significantly higher than the previous phase, and measures ranged between 85% and

100%. In the return to baseline, Thomas' work completion immediately decreased with a

stable decreasing trend in responding. Measures ranged between 40% and 50% with an

average of 46%.
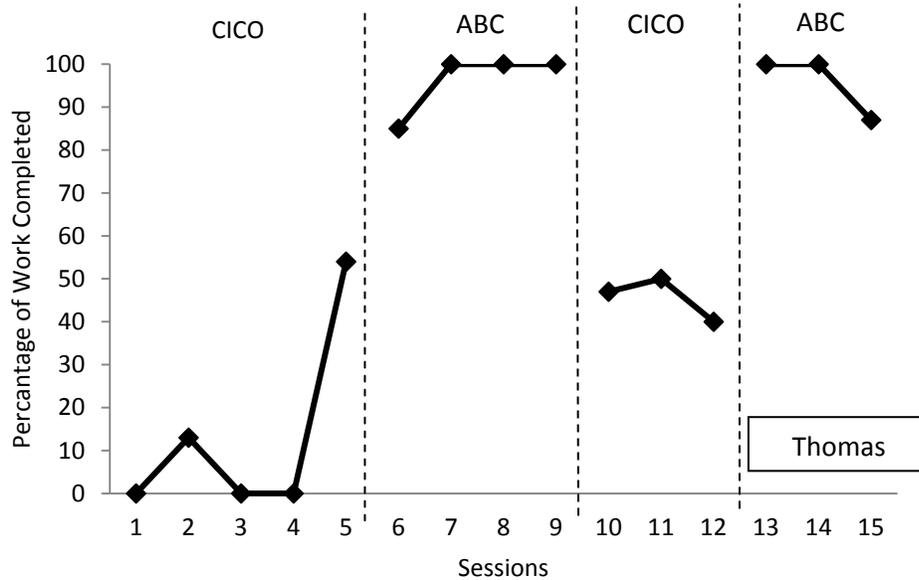
Figure 7. Percent of class work completion for Check-in/check-out (CICO) and the Academics
and Behavior Check-in/check-out (ABC) intervention across non-concurrent sessions for
Thomas.

Fidelity of Implementation

The fidelity of the implementation of ABC was evaluated while the condition was

in place. A summary of data collected is presented in Table 4. Direct observation of

check-in

Table 4

Average Fidelity of Implementation at Check-in and Check-out Meetings Across Critical
Features of ABC

Critical Feature	Check-in	Check-out
Students attended	86%	93%
Greet student individually	93%	88%
Collect home note	81%	
Check for materials	86%	80%
Give new DBPC	100%	
Award points for attending	86%	83%
Positive prompt to meet goals	93%	
Record attendance	100%	100%
Homework completion checked	100%	
Plan for completing unfished homework	100%	
Collect point card and review		93%
Positive feedback for meeting goal		83%
Neutral feedback if goal not met		83%
Give home note		70%
Check homework recorded		88%
Record points		100%
Overall	92%	87%

and check-out meetings occurred one time per week. Data were collected on the critical

features as described earlier. These data indicate that ABC was implemented with high

fidelity as averages were above 80%, except for the home note component. The range for

these measures were from 75% to 100%. Overall, measures of fidelity for ABC averaged

90%.

Additionally, teachers completed rating scales (see Appendix H) to assess the

fidelity of implementation of CICO and ABC features in the classroom setting. Using a

Likert-type scale from 0 (never) to 5 (always), teachers rated their own performance

across 10 features for each. Table 5 summarizes the results of these self-assessments.

On these measures, teachers generally rated their performance well. However, ratings for

performance on reviewing expectations, asking for the point card, and providing negative

feedback, potentially indicate that these features were not implemented with high fidelity.

Table 5

Average Teacher Ratings of Fidelity of Implementation of Critical Features of CICO and ABC in the Classroom Setting

Critical Feature	CICO	ABC
Greeted student	3.1	4
Did not ask for point card	3.6	2.5
Reviewed expectations	2.3	2.8
Monitored behavior	4.7	4.8
Awarded points for observed behavior	4.7	5
Did not review points	2	2.3
Provided positive feedback for points	4	4.2
Provided negative feedback if few points	2.4	3.2
Discussion if student questioned points	2.7	2.7
Find valuable (CICO only)	3.1	
Check homework recorded (ABC) only		3.2

Data on homework recording accuracy was collected to evaluate fidelity of this component of ABC. Homework trackers were reviewed during the ABC intervention and percent of points earned for recording homework across the day were calculated. Results from this are presented in Figure 8. As shown each participant earned varying percentages of points for accurately recording homework. Donovan earned 23% of points possible during the ABC condition, Jessica earned 45% of points, and Thomas earned 11% of points possible.
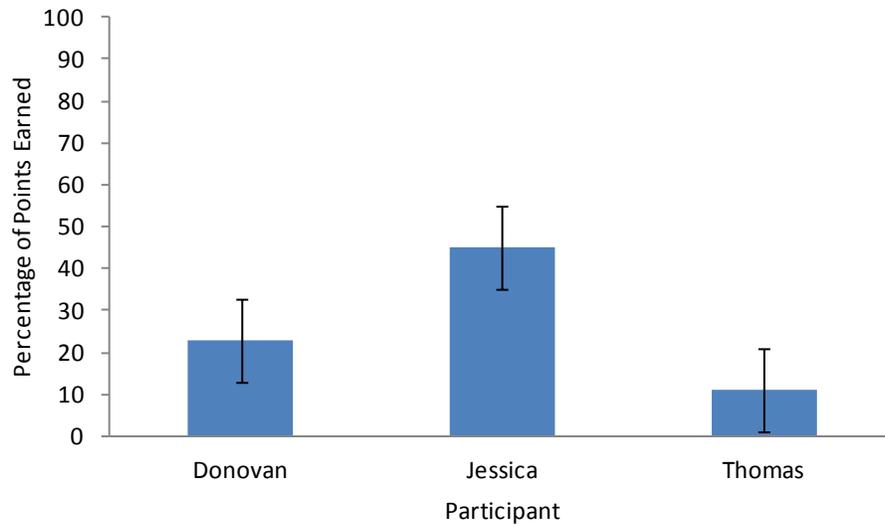
Figure 8. Average percent of points earned for recording homework with tracker during

ABC for Donovan, Jessica, and Thomas

Consumer Satisfaction

Parents, teachers and students utilized a Likert-type rating system of 1-6, with 1

indicating "strongly disagree" and 6 indicating "strongly agree" to evaluate several

statements about the ABC program. The results are outlined in Table 6, which shows

that teachers and students generally rated ABC high, indicating a high level of

satisfaction with the intervention.

Table 6

Teacher, Student, and Parent Ratings of Acceptability of ABC

Student	Person Rating	Improved Behavior	Improved Academic Performance	Worth Time	Good Fit With School	Easy to Implement
Jessica	Student	4	2	5	4	6
	Teacher	6	6	6	6	4
	Parent					
Thomas	Student	3	4	4	2	4
	Teacher	4	3	4	5	5
	Parent	4	3	4	4	4
Donovan	Student	5	4	6	4	6
	Teacher	5	5	6	6	4
	Parent	5	5	5	5	5

CHAPTER IV

DISCUSSION

Educators often receive little specialized, pre-service training to prepare them for managing student behavior. The challenges of addressing problem student behavior can be a contributing factor to burnout and high turnover rates of teachers for schools. The systems and interventions of SWPBIS help school staff promote socially appropriate behavior in school settings and address problem behaviors along a three-tiered continuum of increasingly intensive support.

This study was conducted to further evaluate the efficacy of ABC (Turtura & Anderson, in press), a multi-component Tier II intervention adapted from CICO. Prior research (Tutura & Anderson) provided preliminary evidence of the effectiveness of ABC. This study adds to that research base by evaluating the relative effectiveness of the ABC intervention when compared to CICO.

Summary of Results

All three participants emitted problem behavior during instruction and independent work, which was likely maintained by escape. Implementation of the ABC intervention resulted in changes in measures of academic engagement and problem behavior for all participants, with evidence of an impact on measures of work completion for two participants. As hypothesized, evidence suggests that ABC is functionally related to improvements in these measures. Additionally, the ABC intervention was implemented with fidelity, and was generally acceptable to stakeholders.

The results from this study address a gap in the knowledge base and buttress key findings from previous research. This study primarily addresses a relative shortage of effective, systematic intervention strategies embedded within a multi-tiered, prevention-oriented framework in the literature. Moreover, this study adds further evidence for the effectiveness of ABC, indicating that it is a promising Tier II strategy with the potential to improve outcomes for student behavior maintained by escape or avoidance of academic tasks. The examination of the relative effects of ABC compared to CICO in this study highlight important findings previously untested, thus contributing to the existing data from studies on both of these interventions. Lastly, this study delineates several critical features of a multi-component intervention strategy that aid in explaining the current findings.

Contribution to the Literature

To date, few intervention strategies have been empirically validated as Tier II interventions designed to be embedded within a multi-tiered, systems-level framework such as SWPBIS. Further, existing interventions (CICO, Check and Connect) are most likely to be effective for students whose behavior is sensitive to adult attention; none have features addressing instructional avoidance. The ABC intervention addresses this gap. As a Tier II intervention, it is linked directly to Tier I supports in the building. For example, established building expectations for all students were explicitly taught to the students, but defined in terms of academic behaviors rather than social behaviors, and regularly occurring feedback occurred regarding performance towards these expectations. Further, because ABC shares some features with CICO (e.g., DPR, checks in and out each day), it may be relatively easy for schools implementing CICO to add to their

"toolbox" of effective interventions. In this study and in Tutura & Anderson, measures of fidelity of implementation suggested that ABC can be implemented as designed by existing school personnel.

The relative impact of ABC on measured outcomes further suggests that it can potentially serve as an additional Tier-II support to augment existing behavior support options, specifically for behaviors associated with instructional avoidance. Evidence from this study suggests that the features of ABC support improvements in academic behaviors. These results replicate previous findings on ABC in a study conducted by Tuturra (2012), which also demonstrated reductions in problem behavior and increases in academic engagement. Turtura's original research on ABC is augmented by this study through the inclusion of a group of subjects more "at-risk" for academic difficulties. The participants in the initial study on ABC each met benchmark scores on state standardized assessments, whereas none of the participants in this study met benchmark scores on the previous year's assessment. Examination of the relative effectiveness of ABC in comparison to CICO, must be considered in terms of the fidelity of implementation of each of these interventions. While CICO was not working for any of our participants, this study did not directly document that CICO was implemented with fidelity with these students in particular. Additionally, analysis of the fidelity of the implementation of CICO across the whole population of students receiving the intervention did highlight several critical features which were not implemented with fidelity. In contrast, ABC was implemented with high fidelity and resulted in enhanced engagement for all participants.

Possible Mechanisms Contributing to Outcomes

Academic Behavior CICO is a multi-component intervention—it is not yet known whether one or a few components contribute to the positive outcomes achieved in research thus far or if the entire package is necessary. Mechanisms that may contribute to effectiveness include adult feedback, the token economy, potential establishing operations, and skills training.

Adult feedback. One potentially important component of ABC is frequent and structured adult feedback. Students receive feedback at the end of each instructional period as well as summative feedback at the end of the day. In a component analysis of CICO, Campbell & Anderson (2011) found that disruptive behavior increased when teacher feedback was removed, even with continued morning and afternoon checkouts. It may be the case that frequent teacher feedback contributes to the success of ABC.

Token economy. There is a vast empirical basis for token economies, across age groups (e,g., Phillips, Phillips, Fixsen, & Wolf, 1971; Inghram & Andrews, 1973), populations (e.g. Carton & Schweitzer, 1996; Dalton, Rubino, & Hislop, 1973), and settings (e.g. Fox, Hopkins, & Anger, 1987; Milan & McKee, 1976). In ABC, students earn points throughout the day for meeting behavioral expectations. Points can be traded for incentives periodically (in this school whenever a student earned 80% or more of possible points in a day). In this school, incentives included snacks, passes which could be turned in for 10 minute breaks in class, tickets for reductions in work (negotiated with the teacher), and incentives for extra time with peers. It is possible that the token economy alone contributed to positive outcomes for these students. Future research could compare effects of ABC to those obtained when students participated in a token economy

but did not receive feedback after each class period (beyond seeing the point card) and did not check in and out each day.

Establishing operations. Establishing operations are changes to environmental conditions which increase or decrease the value of a reinforcing item or event and in turn alters the frequency of the occurrence of behavior maintained by the reinforcement (Michael, 1993). Three features of ABC may function as establishing operations. First, the morning check-in is designed to establish goals for the day and the contingencies necessary for earning incentives. It is possible as well that the relationship between the student and coordinator may establish attention from the coordinator as reinforcing. Students may then be more motivated to emit target behaviors in ABC so as to obtain access to coordinator attention. Third, ABC provides a structure to enhance homework completion. If homework is not completed from the day before, the coordinator assists the student with developing a plan to complete the work—and there is no penalty for the delayed completion. Thus, ABC may reduce aversive interactions between student and teacher.

Each of these putative establishing operations should be addressed in future research. For example, the morning check-in could be systematically manipulated and the person conducting the check in and out could be changed so as to minimize development of a relationship. The homework component also could be removed.

Skills training. There are two components of ABC that teach or prompt skills; the homework tracker and instruction in expectations. Students record assignments on the homework tracker and teachers check to be sure the record is accurate—if not the teacher assists the student in completing the tracker. Students thus learn to accurately record

assignments, which may enhance homework completion. Second, students receive

instruction on academic expectations at least once per day, at check-in. Additional

instruction may occur via teacher feedback sessions and at check-out. Future studies

should manipulate inclusion of the homework tracker to assess effects on ABC.

Implications for Practice

As results from this study strengthen the body of literature in regards to ABC

fulfilling the role of a Tier-II intervention in schools, several practical considerations

arise in considering full scale adoption and implementation. First, it seems likely that

schools will be more successful implementing ABC if they are implementing Tiers I and

II of SWPBIS with fidelity and if Tier II includes an established CICO system. Schools

in this study and in Turtura and Anderson (in press) implemented ABC within the context

of well-established implementation of a SWPBIS that included CICO. Thus, each had

systems necessary to support implementation of ABC including a coordinator familiar

with CICO and data-based decision-making and teachers supportive of the use of point-

card based interventions.

A pre-intervention FBA was used in this study and in Tuturra and Anderson (in

press). It may not be necessary to conduct a FBA prior to implementation of ABC and in

fact some researchers advocate against the use of FBA for selecting Tier II supports (e.g.,

Anderson & Borgmeier, 2009; Anderson & Scott, 2011). Educators might instead

consider ABC for students engaging in instructional avoidance instead of CICO. That

said, this approach certainly needs to be assessed in empirical studies.

Limitations of Current Study

      This study utilized a reversal design to control for extraneous threats to the validity of the results and potential sources for error. There are however several limitations to the current investigation. These limitations are discussed in further detail below along with additional discussion on potential future avenues of research related to the ABC intervention.

      Threats to external validity. This study was conducted to extend the literature on the efficacy of the ABC intervention. To date two studies have been conducted in this line of investigation. However, both studies have only been conducted with middle school students. In this particular study, the subjects were also all in the same grade. The ABC intervention may not yield similar results with students in primary or high school settings. Similarly, both studies were conducted in urban school districts. Results may vary in more rural settings, or within smaller school districts. Additionally, the ABC intervention was designed to be implemented in schools with effective SWPBIS systems in place. Schools implementing the ABC intervention without these systems may not yield improved outcomes. Overall applicability of these results to the larger population of students in schools is limited. Thus there is a need for replication of these results across varied population and setting characteristics. Future studies on ABC should consider investigating the efficacy of the intervention across multiple schools, comparing effects in urban and rural settings, as well as potentially extending to primary and high school students. Additionally, the research base should extend the knowledge base on implementation of ABC within schools with less robust SWPBIS systems.

Threats to internal validity. Several factors inherent to this study potentially impact confidence in the findings. First, inclusion of three participants is moderately limiting. Inclusion of an additional participant would increase the strength of the evaluation of the effectiveness of ABC. Additionally, some of the phases in the study were retracted. Although stability in data patterns were documented prior to changes between phases, extended collection of data within phases would strengthen confidence in the results. As this study was conducted in a school setting, the nature of a finite academic calendar and competing events (e.g. field trips, assemblies, etc.) present an obstacle to extended data collection. Additionally, data was collected in only one classroom setting for each participant without an evaluation of the effectiveness across the academic day. Earned points in ABC provide an indirect and more efficient measure of the effectiveness of the intervention in other classroom settings. Gathering this information using direct observation methods would require extensive resources in personnel and time, and likely significant funding to carry-out. Lastly, measures of in-class work completion were impacted significantly by variability in length and difficulty of expected work. Thus, the effectiveness of ABC on work completion could not be accurately evaluated in this study.   However, this is an important variable for consideration in future studies on ABC.

CHECK-IN/CHECK-OUT SELF-ASSESSMENT

(HORNER, TODD, & DICKEY, 2006)

Check-In / Check-Out Self-Assessment

School: _____   **Date:** _____

Instructions: As a team, review and record each of the CICO elements. For all elements that are rated as "in progress" or "not in place" build action planning steps.

CICO Element	In Place	In Progress	Not In Place
1. Faculty and Staff Commitment for CICO defined			
2. Team Defined and Available to Coordinate program			
3. School-wide PBS in place			
4. Student Identification Process for CICO exists			
5. Daily CICO progress report card developed			
6. Home report process defined			
7. Point Trading System established			
8. Process for collecting, summarizing and using data developed			
9. Morning check-in routine established			
10.Teacher check-in/ check-out routine established			
11.Afternoon check-out routine established			
12.Home review routine established			
13. Team meeting schedule, routine, process			
14. Planning for Success in place			

15. Planning for Individualized Support Enhancement in place			
16. Substitute Teacher routine developed			
17. Playground, cafeteria, bus routine developed			

APPENDIX B

ORGANIZATION AND STUDY SKILLS CHECKLIST (TURTURA, 2010)

**Organizational and Study Skills Problem
Checklist**

Directions: The following questions are to be asked at the end of the FACTS interview. Place a check mark next to each item the teacher responds "yes" to.

<u>Does the student...</u>

1) Have an unorganized notebook or no notebook at all?   _____

2) Rarely/never use a planner to record assignments or uses a planner but in a disorganized or messy way that does not help the student track assignments?   _____

3) Appear to have adequate academic skills but still has poor grades?   _____

4) Frequently come to class unprepared, without all needed supplies?   _____

5) Have missing or incomplete assignments in your class?   _____

6) Seem to need increased structure?   _____

APPENDIX C

CICO FIDELITY OF CRITICAL FEATURES FOR ADULT CHECK

COMPONENTS (ANDERSON, 2011)

Middle School CICO
Fidelity of Check-out

Date: _____/_____/_____   Mentor observed: _____

Duration of meeting: _____   Number of students attending: _____

Feature	Tally of Students Feature Completed With
1. Greet each student individually	
2. Award points for attending check-out	
3. Collect DPR and review points earned	
4. Provide positive feedback if student met goal	
5. Provide neutral feedback w/re-teaching if goal not met	
6. Give student home note	
7. Positive prompt to have a good evening	
8. Record attendance at check-out	
9. Record points in CICO-SWIS	

Middle School CICO

Fidelity of Check-in

Date: _____/_____/_____   Mentor observed: _____

Duration of meeting: _____   Number of students attending: _____

Feature	Tally of Students Feature Completed With
1. Greet each student individually	
2. Collect DPR with parent signature	
3. Check to see if student has materials needed and provide if necessary	
4. Give student a new DPR	
5. Award points for checking in	
6. Positive prompt to meet goals for day	
7. Record attendance in check-in	

APPENDIX D

ABC FIDELITY OF CRITICAL FEATURES FOR ADULT CHECK

COMPONENTS (ADAPTED FROM ANDERSON, 2011)

Fidelity of Check-out

Date: _____/_____/_____   Mentor observed: _____

Duration of meeting: _____   Number of students attending: _____

Feature	Tally of Students Feature Completed With
1. Greet each student individually	
2. Award points for attending check-out	
3. Collect DPR and review points earned	
4. Provide positive feedback if student met goal	
5. Provide neutral feedback w/re-teaching if goal not met	
6. Check homework recorded in tracker	
7. Ensures student has needed materials for homework.	
8. Give student home note	
9. Positive prompt to have a good evening	
10. Record attendance at check-out	
11. Record points in CICO-SWIS	

Fidelity of Check-in

Date: _____/_____/_____   Mentor observed: _____

Duration of meeting: _____   Number of students attending: _____

Feature	Tally of Students Feature Completed With
1. Greet each student individually	
2. Collect DPR with parent signature	
3. Check to see if student has materials needed and provide if necessary	
4. Give student a new DPR	
5. Award points for checking in	
6. Homework completion checked	
7. Plan for completing unfinished homework	
8. Positive prompt to meet goals for day	
9. Record attendance in check-in	

APPENDIX E

ABC ACCEPTABILITY QUESTIONAIRE (TURTURA, 2010)

The purpose of this questionnaire is to assess your perception of the Academic and Behavior Check-in/Check-out (ABC) program. The information you provide will be maintained and reported in a confidential manner consistent with the standards of the American Psychological Association. You will never be identified. **Thank you for your contribution and assistance!**

1. The ABC program improved _____'s behavior at school.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

2. The ABC program improved _____'s academic performance.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

3. The ABC program was worth the time and effort.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

4. The ABC program is a good fit with the school.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

5. The ABC program is easy to implement.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

Academics and Behavior Check-in/Check-out

Implementation & Procedures Workbook

Developed
by:
Jessica Turtura, MS & Cynthia M. Anderson,
PhD

Academics and Behavior Check-in/Check-out

Background and Purpose

Academics and Behavior Check-in/Check-out (ABC) is a modified version of Check-in/Check-out that is designed for students exhibiting both academic and behavioral difficulties in school. ABC is specifically designed for students with organizational skill deficits that contribute to their problem behavior in school.

While Check-in/Check-out (CICO) is successful at reducing problem behavior of many students on the program, it is usually most effective for students who engage in problem behavior in order to get attention from adults. The ABC program is designed to work for a group of students that may not be as successful on CICO- students who in engage in problem behavior to escape or avoid a task in school. These students often have organizational skill deficits as well.

While you may already be using some of the components of ABC for some students, ABC is designed to be a systematic intervention that can be used across a group of students. This way, you can save time and resources by not having to modify CICO each time a student is not successful on the program.

The components of ABC implementation include:
1. *Materials*
2. *Developing Expectations & Rewards*
3. *ABC Daily Cycle*
4. *Holding an ABC Parent Meeting*
5. *Teaching ABC to Students*

Materials

In addition to your regular CICO materials, you will need a few additional materials for ABC.

- *ABC Daily Point Card and Homework Tracker (sample provided)*: The ABC daily point card is very similar to the CICO point card that your school is already using. You can choose to use the sample point card that is provided, or you can just modify your school's existing point card. The key difference is a space to track homework on the back of the card.

- *Rewards*: In addition to any rewards that your school may already be using for CICO, you will develop a list of rewards that are specific to students on the ABC program. These rewards will be designed to be reinforcing for students who engage in problem behaviors in order to escape or avoid academic tasks. For example, rewards may include extra time for an assignment or break coupons.
- *Student Materials*: As part of the daily check-in, you will check to see that students are prepared for the day with all necessary materials. If a student does not have all necessary supplies for the day, you will provide them with the tools that they need to be successful. Materials may include pencils, pens, and paper.

Getting Started: Develop Expectations & Rewards

Develop Expectations
In the CICO program, students work towards goals that are tied to school-wide expectations. Students on the ABC program have academic as well as behavior difficulties, so the school-wide expectations will be defined specifically in terms of academic behaviors.

- What are the school-wide expectations for your school?
  1._____
  2._____
  3._____
  4._____
  5._____
-
- How can each expectation be defined in terms of academic behavior? (for example, "Be Responsible" may be defined as "Complete all class assignments".)

  These will be the daily goals that students will work toward. In addition to the 3-5 goals tied to your school-wide expectations, include an extra goal. This extra goal will be "Record assignments accurately on homework tracker".

  1. _____
     _____
  2. _____
     _____
  3. _____
     _____
  4. _____
     _____
  5. _____
     _____

- Provide at least two examples and non-examples for each goal that you can use to teach your students the expectations:

1. _____

    ! Examples:

    ! Non-Examples

2. _____

    ! Examples:

    ! Non-Examples:

3. _____

    ! Examples:

    ! Non-Examples:

4. _____

    ! Examples:

    ! Non-Examples:

5. _____

    ! Examples:

    ! Non-Examples:

Consider Rewards

Earning positive recognition or a reward for reaching a goal is an important piece of ABC that allows students to feel motivated and successful. In addition to any rewards that you may already be using for the CICO program, you will develop a list of rewards that are specific for students on the ABC program. Keep in mind that students on the ABC program engage in problem behavior in order to escape or avoid tasks at school. The rewards that you choose should let students earn a chance to escape or avoid a task when they engage in appropriate behavior at school and meet their goal for the week. For example, a student may earn extra time to complete an assignment or a Break Coupon that they can use for a 5-minute break.

ABC Rewards Worksheet

> *Use this space to come up with some rewards that you think will be reinforcing for students on the ABC program:*

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

ABC Daily Cycle

The ABC program has four main components that will happen each day: 1) Morning check-in, 2) Daily point card/homework tracker, 3) Afternoon check-out, and 4) Home component. Each of these components is similar to the way you are already using CICO, so it shouldn't be too difficult to get the hang of ABC!

- *Morning Check-in***:**
    - o The morning check-in will look the same as for students on CICO, but will include a few additional pieces. After returning the previous day's signed point card and getting a new daily point card, students will show you that they are prepared for the school day with all needed materials. If students are prepared, you will give them a bonus point on their point card. If students are not prepared, you will have some supplies on hand to give to them.
    - o Next, you will check the previous day's point card to see if students have completed all of their homework. The point card has a place for parents to sign and indicate if their student has completed all of their homework or not. If students have completed all homework, you will give them a bonus point on their point card. If students have not completed all homework, they will be given the opportunity to do so. They can either stay at the check-in to complete the homework, or can be given a homework pass and will be expected to complete the homework later in the day (maybe during recess or a free period). If this happens more than 3 times in 2 weeks, the student is in need of more intensive intervention and will no longer participate in the ABC program.
    - o Finally, provide students with some positive encouragement ("Have a great day!") and send them off to class.

- *Daily Point Card/Homework Tracker:*
    - o The daily point card should look very similar to your school's CICO card. One main difference is that students' daily goals will be more specific than just the school-wide expectations. Each school-wide expectation will be

defined in terms of academic behavior. You will use the goals that you came up with earlier in this training. Also, all students will have an additional goal related to correctly recording assignments on their homework tracker, which will be located on the back of the point card.
- o Just like in CICO, students can earn up to 2 points for meeting each goal in each class period. Unlike CICO, the ABC card will only be used in academic settings.

- *Afternoon Check-out:*
  - o Students will briefly check out with you each afternoon. You will review their point card and determine if they have met their daily goal of earning 80% of possible points. If students have met their goal, give them positive verbal feedback ("Great job! I can tell you worked really hard today.") If you are using small daily rewards for students on CICO, you can use them for students on ABC also.
  - o If students have not met their goal, give them brief neutral feedback ("Let's try harder tomorrow.")
  - o Each week, students who have met their goal on 4 out of 5 days can earn a weekly reward. Students can choose a reward from the list that you have developed.
  - o Each afternoon, you will briefly review each student's homework tracker with them and make sure they know what is due. Briefly develop a plan with each student for what they will need to do that evening to complete all of their assignments.
  - o At the end of the check-out, remind students to review the homework tracker with their parents and to have parents sign their point card.
  - o Be sure to end the check-out with positive encouragement such as "Have a great evening, see you tomorrow!").

- *Home Component:*
  - o Each day after school, students will show parents their daily point card and homework tracker. Students should review their homework with parents each night, and get their parents signature. Students should also be

prepared to return the previous day's signed point card to you the next day, at check-in.

Holding an ABC Parent Meeting

You will have one 45-minute meeting with each student's parents, before the student begins the ABC program. All the materials that you need to conduct this meeting are included in the "ABC Parent Guide." The goals of the parent meeting are to: 1) Introduce parents to the components of ABC, 2) Help parents come up with a routine and strategies for helping their child with homework, 3) Teach parents their role in the home component, and 4) Review appropriate ways of responding on days that a student meets his goal and on days that they do not meet their goal.

Now, let's get out the "ABC Parent Guide" and go through each of these pieces in more detail.

Teaching ABC to Students

You will have a brief meeting with each student before they begin the ABC program. This meeting should look very similar to meetings that you have with students before they begin the CICO program. The goals of the student meeting are to: 1) Introduce the student to the components of ABC, 2) Teach the student the daily goals and how they can meet these goals each day, and 3) Review the list of rewards with the student and find out which rewards they would like to work towards. It may be helpful to go through each component of the ABC program, and teach students what to expect for each part of the program. Here are some suggestions for introducing each piece of the program to students:

- *Morning Check-in*:
  - First, tell the students where they should come to check-in each morning, and at what time. Next, briefly role-play what a typical check-in will look like. Students will: 1) turn in yesterday's signed point card, 2) show the coordinator that they are prepared for the day with all necessary materials, 3) show the coordinator that they have

completed all of their homework, 4) get a new point card, and 5) earn bonus points if applicable.

- o You should also be sure to explain the homework policy to students. If students are not completing their homework on a regular basis, they are likely in need of more intensive intervention and will not longer be eligible for the ABC program.

- *Daily Point Card/Homework Tracker:*
  - o Show students the daily point card and homework tracker. First, review the daily goals, using the examples and non-examples that you came up with earlier. Have students come up with some of their own examples and non-examples for how to meet each goal. Next, teach students to turn in their point card to teachers at the beginning of each academic period and get the card back at the end of each period. Students should expect to get feedback from teachers and should also make sure that teachers sign the homework tracker.
  - o Teach students how to use the homework tracker. Tell students that they will need to record assignments during each academic period. Also, teach students that if they do not know what the assignment is, they should ask their teacher at the end of the period.

- *Afternoon Check-out:*
  - o First, tell students where they should come to check-out each afternoon, and at what time. Next, briefly role-play what a typical check-out will look like. Students will show you their point card and determine if they have met their daily goal. If they have met their goal, they may earn a small daily reward and will also earn points toward a weekly reward. If they have not met their goal, they should expect to receive brief and neutral feedback from you. Finally, students should be prepared to review their homework tracker with you and develop a plan for completing assignments.

- *Home Component:*
  - Tell students that each day after school, they will show their parents their daily point card and homework tracker. Students should expect to review their homework with parents each night, and get their parents signature. Students should also be prepared to return the previous day's signed point card to you the next day, at check-in.

Communicating With Teachers

Before beginning the ABC program with a student, it will be important for you to notify the student's teachers. All teachers will already have been introduced to the ABC program, so they should have a general idea of what their role is. At the end of this workbook, you will find a sample letter that you may want to give to teachers before their student begins the program

After meeting with parents and students, and communicating with teachers, you are ready to get started!

Feel free to contact the Project Coordinator at any time with any questions or concerns you may have along the way.

Contact Information

Project Coordinator:
Email:
Phone:

Sample Letter to Teachers
(adapted from Crone, Horner, & Hawken, 2004)

Attention Teachers:

_____ will begin a modified version of Check-in/Check-out called Academics and Behavior Check-in/Check-out (ABC). The following modifications will be made.

1. _____'s point card will have goals that are specifically tied to academic behaviors.

2. _____ will be expected to record all homework assignments on a homework tracker that is located on the back of their point card. Please briefly review his or her homework tracker at the end of your period each day. If all assignments due have been accurately recorded, please award 2 points on the point card. If some but not all assignments due have been recorded, please award 1 point. If no assignments have been recorded, do not award any points. If this happens, please tell the student what is due so that they can record it on their tracker. Finally, please initial the tracker to show that the student has recorded assignments accurately.

Thank you for your cooperation with the ABC program. If you have any questions, please contact _____, the ABC coordinator.

ACADEMICS AND BEHAVIOR CHECK-IN/CHECK-OUT PARENT GUIDE

Academics and Behavior Check-in/Check-out
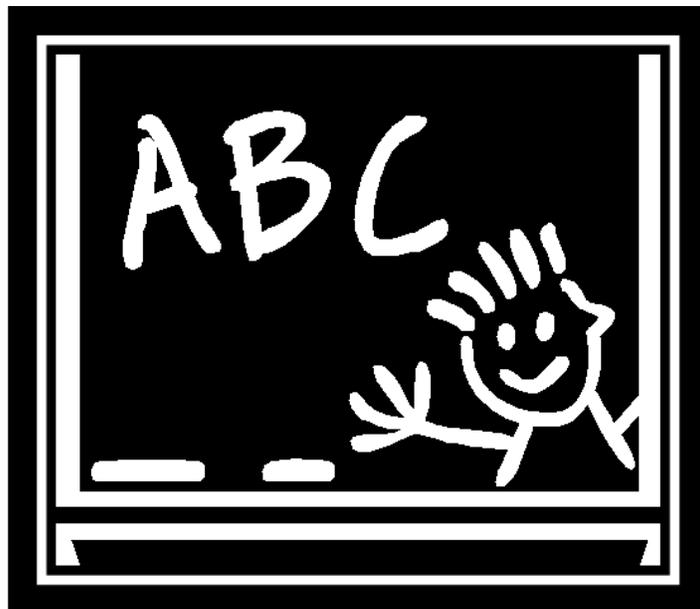
A Guide for Parents

Developed by:

Jessica Turtura, MS & Cynthia M. Anderson, PhD

Academics and Behavior Check-in/Check-out

Background

Academics and Behavior Check-in/Check-out (ABC) is a modified version of Check-in/Check-out that is designed for students exhibiting both academic and behavioral difficulties in school. ABC is specifically designed for students with organizational skill deficits that contribute to their problem behavior in school.

Check-in/Check-out (CICO) is a program that your child's school currently uses to help students be more successful at school. The CICO program usually works best with students who engage in problem behavior in order to get attention from adults. The ABC program is designed to work for a group of students that may not be as successful on CICO- students who in engage in problem behavior to escape or avoid a task in school. These students often have organizational skill deficits as well.

Expectations & Rewards

Develop Expectations
In the ABC program, students work towards goals that are tied to school-wide expectations. Students on the ABC program have academic as well as behavior difficulties, so the school-wide expectations will be defined specifically in terms of academic behaviors.

- The school-wide expectations for your child's school are:
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____

- The daily goals that your child will work towards are:
  1._____
  2._____
  3._____
  4._____
  5._____

- Here are some examples and non-examples for each goal:

  1. _____
     ! Examples:

     ! Non-Examples

  2. _____
     ! Examples:

     ! Non-Examples:

  3. _____
     ! Examples:

     ! Non-Examples:

  4. _____
     ! Examples:

     ! Non-Examples:

  5. _____
     ! Examples:

     ! Non-Examples:

Consider Rewards

Earning positive recognition or a reward for reaching a goal is an important piece of ABC that allows students to feel motivated and successful. Students on the ABC program will earn a reward when they have met their weekly goal. Students will be able to choose a reward from a list that has been developed specifically for students on the ABC program. For example, a student may earn a Homework Pass or a Break Coupon that they can use for a 5-minute break.

ABC Daily Cycle

The ABC program has four main pieces that will happen each day: 1) Morning check-in, 2) Daily point card/homework tracker, 3) Afternoon check-out, and 4) Home component.

- *Morning Check-in***:**
  - Each morning, your child will check in with the ABC coordinator. First, they will return the previous day's signed point card and will get a new daily point card.
  - Next, they will show the ABC coordinator that they are prepared for the school day with all needed materials. If your child is prepared, they will earn a bonus point on their point card. If they are not prepared, the coordinator will have some supplies on hand to give to them.
  - After that, the coordinator will check the previous day's point card to see if your child has completed all of their homework. The point card has a place for parents to sign and indicate if their child has completed all of their homework or not. If your child has completed all homework, they will earn a bonus point on their point card. If they have not completed all homework, they will be given the opportunity to do so. They can either stay at the check-in to complete the homework, or can be given a homework pass and will be expected to complete the homework later in the day (maybe during recess or a free period). If this happens more than 3 times in 2 weeks, the student is in need of more intensive intervention and will no longer participate in the ABC program.

- o Finally, the coordinator will provide your child with some positive encouragement ("Have a great day!") and send them off to class.

- *Daily Point Card/Homework Tracker:*
  - o Each day, your child will have a point card where they can earn points for meeting their daily goals (see sample).
  - o Students can earn up to 2 points for meeting each goal in each class period. The ABC card will only be used in academic settings.
  - o On the back of the point card, there is a homework tracker. This is where your child will record their homework assignments for each class. Each teacher will sign the tracker to make sure that your child has correctly recorded the assignment.

- *Afternoon Check-out:*
  - o Your child will briefly check out with the ABC coordinator each afternoon. The coordinator will review their point card and determine if they have met their daily goal of earning 80% of possible points. If students have met their goal, the coordinator will give them positive verbal feedback ("Great job! I can tell you worked really hard today.") If the school is using small daily rewards for students on CICO, they may use them for students on ABC also.
  - o If your child has not met their goal, the coordinator will give them brief neutral feedback ("Let's try harder tomorrow.")
  - o Each week, students who have met their goal on 4 out of 5 days can earn a weekly reward. Students can choose a reward from a list that the coordinator has developed.
  - o Each afternoon, the coordinator will briefly review your child's homework tracker with them and make sure they know what is due. The coordinator will briefly develop a plan with your child for what they will need to do that evening to complete all of their assignments.
  - o At the end of the check-out, the coordinator will remind your child to review the homework tracker with you and to have you sign their point card.

- o The coordinator will end the check-out with positive encouragement such as "Have a great evening, see you tomorrow!".

- *Home Component:*
  - o Each day after school, your child will show you their daily point card and homework tracker. If they don't offer to show you, you should ask to see it.
  - o Check to see if your child has met their goal for that day. If they have, go ahead and give them some positive encouragement. You can say something like "Great job! I'm proud of you."
  - o If your child has not met their goal, you can just give them some brief neutral feedback. You can say something like "Try harder tomorrow."
  - o You will review the homework tracker with your child to see what assignments are due the next day. In the next section, we will talk about some strategies and tips for helping your child with their homework.
  - o Make sure that you sign the point card before your child heads to school the next day. There will be a spot for you to sign if your child has completed all of their homework, and a spot for you to sign if they have not.

Helping Your Child with Homework (Clark & Clark, 1989)
Homework can be stressful for both parents and children. It seems like there's never enough hours in the day to get everything done! Here are some tips that might help you help your child with their homework. These are things that are meant to be easy to do, and will fit into your busy schedule.

- Establish a Routine:
    - o Homework should be done at the same time and place every day. Work with your child to decide when and where they will do homework each day. For example, they may decide to do homework at 7:00 each evening, in their bedroom. Or, they may choose to join Homework Club and do homework right after school each day.
    - o What is most important is that you and your child develop a *homework routine*. This way, your child will always know when and where they are expected to do their homework each day.

- Planning a Project:
    - o At the middle school level, many assignments may be longer-term projects. Here are some tips on helping your child plan a project.
        - ! Help your child decide on a subject that they are interested in, that meets the teacher's criteria, and that has enough, but not too much, information.
        - ! Make a list of the steps needed to do the project.
        - ! Estimate the time needed for each step of the project.
        - ! Make a list of materials that will be needed.
        - ! Make a timetable of when each step needs to be done.
        - ! Check in with your child frequently to make sure they are on track for meeting the due date.
- Organization:
    - o Getting organized is often one of the hardest skills for middle school students, but it's also one of the most important. Here are some tips on helping your child get organized.

- An organized notebook contains everything your child needs for homework. When held by its spine and shaken, nothing should fall out.
- You child's notebook should include separate sections for each class, and folders that are labeled with each subject.
- If teachers require separate spiral notebooks for each subject, but a larger notebook to hold these.

Getting Started

Now that you know all about ABC, you are ready to help your child succeed on this program. You child will begin the ABC program on

_____.

The ABC Coordinator, _____ will available to answer any questions you may have.

You can also feel free to contact the Project Coordinator at any time with any questions or concerns you may have along the way.

Contact Information

ABC Coordinator:	
Email:	
Phone:	

APPENDIX H

TEACHER SELF-ASSESSMENT (ADAPTED FROM ANDERSON, 2011)

Across the school day, how many students do you teach are on ABC? (0-1; 2-4; 5-7; 8-11; 12 or more)

To answer the questions that follow think about your implementation of ABC across all students during the past week.

I greeted students on ABC individually when the student entered the room.	0 Never	1	2	3	4	5 Always
I did not ask for the point card if a student forgot it or didn't give it to me at the start of class.	0 Never	1	2	3	4	5 Always
I reviewed classroom rules with students on ABC prior to the start of class.	0 Never	1	2	3	4	5 Always
I monitored the behavior of students on ABC throughout the class.	0 Never	1	2	3	4	5 Always
I checked to ensure the student recorded homework in their planner/tracker.	0 Never	1	2	3	4	5 Always
I awarded ABC points based on actual student behavior during the class.	0 Never	1	2	3	4	5 Always
I handed the student the point card at the end of class without reviewing points earned.	0 Never	1	2	3	4	5 Always
I provided positive feedback if a student earned most or all possible points.	0 Never	1	2	3	4	5 Always
I provided negative feedback if a student earned few points (did not meet expectations).	0 Never	1	2	3	4	5 Always
If a student questioned points earned I engaged the student in a discussion about points.	0 Never	1	2	3	4	5 Always
In general, I think ABC is valuable for most students I work with who are on the intervention.	0 Not at all	1	2	3	4	5 For all students

SAMPLE ABC DAILY BEHAVIOR REPORT CARD

Daily *Cougar Pride* Progress Form
ABC Middle School

STUDENT NAME:	HOMEROOM:	DATE:

Notes: Please award _____ a "0", "1", or "2" based on how he/she behaved in regards to each specific goal, not in general, and indicate whether they recorded their daily homework in their planner/tracker.

Have a Great Day! ~ We know you can do it!

2=Excellent 1=Good 0=Needs improvement **Individual Goals →**	R- Respect -Complete class work -Listen to the teacher - Participate in class discussion	D- Diligence -Be on time to school/class -Complete daily planner -Turn in class/homework	S- Safety -Use materials appropriately - remain in designated seat	Recorded Homework	Teacher Initials
Subject_____ Period 1	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period 2	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period 3	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period: 4	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period 5	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period 6	0 1 2	0 1 2	0 1 2	Y N	
Subject_____ Period 7	0 1 2	0 1 2	0 1 2	Y N	
Bonus Points		Completed yesterday's homework 0 1 Has all materials needed for class 0 1			
Goal 80%		Points Possible: _____ Total Points:_____			

Parent Signature:_____

My son/ daughter: has completed homework ☐   will need to complete homework ☐

ABC

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